AMERICAN MAGAZINE

OF

USEFUL AND ENTERTAINING KNOWLEDGE.

The following are but very few of the recommendations of this very valuable work, which have appeared during the publication of the three volumes which have already been issued in Boston.

RECOMMENDATIONS.

We pronounce it the best work of the kind now published. To us it appears highly improper for the lovers of literature and useful knowledge in America, to depend so much as they do upon foreign periodicals and foreign talents. We have in our country subjects, and we have men of talents to write upon them; and we should be more independent of foreign works than we now are. It is embellished with numerous engravings, illustrative of the many objects of interest in this country. To an American, it is a much cheaper, and a much more interesting and useful work, than the Penny Magazine. — *Plattsburgh Whig.*

We have rarely met with a volume which has afforded us more gratification than this Magazine, and although within a few years the number of periodicals has increased to an unprecedented extent, and many of them employed the best talents of the age, — still we think that the work now before us, for the amount of useful matter which it contains, will bear a comparison with any similar production which we have seen. — *Baltimore Daily Gazette.*

We gave notice, some two or three weeks since, that a work with this title was about to be published. It has come to hand, and proves on examination all that we predicted it would, — a work every way worthy the support of a scrutinizing public. — *Farmers' Gazette.*

A more interesting periodical for the great mass of readers we have never met with. — *Old Colony Memorial.*

Its matter and typographical execution are very creditable, and the wood engravings exceed any thing we have seen among our low-priced periodicals. — *Maine Enquirer.*

Its matter is mostly original, and its engravings taken from scenes in this country. They are selected with a good deal of taste, and executed in a manner superior to any thing of the kind that we have ever seen. — *We the People, Plymouth.*

Among the numerous periodicals of the day, "The American Magazine of Useful Knowledge," stands preëminent. It is a work which should be found in every family. Instead of being filled with useless fiction, which we are sorry to find in too many publications, its pages are enriched with historical facts; biographical sketches of prominent men; architectural notices of public buildings, in our own and other countries; natural history in all its various branches, receives due attention, as well as domestic economy, and the improvements in the arts and sciences. — *New England Farmer.*

This work maintains fully its elevated rank among the journals of the day. For sound, practical knowledge, there is no work that exceeds it in merit. — *Lincoln Telegraph.*

From the disgusting and tedious details of party politics, we are grateful that opportunity is now allowed us to contemplate and speak of subjects more creditable to human character. We may now turn our attention to

the efforts of mind acting in its proper sphere — to works of an enlightened and generous nature, designed and fitly adapted to improve the taste, and mind, and hearts of men. Such efforts are truly praiseworthy, and merit all encouragement. Of this description is the work before us, entitled "The American Magazine of Useful and Entertaining Knowledge." The object of this work is to give to the public subjects, scenes, places, and persons of other countries; but more especially, the prominent subjects, scenes, places, and persons of our dear land, abounding more than any other on the globe with subjects for the pen or pencil. — *Cortland Republican.*

We have been highly gratified by the examination of this splendid periodical. We are sure it must more than meet the expectations of those who have desired its appearance. — *Independent Messenger, Mendon, Mass.*

The admirers of American scenery, and American natural curiosities ought to encourage a work of this kind, it being purely a national work, just such an one as the people want. — *Franklin (St. Alban's) Journal.*

The American Magazine of Useful and Entertaining Knowledge strikes us as an enterprise particularly worthy of patronage. The contents of the first number argue good editorship. — *Philadelphia National Gazette.*

The proprietors of this new Magazine appear from their introduction to have just ideas of what a popular work of this kind ought to be. They express a proper feeling in regard to the kind of attention which should be paid in their journal to what is local and national, and in the specimen which they have furnished, in respect both to the matter it contains, and the manner in which it is put forth, they afford a fair promise of a popular and useful result. — *Boston Christian Register.*

We recommend this publication to the public as an American work, well deserving of their patronage. — *Worcester County Courier.*

It is after the plan of the Penny Magazine; — we should rejoice to have every subscriber to the latter work transfer his name to the former. — *Vermont Free Press.*

We place it among the most valuable periodicals of the day. — *Vermont Statesman.*

The American Magazine of Useful and Entertaining Knowledge is got up on the plan of the Penny Magazine, and we think will prove far more interesting to the American reader than that celebrated work. — *Sandy Hill Herald.*

It has long been a desideratum among the productions of the American press. It is American, purely American in its character, and its claims must find their way to the heart and pocket of every true American, and every admirer of American scenery. — *Boston Republican.*

On a perusal of the work, we do not hesitate to pronounce it good. It contains a rich variety, and much original matter, which cannot fail to please and instruct. The engravings, which are numerous, are neatly executed, evincing much care and skill. The description is mostly American, and we believe a work of this kind is called for. Why should we explore foreign countries for matter of interest, to the exclusion of our own happy land, rich in variety, and presenting objects of the most soul-moving nature, to the poet and historian? We wish the work God-speed, and would recommend it to the reading public as worthy of patronage. — *Maine Recorder.*

It has acquired a character for interesting and useful reading, which any periodical might be proud to possess. It recommends itself to the capacity and mind of every reader — to the learned and unlearned, — and its price puts it within the reach of every one. — *The Jeffersonian.*

Its matter and typographical execution are very creditable, but its wood engravings surpass any thing we have ever before seen in that line, among our low-priced periodicals. — *New Yorker.*

We recommend it to our readers as a most useful and interesting work. — *Goshen (N. Y.) Democrat.*

Its appearance is very neat, and the numerous wood engravings, which are scattered throughout the work, are well designed and executed. — *Boston Mercantile Journal.*

We would commend it to the public as the best periodical of the kind now presented to the American reader. — *Franklin Journal.*

We know of no periodical that has better claims to public favor than this. — *Boston Daily Times.*

If they desire to patronize a publication of real merit, they had better call at this office and become subscribers to this great national work. It is what every American should place in the hands of his family for perusal. — *Woonsocket Patriot.*

It is on the plan of the London Penny Magazine; but in its execution, it is far superior to that deservedly popular work. It is decidedly American in its character, and much more worthy of an extensive patronage throughout the Union, than any similar work from abroad can possibly be. — *Albany Mercury.*

We have examined the first number of this excellent work, and find it every way worthy of the high name which it bears. It is a work which will be wanted in every American family; and into a large portion of them it will doubtless find its way, as its cheapness places it within the reach of all. — *Norfolk Advertiser, Dedham.*

It is of a character quite similar to the Penny Magazine, with this essential difference, that it is strictly American, and treats of subjects and topics relating to our own country. The plates and engravings are illustrative of subjects which are, in a particular manner, interesting to the American reader. The Penny Magazine is better calculated for the meridian of Great Britain, than our own country; and this remark applies to its cuts and engravings, as well as to the subjects in general, of which it treats. The American Magazine is just what is needed for the great mass of the American community. It is descriptive of subjects, scenes, places, and persons of our own country. The several subjects are described and treated in a familiar and interesting manner, which will render the Magazine an exceedingly valuable work to almost every family in the country. — *Worcester Palladium.*

Its plan is similar to the famous London Penny Magazine, but its appearance and contents, in our humble opinion, are far superior. We consider this book of great value. Most of the Magazines of our country treat almost exclusively of subjects of foreign growth; the utility of which we never could perceive. The object of the present Magazine is to correct this defect, and give to the public a work descriptive not merely of subjects and persons in distant climes, but also of our own country. — *Thompson (Conn.) Transcript.*

We have examined it with considerable attention, and have been much gratified and instructed by its perusal. It is designed to be what its name imports — American, in every sense of the word. Such has long been a desideratum. We are very willing and desirous of acquainting ourselves with the History, Biography, Scenery, &c. of other countries, but we are not willing to forget our own land. This, in the perusal of Magazines heretofore, we have been obliged to do. We now have an opportunity to remedy this inconvenience, — to wipe out this stain. — *Middlesex Whig.*

For interesting matter, and neatness of execution, it has far exceeded our expectations. The information which it contains is indeed both *useful and entertaining.* Those who have families will find it a most useful auxiliary in forming the minds of their children to habits of reading, and, at the same time, storing them with useful information. — *Oxford (Me.) Democrat.*

We have received the first and second numbers of this periodical. These numbers contain a rare collection of choice and well-written articles, nearly all relating to scenes, objects, and occurrences of our own country, and many of them are finely illustrated by elegant and correct engravings. There is, perhaps, no publication of the kind existing, which combines so much useful, interesting, and attractive matter, within the same space, and for the same price, as do these numbers. — *Republican (Ohio) Advocate.*

Among the periodicals which abound at the present day, we have seen

none more calculated to benefit the community, than "The American Magazine of Useful and Entertaining Knowledge." — *Cadiz (Ohio) Organ.*

It is conducted on the plan of the Penny Magazine, with wood engravings on a great variety of subjects; these are well executed, and while they serve to illustrate interesting subjects, are handsome embellishments to the work. The original and selected articles in this work are mainly of a solid, useful character, and a good portion of it is devoted to the biography of our most distinguished countrymen. This part of the work we regard as extremely valuable, for it is hardly possible to place in the hands of youth a more useful book than a well written and authentic biography of illustrious individuals. The work is low enough to be within the reach of nearly every man, and we do not see how any parent can render a more acceptable service to his children, than by laying before them popular useful works of the character of the American Magazine, where so much knowledge may be obtained in one year at so small a cost. — *Genius of Liberty, Leesburgh, Va.*

We have received the first four numbers of the third volume of this valuable work. The literary character of the work is still fully sustained, and we think we hazard nothing in saying that a greater quantity and variety of useful and entertaining matter at the same expense, can no where be found, than is contained in the American Magazine. Many of the magazines of the day copy foreign matter, so copiously, that they lose, in a great measure, their interest to American readers; but this objection cannot be brought against the work under consideration. The embellishments are numerous, embracing representations of the most striking and romantic scenes of our country, our principal cities and public buildings, our native animals, plants, and trees, and a variety of views intimately connected with our national history, all of the most interesting character. Each volume contains from 20 to 30 portraits of distinguished Americans, accompanied by appropriate biographical sketches. Domestic economy, the improvements in the arts and sciences, &c. receive due attention. In short, it is a work well worth the attention of every reader. — *Woodstock (Vt.) Courier.*

As a Magazine, containing useful knowledge, we believe it ranks among the first in this country: indeed, to know its worth, only requires a careful perusal. We recommend this work to all who take an interest in the extension of knowledge, and the improvement of the mind. — *Lafayette (La.) Gazette.*

We have for a long time been much pleased with this really useful work. It is better than its cost in notes, though redeemable in specie. — *Bangor Mechanic and Farmer.*

Our country abounds at the present day with such a vast variety of literary publications, possessing real merit, and well deserving of patronage, that little can be said by way of recommendation of any one which does not, in some sense, apply to many. There are a variety of desirable objects to be attained in the publication of periodicals, — and those works which combine in the highest degree the amusing, the entertaining, and above all, the *useful*, and are adapted to the capacities and wants of the greatest variety of readers, at the same time inculcating purity of thought, correct morals, and affording sound and substantial information, are unquestionably deserving of all the encouragement which an enlightened and generous community can afford them, in view of the permanent welfare of society, and especially of the rising generation. — We know of no periodical which more decidedly combines all these qualifications than "The American Magazine." — *Pontiac (Mich.) Courier.*

The fund of useful and entertaining knowledge contained in the pages of this Magazine entitles it to the support and patronage of every American citizen. It is, in fact, to the United States, what the Penny and Saturday Magazines are to Great Britain, in every way equal to those works, and in matters relating to America, superior. — *Philadelphia Saturday Chronicle.*

THE

AMERICAN MAGAZINE

OF

USEFUL AND ENTERTAINING KNOWLEDGE.

VOL. II.

EMBELLISHED WITH NUMEROUS ENGRAVINGS.

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AMERICAN MAGAZINE

OF

USEFUL AND ENTERTAINING KNOWLEDGE.

VOLUME II. SEPTEMBER, 1835. NUMBER I.

INTRODUCTION TO SECOND VOLUME.

We have always been of the opinion, that the people ought and would judge of plans, either literary or mechanical, rather from the execution than promises previously made. In presenting the first number of our work for a new year, therefore, we have had some hesitation in offering any remarks, by way of seeking public patronage in anticipation of our labors, or of gaining friends by liberal promises. But we feel that general custom is not to be disregarded, where it does not require a moral impropriety, nor control one's independence and self-respect. Still, we consider it proper to refer as well to works as to professions, to past efforts as to promises for the future. For the character of the Magazine hereafter, our friends and patrons are respectfully requested to form an opinion by the numbers for the year past. The plan suggested in the first number, September 1834, and presented to the public in the prospectus of the work, it is intended still to follow, without material alteration. The work is designed to be AMERICAN, and to give articles relating to the natural history, geology, and geography of this continent; to the political history, the means of education, the literature, the institutions, the discoveries in useful arts, in the United States, with whatever may occur important and useful, on a perusal of respectable European publications of the day. A due portion of paragraphs on moral and religious topics (excluding however every thing merely sectarian) will also be furnished, either from our own limited and scanty stores, or from writers of established reputation; giving credit to those of whose labors we may thus avail. Of original poetry, we cannot *pledge* ourselves to supply so much as we should wish. And where there is not some little inspiration, we had rather give information, or attempt to instruct, in humble prose.

But whether it be *rhyme* or prose, we think we may safely pronounce, that all shall be in favor of good morals, and tending to improve both the hearts and the taste of the young. It will probably be observed by our readers, that we give a large portion of the Magazine to subjects in natural history. We presume that generally, this course will prove agreeable, as such articles may be made both "useful and entertaining," if there be not a great lack of care and ability in the Editor. We think a knowledge of natural history, as well as of astronomy, must lead the young to adopt sentiments of admiration of the wisdom, intelligence and benevolence of the GREAT FIRST CAUSE of all things.

Hitherto, we have had very few contributions from the gifted and the learned. We invoke their friendly aid, with the assurance that their labors will add to the sum of general improvement; a reward with which the benevolent are always satisfied.

The character of the work will show, that the object of its conductors is to disseminate useful information among the *many*; and that it is essentially republican, without being radical, in its aim. The great body of the people want information without *excitement*, and knowledge instead of inflammatory appeals to their passions: and unless well informed,

they are in danger of having their passions aroused by the ignorant, notoriety-loving sciolist, and of thinking themselves oppressed even in a government of mild and equal laws. Our political creed is given in few words. We hold to the constitutions of the States, each within its own territory; and to that of the United States, over the whole; so far only, however, as power has been given to the Federal Government. We are advocates for civil liberty, for republican liberty; but equally so for laws and the Constitution. Without equal laws, regularly and impartially administered and executed, we shall be no better than in a state of anarchy or despotism. And if the Constitution is not respected, it is possible laws may be improper and unequal. The people have the power in their own hands; but let them use it discreetly, and according to great constitutional principles and maxims, adopted deliberately and without excitement. No one is long safe either in person or property, when laws are made by a *party*, or administered by a *mere party*. For the dominant party to-day may be in the minority to-morrow; and with what measure he or they have meted to others, when in power, so must they expect it will be meted to them when they are the minority. It is the interest of all, then, that the laws and the Constitution should govern. And to prevent the evils of improper excitements, and of hasty and unwise decisions in time of such excitements, knowledge must be spread through all classes. Common and public schools should be supported everywhere; and the young taught "that order is heaven's first law;" that the *supremacy* of the laws is essential to the welfare of all; and that the aged patriots, who are of no party, but for the country and the whole country, are the men of whom they should take counsel and advice.

Boston, September 1st, 1835.

SEPTEMBER.

GUIDED BY MINERVA, MERCURY IS BEARING SCIENCE ROUND THE WORLD.

In selecting such a group of mythological divinities, as the frontispiece for our first number of the second volume, we protest against the charge both of vanity and heathenism. It is but a small portion of the globe that we expect to enlighten, nor do we even hope to give light enough to the regions visited by our Magazine. If we can contribute only a *mite*, we think we shall not be called presumptuous in adopting the device; and it is the *attempt* rather than the *fruit* of our labors, to which we would be understood to refer. And as to heathenism, it is only complying with long established custom in such matters, to allude to the imaginary deities of ancient times, to indicate a literary object or plan. Though we make allusions to the pagan classics, we trust the character of the work for the last eight months at least, will show our deep and reverent regard for whatever is Christian, and our decided, though temperate disapprobation of whatever is *anti-christian*.

THE MAGNETIC POLE.

It may gratify our readers to give the result, in a simple and plain manner, of Capt. Ross' attempt to reach and discover the *magnetic pole*, from his narrative of his last voyage, just published. —"The place of observation was as near the magnetic pole as the limited means which I had, enabled me to determine. The amount of the dip was 89 deg. 59 min. being within one minute of the *vertical;* while the proximity of the pole, if not its actual existence where we stood, was further confirmed by the total inaction of the several horizontal needles in my possession. These were suspended in the most delicate manner possible; but not one showed the least effort to move from the position it was in—a fact, which the most uninformed on the subject must know proves, that the centre of attraction lies at a very small horizontal distance, if at any." The British flag was then fixed on the spot by Capt. Ross and his party, &c., all which was very natural: and a small monument or heap of stones was erected. Capt Ross proceeds to state, "that a learned professor in England had, in the absence of the expedition, laid down all the curves of equal variation to within a few degrees of the point of concurrence; leaving that point of course to be determined by observation, should observation ever fall within the power of navigators. It was most gratifying on our return to find that the place I had fixed upon was precisely the one where these curves should have co-incided in a centre, had they been protracted on his magnetic chart." Capt. Ross adds, if popular observation gives to this voyage the credit of having placed a flag on the very point—on the summit of the mysterious pole, which it views, perhaps, as a tangible and visible reality, it may now correct itself if it pleases.

A few days after, and on returning to their more permanent station, Capt. Ross examined his instruments, and his experiments served to convince him that his observations on the celebrated spot were correct. The theory previously adopted, was that the place of the magnetic pole was at 70 deg. north lat. and 98 deg. 30 min. 45 sec. W. longitude—and the spot where Capt. Ross supposes it, is 70 deg. 5 min. 17 sec. north l. and 96 deg. 46 min. 45 sec. west long. A committee of the Admiralty, to whom Capt. Ross' narrative and statement was submitted, reported, (among other things,) that "they have no reason to doubt that Capt. Ross actually reached the magnetic pole."

It has been supposed that the *magnetic* pole was not identical with the north pole; or, was not exactly at the point of 90 deg. from the equator. The magnetic meridian was also known not to be uniform, on all parts of the earth, or not to be parallel with the meridians of longitude. "There are certain points on the earth where there is no declination of the magnetic needle; that is, no variation from a north and south direction. And the line formed by these places do not coincide with geographical meridians (as just observed) but deviate from them quite irregularly. According to the latest observations, there is a line without declination (or variation) in the Atlantic ocean between the eastern and western continents. It intersects the meridian of Paris, in south latitude 65, thence it mounts to the N. W. to about 35 W. longitude from Greenwich, (England,) as high as the latitude of Paraguay; after which, becoming again nearly north and south, it skirts the coasts of Brazil, and passes to the coast of Cayenne. Then turning to the N. W. it takes the direction of the United States, and proceeds to the north parts of the continent of America, which it traverses in the same direction. The position of this line on the globe, however, is not immutable. It has now been tending to the west for nearly a century and a half. But there is no regularity in this change. In the West Indies, the variation has been very trifling for one hundred and fifty years. There is supposed to have been a retrogradation towards the east for forty years past. The inclination, or *dip* of the needle is also found to be variable. At London in 1775, it was 72° 30′, in 1805, it was 70° 21′.

There is another line at which there is no declination, nearly opposite the one above described, in the southern ocean, and running in a N. W. direction. It cuts the west part of New Holland, traverses the Indian ocean, enters the continent of Asia at Cape Comorin, lat. 10 north, long. 80 east, thence passing through Persia and West Siberia, reaches Lapland. There is a branch or division of this line near the Archipelago of Asia, which runs north and south, crosses China, and touches the eastern part of Siberia. Indications of a fourth line, where there was no declination, were mentioned by Capt. Cook, in the South Sea. The greatest declination, or variation noticed by Cook was in lat. 60, south. The greatest declinations have been in high latitudes, south and north. In northern latitudes, where the magnetic pole has been more nearly approached, (and lately supposed to be reached by Capt. Ross, as stated in the beginning of this article,) the greatest variation has been observed; nearly 90° even. "And if the magnetic pole should be passed, (says a writer on this subject,) the north pole of the needle would turn to the south; and directly over the pole its direction would be *vertical*, and of course there would be no horizontal direction. It would appear, therefore, that the horizontal direction will be very weak, when the indication or *dip* is greatest; so that a slight extraneous influence may render the compass useless." We ask the reader to refer anew to the above statement of Capt. Ross. Before Capt. Ross made his last voyage to the northern regions, it had been supposed and asserted, that the strongest, or greatest inclination of the needle was between 70 and 80°. Capt Parry found the inclination 88° 43′, in latitude 74° 47′. If Capt. Ross is correct, Parry passed to the *north* of the magnetic pole; and yet he did not notice the phenomenon mentioned above, of the north pole of the needle pointing south. Farther observations and explanations seem to be necessary. And yet it is considered by mathematicians in England, that Capt. Ross' statement is correct.

As to the magnetic pole, or the substance which produces the phenomena of the magnetic needle, some suppose "that there are great magnets in the earth, which move periodically." Professor

Steinhauser, was of opinion, "that an interior planet revolved round the centre of the earth once in 440 years, and produced the magnetic effects at the surface." Sander contended these phenomena are to be ascribed to a *magnetic planet* beyond the newly discovered planet Herschel, or Uranus, performing its revolutions in 1720 years. Truly, the subject requires further explanation!

THE WHALE, AND WHALE CATCHING.

In giving a description of the whale, the writer must necessarily repeat much that has been written by others; but one who has seen them, in their native element, and has often met them in all their terrors, can at least strip his description of the exaggeration in which most writers have indulged.

The whale may be properly divided into two genera: the Bone whale and the Sperm whale. I prefer this distinction to the scientific one usually given, as it will more definitely mark the difference of these animals than classic words, to which we attach little meaning. The Bone whales are of several species, all agreeing in general habits and character, but each having some distinct characteristic. The first and most important is the Black whale, or as the Americans call him the *right* whale. This animal is usually about fifty-six feet in length, the largest may reach to sixty feet. Their color is black on the back, and white on the centre of the belly. Occasionally he is spotted with white. The head of this creature is about one third of his whole length. The eyes are placed upon the sides of the head, near the body, and from its great size, it is consequently unable to see either directly forward, or behind it, so that it may be approached very near, without being alarmed. But the most singular part of the animal, is its mouth, and its adaptation for collecting the food upon which it lives. The upper jaw opens at least fifteen feet in length, and is provided with over five hundred laminæ, or slabs, of thin black bone, which are hairy on the inner side, and when seen without, have the appearance of a Venetian blind, placed perpendicularly. The under jaw is broad, and when closed receives the ends of this bone upon its soft gums. It is also provided with two immense lips, one on each side, which are large enough to close the whole mouth and cover the bone. Some idea of these lips may be formed, when we know that the longest bone, is fourteen feet in length, and the largest lip will make three barrels of oil. The body is from forty to fifty feet in circumference, and has two fins just behind the head, in which whalemen, owing to the peculiar situation of the bones, trace a fanciful resemblance to the human hand and fingers. The use of the fins appears to be to direct their course and not to assist them in swimming. The body is thick for the greater part of its length, but it tapers near the end, and finishes in a tail, or as it is usually called, in flukes. These flukes are from twelve to fifteen feet in breadth, and in them is placed the animal's means of offence and defence. With its flukes it strikes blows which may be heard at the distance of miles, and from their force, one would suppose that nothing could sustain them, but we find that in their contests with each other, they seldom or never produce death.

This whale feeds upon the animalculæ of the ocean: more particularly upon a very minute species of shrimp, by the whalemen called britt, which is found without the tropics, both in the northern and southern oceans. This is obtained by swimming with its mouth partly opened, until a sufficient quantity is collected and retained by the hairy bone of the upper jaw, when the lips are closed, and by means of its tongue this small food is collected and swallowed. Its manner of feeding would remind you of the grazing of the ox, the same disproportion between the size of its food and the animal to be supported. But when we reflect upon the fact, that the ocean is teeming with life, and remember the immense net-like mouth of the whale, we shall at once see that the end is not disproportioned to the means. Like the ox too, this animal feeds industriously for a few hours, and then either rises above the surface and sleeps, or exercises itself in awkward gambols. If playful, it beats the water with its flukes, or sinks to the depths of the ocean, and ascends with such velocity that it throws its whole body out of the water. It cannot remain long under the water at one time, it being a warm blooded animal, and breathing air, it must ascend for respiration. Its usual time of breathing is once in fifteen minutes. It has two orifices on the top of the head which answer for nostrils, and when it throws out its breath it is detected by the spray or steam which it throws up; owing to this, it becomes the prey of the whalemen. This animal is sought for its oil and bone.

The other species of Bone whale are the Humpbacked whale, the Finback, and a species called the Sulphur Bottom, by American whalemen, (perhaps answering to the Razor Back of the English.) The Humpback is killed for his oil, but his bone is small and of no value; he differs from the Black whale in having a large hump on the back, and in his fins, which are at least fifteen feet in length, with which he strikes severe blows, and will readily destroy a boat. The Finback whale is ninety feet in length, being much longer than either of the others, is distinguised from them by throwing his spout much higher, and by having a fin on the top of his back, and never lifting his flukes out of the water. He is also much fleeter than the Black or Humpbacked whales. For while they usually move but three or four miles an hour, and when excited can only for a short time accelerate their motion to ten or twelve miles, and must then stop and rest, the Finback can readily move at the rate of twenty miles an hour, (at the least) and will continue that rate for a length of time, that render all attempts to take him unavailing. The last and largest of the whale species, is the Sulphur Bottom or Razorback whale. They have been met with at the estimated length of one hundred and thirty feet, they differ little in appearance from the Finback, except that the back fin is nearer the tail, and their motion is much slower, seldom exceeding five miles an hour. They feed in the same manner as the Black whale, and like them are killed for their oil. All the species of Bone whale are alike in their habits, being all timid and cowardly, trusting to flight when attacked, and never if they can avoid it, defending themselves by injuring others.

The Bone whales have but one known enemy except man. This is a fish called by whalemen "The Killer," about twenty feet long, rather large in the body, and armed with strong teeth, which attacks the bone whale for the sake of his tongue. He first fastens upon the blow holes or nostrils of the whale until he is forced to open his mouth, to breathe, which then entering he fastens upon the tongue and devours it, thus killing this immense animal, which would appear from its bulk, to be safe from the attack of all minor creatures.

The Sperm whale differs from the Bone whale in its feeding. The food of the Sperm whale is a species of animated vegetable, called squid, usually found in deep water. As this substance has much consistency, the whale is provided with thirty-six large teeth on the under jaw, with which it rends its food from the rocks to which it is attached. The head of the Sperm whale is square at the end, and seems unfit for rapid motion, but it is so hard that it is unaffected by collision with hard substances, and one means of offence with this animal is to strike with the head. Its head is not only one third the length of the body, but contains one third of the oily matter of the whole creature; its upper jaw is frequently fourteen feet in thickness. Its upper surface of about six or eight feet in thickness (in a very large whale) is called junk, being formed of hard muscular fibres filled up with very fat oily matter. Beneath this is a cavity called the case, in which is contained a semi-liquid matter, which is spermaceti mixed with a little oil. This whale is not so timid as the Bone whale, and has more means of offence. It can attack with its square head, its jaw, or its flukes, and either of them are usually fatal to its opponent. It is the monarch of the ocean, and probably the leviathan of Job. It is not usually dangerous, or malicious, but when aroused and aware of its enemy, its ferocity is terrible; it is not satisfied with beating him off, but pursues him to his destruction. It pursues the boat of the whaleman until he has dashed it in pieces; but they who man it are too contemptible an enemy for this terror of the deep: when the apparent enemy is destroyed, the men are left to their fate, and are safely picked up by another boat.

The Sperm, like the Bone whale breathes air, but is capable of remaining longer under the water. It is usually supposed that the Sperm whale remains as long under the water as he does on the surface; and the largest have been known to be one hour and a quarter on the surface, breathing, and the same time below. This whale has but one nostril or spout hole, and in breathing blows the spray forward and low. He moves slowly through the water when not excited, but when attacked is capable of moving seven or eight miles an hour, and continuing at that rate for a great length of time. The male of the Sperm whale, is much larger than the female; the largest male whales, having produced from one hundred and fifty to two hundred barrels of oil, while the largest female never yields more than forty barrels. Of the same genus as the Sperm whale are the Porpus and Black fish. Their habits are similar, and their oil of the same kind. All whales produce their young alive, one every year, and the young are suckled like the calf until they are capable of providing for their own sustenance.

Having given a short account of the habits of whales, and the character of the different species, I shall now describe the manner of taking them and saving the oil.

A whale ship is usually fitted with three or four boats, according to her size. Each boat is manned with six people—one mate, one harpooner or boat steerer, and four sailors. Besides the boats' crews, she has six or eight men to keep the ship when the boats are in pursuit of whales; having in all from twenty-five to thirty-three men on board. Each boat is provided with a tub containing thirteen hundred and fifty feet of tow-line, which, when used, is made fast to two harpoons. She also has several lances, which are sharp weapons five feet in length and made fast to a pole, and used to despatch the whale after the boat is made fast to him by the barb harpoon. There are also several minor articles attached to the boat, which conduce to the safety of the men in case of accident. The ship is also provided with two or three large iron pots, capable of containing from one hundred and sixty, to two hundred and twenty gallons each, for the purpose of boiling out the oil. Thus provided, the ship takes her departure in search of the monsters of the deep. At this time commences the toil and excitement of the whalemen, which I shall now attempt to describe, using the language of the whaleman where it is intelligible to landsmen.

The ship goes on her course with an officer at her mainmast head, and a sailor at her fore. All is industry on deck. When the look-out aloft, cries "there she blows," instantly he is answered from the officer of the deck, with the shrill cry, "where away." He answers, giving the direction in which the fish is from the ship. Now all is bustle, but all is order. The captain with his telescope, ascends the mast, and observes the spout, and directs the ship to steer for the expected prey. The mates and boat steerers prepare their weapons for the conflict. The men are all on the look-out to catch the first view of the whale from the deck. The old and seasoned whaleman looks forward to the strife with hope and excitement, and perhaps amuses himself by frightening the landsmen with the dangers they are about to encounter. At last comes the order, "haul aback the main yard," "lower away the boats." In breathless haste the orders are obeyed, the boats are gone, the ship lies like a log on the waters, and all is silence and expectation. The boats speed towards their object, the old sailors recklessly indifferent to the danger, and highly excited with the hope of gain, and the pride of contest, the landsmen doubting but usually firm, and too proud to yield when others will lead.

Unaware of his danger, the leviathan of the deep lies idly on the water. His foe is upon him. All is silence and exertion; now comes the stern order to the harpooner, "stand up—dart," and the barbed iron is buried deep in his vitals. Then is heard the shout, "stern all," (to escape the danger of the agonized exertions of the wounded monster,) and the reckless exultation of the daring whaleman; then writhing with pain he lashes the waters with his

tail, and in the words of the Hebrew poet, "he maketh the sea to boil like a pot, one would think the deep to be hoary." But this soon passes away, his strength is exhausted, and he lies trembling on the waters, or he seeks safety in flight. Now the boat by its tow line is brought near to him, and the mate with his lance, strikes him to the heart; he throws blood from his nostrils; his breathing is choked; in his agony he lashes the water; the ocean resounds with his bellowing; his strength can endure no more, he rolls a lifeless mass on the waters, the prize and scorn of his puny enemy. Yet in all this there is but little danger to the bold and experienced whaleman. He watches the motions of his timid foe, he avoids the agonized blows of his tail, and suffers him to exhaust his great strength in futile exertions.

When the whale is dead commences the labor of saving the oil. The animal is brought along side of the ship, and secured by a chain around the small part of the body where it joins the flukes. Large tackles (or pully blocks with ropes rove through them) are made fast at the main mast head, one end of the fall or rope is passed around the windlass forward; and to the lower block is attached a large hook. A hole is now cut in the blubber or outer coat of the whale, and the hook is placed in it; the men at the windlass then heave up the hook, a strip of about four feet in width of the blubber is cut by the officers of the ship, and the fat or blubber is peeled off as the bark is peeled from a tree. When a piece extending from the animal to the head of the mainmast is hove up, a new hole is cut and another tackle is made fast below, and the part above is cut off and lowered into the hold. The other tackle is hove up with another piece, rolling the whale over and over, until the whole of the blubber is taken into the ship. When every thing valuable is secured, preparation is made to boil out the oil. Two men commence cutting the blubber into small oblong pieces. It is then passed to two others who with large knives mince it thin, when it is placed in the large pots and heated until the oil flows from it, and all the water is expelled. The oil is then bailed into a large copper vessel from which it runs through a strainer into a large pot, and is thence put into casks and rolled away to cool. The scraps or solid matter of the blubber are used for fuel, so that every part is useful; and if it were not for the scraps, no ship could carry wood enough to boil out its oil. When the oil is cooled it is sent below into casks in the hold, by means of leather hose, and is there done with until the ship arrives at home.

The description of a whale-ship boiling at night, may amuse, and would convey no bad idea of the fancied infernal regions of former days. If the observer were placed near enough to see the general movements, and yet not so contiguous as to let dull reality dispel the illusion of appearance, and could fancy the heaving ocean glaring in the fitful light to be liquid sulphur, he would have the material hell of our precise ancestors before him. The men feeding their huge fires, and now stirring them into fierce action, the bright blaze flaring wide over the ocean and throwing in bold relief visages blackened by smoke, unshorn and shaggy, their bright steel forks and pikes now flashing in the light, and now indistinct as the flickering blaze fades away, and again seen as the master-demon throws boiling oil into the blaze, (to give light to his operations,) the hasty movements of the men passing suddenly before the fires and then lost in darkness, or their forms thrown at length before the blaze in the moments of relaxation,—a morbid fancy might easily make it an image of terror, or a lighter mood might laugh at the ridiculous pageant as it passed before him.

Note.—For this article we are indebted to a sturdy, but well educated young man of Massachusetts, who had been a whaling voyage—thus we ventured on no criticism, or addition. Its description could not be mended, and its freshness might be injured, by any attempts at explanation.

ASTRONOMY.

We have already, once and again, referred to astronomy; but it is intended to treat of the topic more fully, and in several successive numbers. In doing which, we shall make use freely of other works, and shall endeavor to draw from the most correct modern writers. Three centuries ago, it might have been necessary in speaking on the subject, to advise against vulgar errors, and to be guided by facts and proofs, however opposed to popular belief. Such advice is hardly necessary now. Since the discoveries of Kepler, Newton, and others, of the 17th century, we are prepared to reason, and to believe what can be, and is demonstrated. The elements or outlines of astronomy are at present well settled. The sun is at, or near the centre of our system; and the earth and other planets move round the sun in orbits or paths, more or less elliptical; (that is, not in perfect circles, but partaking of an oval form;) and requiring longer or shorter times to perform their revolutions, according to their several distances from the sun, or the centre of the solar system. The motions of these planets are regular and uniform in their orbits, and subject to the same great law of gravitation and attraction; and yet they appear to be irregular in their motions, and some retrograde. But besides a motion round the sun, they turn on their own axis, in shorter or longer periods, and vary their position as it respects facing the sun; which cause day and night, summer and winter, or heat and cold. The earth and some other planets are attended by satellites, revolving round them, at short periods. Some knowledge of mathematics is necessary, to understand astronomy, and to comprehend both the real movements and the appearances of the heavenly bodies; and great advantage will arise to the student in astronomy from a more than ordinary acquaintance with mathematical science. Astronomy is also explained and illustrated by figures, and still more so by the globe and orrery. The fixed stars, so called, are at an incalculable distance from the earth, and are supposed to be centres (or suns) of other systems. Their distance must indeed be immense, when they scarcely change their apparent place, seen from us at the opposite points of the earth's orbit.

Though astronomy more directly refers to the

stars and planets, yet some general knowledge of the earth is important, as preliminary to it. And it should not be thought strange by a student in astronomy, that the earth is ranked with the planets. For such it in truth is. Though it is a dark body, and seems to us to be at rest, it revolves round the sun, as the other planets do, and turns on its axis in twenty-four hours. Such motions of the earth must be admitted, to explain and account for the appearances and occurrences, which cannot be denied, and are known to the most common observer. And no doubt, the earth, or the atmosphere which surrounds it, reflects the light, as well as the moon and the other planets, so that it appears to those who inhabit them, as they appear to us.

The ancients supposed the earth, (because they perceived not its motion,) to be at rest; and that the sun and all the planets and stars rose and set, according to appearance. Some of them, indeed, were led to doubt this on reflection. For they believed the sun and stars and planets at a very great distance, and perceived that their velocity must be inexpressibly great to move round the earth, as they appeared to do. And the system now adopted was suggested by some in early times. Still, the general belief was otherwise, and the common language was such as if the earth was at rest, and the heavenly bodies revolved round it, every twenty-four hours. This theory however, was so evidently improbable, (not to say impossible,) in the view of reflecting men, that it was long matter of objection and doubt, till the present system was more fully taught by Copernicus and demonstrated by Kepler, Newton and others. But we shall not go into their arguments; it were needless; and it is therefore, assumed, that the sun is at or near the centre of our system, and that the earth and planets revolve round it; and that the stars (as distinct from the planets) are central suns of other immensely distant systems. In observing the appearances of the sun, planets, &c., we are to consider also, that the earth, on which we are, is constantly in motion, rapid motion; and that it has two motions, viz. one round the sun in three hundred and sixty-five days and a few hours, and one on its axis, or in other words, is constantly turning like a ball in swift motion. Thus different parts of the earth are successively turned to the same point in the heavens, and the same part to different points of the heavens; and the earth is continually changing its place in the heavens, or in space, as it is constantly moving in its orbit; and the effects of these motions and changes of place, or the different appearances (both as to the sun, stars and other planets) arising from them must be considered to account for the phenomena presented to us. A little reflection will teach any one more than many words, or long descriptions.

Our globe is surrounded by air, called the atmosphere, which is not only necessary to life and health, but to sight and sound; the extent of which from the earth is uncertain, though at the height of more than ten miles, it is so rare as not to answer the purposes of air; and yet at five times that distance, it is possible and even probable that it extends, in a state of extreme rarity. The highest mountains are not more than five miles perpendicular. But no one has ascended more than two-fifths or four-sixths of this extent. But the daring æronaut has ascended to the height of five miles, or 25,000 feet. And the *refracting* power of the air is also important, especially in optics, and therefore so to the astronomer. The air, as well as water, a denser medium, (or fluid) has this power of refraction. The appearance of objects is often different from their real situation or size, and we are thus liable to be deceived, if ignorant of this property. The rays of light from a body beyond the atmosphere are turned from a straight line, and the body does not appear in its true place. And the refraction is greater the more obliquely the light passes through the atmosphere, while in the zenith there is no refraction. Thus a body in the true horizon appears above it. And a body is visible after it is actually a little below the horizon. This is true of the sun both morning and evening.

The exact amount of atmospheric refraction is a difficult subject of physical inquiry, and one on which geometers are not entirely agreed. And this difficulty arises from the different density of the air in different states of heat and cold, moisture and dryness. The accuracy of astronomical observations depends much on a knowledge of the refracting property of the atmosphere, and of its density as affected by heat or moisture, and their opposites. It is owing to the reflection of light that we are not immediately in total darkness when the sun is at all below the horizon. It is not only by the *direct* light of a luminous object that we see; but the portion of light which would not otherwise reach us, is intercepted in its direct course, and thrown on us laterally, and is the means of illumination. Such reflective obstacles always exist floating in the atmosphere. The course of a sunbeam entering the chink of a window-shutter into a dark room is visible as a brighter line in the air; and if it is stifled, or let through an opposite crevice, the light scattered in the room will prevent total darkness. The luminous lines sometimes seen in the air, when the sky is full of broken clouds, commonly called "the sun drawing water," are caused in the same way. They are sunbeams through openings in the clouds, partly intercepted, and reflected on the dust and vapors in the air below. Thus also the solar rays, which, after the sun itself is below the horizon, traverse the higher regions of the atmosphere and pass through them, without directly striking the earth. So, when the sun is above the horizon, it illuminates the atmosphere and the clouds, and these disperse and scatter a portion of light in all directions. The generally diffused light which we have in the day-time, is a phenomenon originating, or caused as the twilight. Were it not for this reflective and dispersing power of the atmosphere, no objects would be visible to us out of a direct sunshine: every shadow of a passing cloud would be pitchy darkness; the stars would be visible through the day; and every place to which the sun had not direct admission would be involved in nocturnal obscurity.

French Proverb.—Secret de deux, secret de Dieu; secret de trois, secret de tous.

MINERAL SPRINGS OF VIRGINIA.

The following account of the mineral springs in Virginia, is extracted from letters of an intelligent gentleman, written while on a visit to them in June last. It will be perceived by his reference to the country which he passed through, that he was from the eastern part of the Union. The letters are dated at the White Sulphur Springs, Greenville county. "This is a mountainous region, beginning near the Potomac, S. W. of Washington city, and extending through the State, nearly in the same direction, with a breadth of sixty or seventy miles; the Alleghanies being the highest group to the N. W. and the Blue Ridge to the S. E. And the fountains on the south and east discharge their waters in the Atlantic, and those on the N. W. and W. in the Ohio and Mississippi. In our route here, we passed between the fountains of the great Kanawha, and of James river. The Potomac, it will be recollected, finds a passage through the Blue Ridge; where, according to Mr. Jefferson, (and he is not alone in the opinion,) the scene is highly picturesque, and *worth a voyage across the Atlantic to behold.*

"Twenty miles west from Charlottesville, which is eighty miles from Richmond, and one hundred and twenty from Washington, we began to ascend the Blue Ridge; and the White Sulphur Springs are then about one hundred and twenty miles; the road leading over mountains and through vallies, with scarcely a plain in the route. The points of elevation could not be accurately fixed when travelling; but probably are one thousand or twelve hundred feet. As the road runs, neither the ascent or descent are very great; and when we reached the foot of the *warm* spring mountain, we discovered a small house, about four miles distant on the highest summit. One is surprised that a man should fix his habitation among the clouds, but after winding our way up an easy ascent on the mountain's side, we found ourselves at the house, without being sensible of the height we had attained. Whoever has heard of the "Alleghany mountains" is ready to think of almost impassable places, and dangerous precipices; but we found none of these dangerous; yet in several places the roads are not so good as in most of the eastern states. Two horses, with a light carriage and two persons, will proceed with difficulty more than four miles an hour. From Fredericksburg to this place (White Sulphur Springs, Greenville county) are two hundred miles; and the road is the great highway from the West to Richmond, to Washington, and to Baltimore; or to, and from Gyondotte, on the Ohio, forty miles below the mouth of the great Kanawha. As these beautiful mountains and vallies and the health-imparting springs are more known and visited, the roads will probably be improved. At present, the stage with the mail travels only seventy-five or eighty miles in twenty-four hours; while from Boston to Portland, one hundred and ten miles, our stages pass in fourteen.

"The first watering place we reach from the N. E. is in a deep valley, and is known as the *warm* springs. The valley lies N. and S. and is surrounded by mountains. There is one hotel near the spring, large and well kept. The water rises in the middle of the valley, and is at 98 through the year. It is clear, but has a little sulphur taste. The bathing gives a most delightful sensation. The benefits resulting from bathing in this water are said to be great, especially in cases of rheumatic complaints; but we leave it to learned physicians to decide. Five miles distant are the *hot* springs. The property is at present in the possession of Dr. Good, who is making great improvements. The water here rises through fissures in the rocks, and within a short distance, the temperature of it is different: the hottest is 100 and 106 deg. The common and the shower bath may be had at this place.

"The *white sulphur* are about thirty-six miles west from the warm and hot springs; and the road is chiefly on the sides of the mountains. Almost every house on this road is an inn, and in some parts of it they are eight miles distant; and the way is like an avenue to an English country seat. The taverns on this route are neat, and the hosts know how to provide for those who inhabit the large cities, and have been accustomed to all the conveniences of the more opulent. I was much pleased to observe that no ardent spirits were placed on the table; though, in most houses, they were to be had, if particularly desired. No instance of intoxication was noticed from Fredericksburg to this place, and no rudeness or incivility. At Charlottesville, eighty miles from Richmond, there was a frequent call for ardent spirits by some *young men*; but who, I presume, *were not sent there by their fathers, to put such matters into their heads.* The sight of this, at every house, especially before dinner, is not at all pleasant in the rising hopes of the country. Much use is made of *mint tea*, a large portion of which is alcoholic spirit. If the mint is intended to prevent bad breath, it is not a sufficient preventive. It is as unpleasant as that of the *habitual smoker*, or even that of the common *rum-drinker*.

"These springs are also situated in a valley, of about four miles in length; and at the north part, within the compass of 1000 by 1500. There are *cabins*, as at the warm springs, containing two or more rooms; and a large dining hall. The fountain is under cover; the water is very transparent, but its sulphurous quality is perceived by the sense at fifty feet distance. It contains little fixed air, and tastes much like other sulphur water. It is commonly heated, when used for bathing, but thus looses its apparent purity. It is usual to take two or three half-pint tumblers, three times a day, and to bathe in it, and it is found to be useful in chronic complaints, of the liver especially. Many relations are given of remarkable cures by the use of these waters. But there seems much doubt and uncertainty as to the diseases most likely to be removed by them. There are no opinions of skilful physicians, on the subject, who have had experience enough to justify a full reliance on their conjectures. The immediate effect is generally to lassitude and a desire to sleep more than usual; but it is said, that this soon subsides, and is followed by uncommon sprightliness and a *good appetite.*

"The sweet springs are about sixteen miles from

the white sulphur, in a S.E. direction, and the waters are of a tonic quality. The season for company at the white sulphur springs is said to begin in July, and to continue nearly three months. Those who have visited the springs from the New England States have often gone at an earlier day. In the middle of June there were one hundred visitors, and they were constantly increasing. The buildings are designed to accommodate three hundred. As at other watering places, the company is constantly changing; and in the course of ten days, the table is filled with almost a new set.

THE CHILD SHOULD BE EARLY TAUGHT.

Education of children should be commenced at an early age: We speak of both moral and literary. But the mode and the kind of education are most important. The mind or the capacity of a child is discovered at a very early period. It has perception, and discernment, it notices and observes, usually long before the time its parents undertake to instruct or to form it. We soon discover that it has mind and affections. Should not the business of informing the one and directing the other, then, be early commenced! As to the moral feelings, it is generally true that they are early regarded, and that efforts are made to regulate them. And this is one great part, an essential part, of education. But is it duly considered and attended to by parents? It requires attention, constant attention, judgment, patience, good temper, equanimity; and how few are faithful in these respects? We are impatient, inattentive, variable, passionate; and therefore it is that our children are not duly controlled, directed and governed. We govern too much, or too little; it is a trouble to watch our children, and to instruct, to restrain or to encourage; and we leave it to others, or it is wholly neglected. If parents are not faithful, the child will be perverse, insubordinate, petulant, or positively bad. And whose is the fault? We may attempt to excuse ourselves, by the plea of business, or of the bad disposition of the child. But it is a poor apology. The child has not a bad nature—it is not born wicked; it becomes so, through the strength of its passions, its inexperience, its mistakes, and the want of parental discipline and care. Where then does the blame attach? Let us think of this. There is a great responsibility. We cannot throw it off. The directions of religion and our own experience will enable us to do much, if we are not culpably negligent, in forming the dispositions and habits of our children aright. It is much the same, in their intellectual culture. They are capable of learning much when quite young. Frequent occasions occur for giving them useful information. They have curiosity, at an early age. Let it be indulged and gratified: gratified, by answers to their questions, and explanations of what to them is mysterious. But here also, they must not be kept constantly at their books, or required to burden their memories with a variety, which cannot profit, because it is not understood. Compulsion should not be used with very young children, in giving them knowledge, or making them study. They should be allured to it, or led to study voluntarily, by exciting their curiosity, or incidentally informing them of the benefits and pleasures of knowledge. It should not be so much a matter of restraint as of choice; and be represented as a privilege and a blessing. This may be done in various ways.

All this, we are aware, is common place. But what can we justly expect new on this subject? What need are hints or suggestions of what has been found to be useful and important? Those who have the blessing of children, have also a deep responsibility. And to the well-disposed, it is not an irksome task or unpleasant duty, but a pleasure, to witness and to assist in the developement of the intellect and the heart of innocent youth. For useful information and human knowledge, there are now most abundant facilities. But the affections cannot be directly improved by these, as commonly applied. A parent's attention and care are necessary in this department. This source of good and evil does not receive its character from the schools and colleges. The love of a parent, of a judicious and conscientious parent only is equal to the task of directing and teaching here. And it cannot be shown too early, too constantly, nor with too much discrimination. B.

THE WORM AND THE FLOWER.

BY J. MONTGOMERY.

You're spinning for my lady, Worm,
Silk garments for the fair;
You're spinning rainbows for a form
More beautiful than air;
When air is bright with sunbeams
And morning mists arise
From woody vales and mountain streams,
To blue autumnal skies.

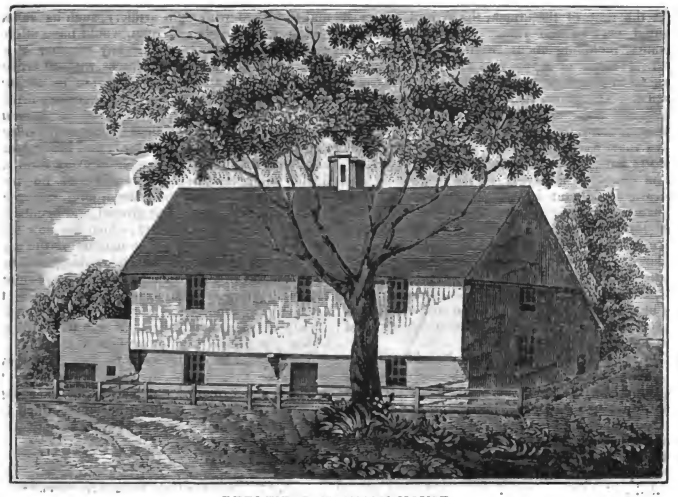
You're training for my lady, Flower!
You're opening for my love
The glory of her summer bower,
While sky-larks soar above.
Go, twine her locks with rose-buds,
Or breathe upon her breast;
While zephyrs curl the water floods,
And rock the halcyon's nest.

But oh! there is another worm
Ere long will visit her,
And revel on her lovely form
In the dark sepulchre:
Yet from that sepulchre shall spring
A flower as sweet as this:
Hard by the nightingale shall sing,
Soft winds its petals kiss.

Frail emblems of frail beauty, ye,
In beauty who would trust;
Since all that charms the eye must be
Consigned to worms and dust.
Yet like the flower that decks her tomb,
Her soul shall quit the clod,
And shine in Amaranthine bloom
Fast by the throne of God!

TEMPERANCE is a bridle of gold; and he who uses it aright is more like an angel than a man.—The English, who are high livers, are more subject to melancholy than any other nation.

They who disparage moral honesty do in truth injure the cause of religion. What is it if a man runs after a sermon, if he cheats or oppresses his neighbor as soon as he goes home. But on the other hand, morality must not discard religion; but be aided and supported by it.



DEERFIELD MANSION HOUSE.

[FOR THE AMERICAN MAGAZINE.]

As one object of the Magazine is to give descriptions of "interesting subjects, scenes, and places to be found in our country," I send you the following view of the old mansion-house in Deerfield, in the county of Franklin, which escaped the conflagration of that town, by the French and Indians, in Queen Anne's war, 1704.

This edifice is situated near the Brick Church, in the centre of the village; its age is not precisely known, but from the best data may be stated at one hundred and fifty years. The ground plan is forty-two by twenty-one feet, with an elevation of two stories; a chamber and a garret extending the whole length of the building. Excepting the walls, which are filled in with brick, the structure is of timber, of a large size and firm texture, most of which remains sound, even to the sills, and the primitive clap-boards at the *gables*, are in a good state of preservation. Other parts of the edifice have been repaired, and do not exhibit so antique a contour as its age would indicate.

This ancient structure excites the curiosity of all travellers who are acquainted with the history of Deerfield, and particularly its *front door*, which is made of double pine boards, firmly attached by iron nails, in a tessellated manner; and near its centre is a triangular perforation, made with the tomahawk of the Indians at the time the town was destroyed. The house was then owned by Capt. John Sheldon, and occupied by his family, including a son and his wife. The doors of the house being firmly bolted, and the windows barricaded, the Indians found it difficult to gain access; and after they had perforated the door, a musket was thrust in and discharged obliquely into the eastern room, which killed the Captain's wife, then rising from her bed in the opposite corner,—the Captain being absent from home at the time. The perforation of the fatal ball is still seen in the wall, and through the original door leading to the front entry. This door has been removed from its place, but is still preserved. Marks of other balls are seen in the ceilings and timber in various parts of the same room.

During this attack upon the door, the Captain's son and wife, who lodged in the chamber over the room in which Mrs. Sheldon was killed, leaped from the east window, with the hope of escaping from the enemy; but the descent was so violent, upon the crusted snow, that the wife strained her ankle, and being unable to flee, was seized by the Indians, while the husband escaped to the eastern woods.

This house and a small Church, were the only buildings within the fort, that escaped destruction. Another dwellinghouse, situated about ten rods southwest of Sheldon's, was defended by seven men and a few women, by keeping up a deadly fire on the assailants; but after the enemy left the place, these brave defenders pursued them into an adjacent meadow, and attacked their rear: while thus engaged, the house accidentally took fire, and was consumed.

The house now standing, being one of the largest in the place, was occupied by the enemy as a *depot* for their prisoners; and on quitting it they set it on fire, but it is supposed to have been saved, by the gallant men in the neighborhood.

At the time of the attack, the central and most elevated part of the village was enclosed with palisades, including about twenty acres, near the northwest angle of which was situated the present house; but this fortification afforded but a feeble defence. The snow, then very deep, was drifted against the palisades, which enabled the enemy to pass over them, and to penetrate to the centre, before they were discovered; the guard usually kept up, having retired to their houses.

The mode of fortifying on the frontiers at that time, was rude and imperfect, calculated only for defence against slight attacks of musketry. In some instances, single houses were enclosed with palisades, of round or cleft timber planted perpendicular in the ground, and the larger works about villages were constructed in the same manner; but generally without ditches and flanking parts. Log houses were sometimes pierced with loop-holes, on every side, through which a fire could be directed upon assailants.

The walls of many of the framed buildings were lined with brick, musket proof, the upper stories projecting over the lower, and loop-holes prepared to fire down upon an enemy, in a close approach; and sometimes flanking parts, resembling bastions, were erected at the angles.

A work called *a mount* was often erected at the most exposed points, resembling a block-house, so elevated as to give a view of the neighboring country; and when these were wanting, *sentry boxes* were sometimes placed upon the roofs of houses.

One great error was common in the construction of forts about villages,—they embraced too much area. Strong block-houses, within the exterior palisades, so placed as to give an *enfilading fire*, and furnished with light artillery, such as *swivels*, and a small number of men, would have afforded an effectual defence against any number of savages, and even small regular forces, without artillery.

Our early frontier settlers, unable to construct expensive forts, and procure the necessary artillery and munitions of war, relied more on *bone and nerve*, in the defence of their cottages and villages, than on *art and science*. Hardy and brave, almost to a fault, they breasted danger in every form, and finally triumphed over an enemy, of no mean prowess. The contest was indeed, long, severe and bloody; but they held their ground, and bequeathed to their successors a country, which has now taken an elevated stand among the nations of the earth. Our present *border men* have a less dangerous task. With the aid of a government, rich in its resources, they can erect tenable fortifications, provide the necessary ordnance and stores, and in a short time a body of men may be brought into the field, with whom it would be vain for savages to contend.

The condition of the early frontier settlers was not unlike that of the ancients, previous to the invention of gunpowder and fire-arms, as is ingeniously expressed in the following lines, which I do not recollect to have seen in print.

> "When bows and weighty spears were used in fight,
> The *nervous limb* declared the man of might;
> But now gunpowder scorns such strength to own,
> And Heroes, not by *limbs*, but *souls* are shown."*

* These lines are found imprinted on a curious *powderhorn*, made by a friendly Indian, at Lake George, bearing date Sept. 8, 1755. They are said to be the production of the late Judge Paine, who was a Chaplain in one of the regiments at that place, in General Johnson's army. The horn is in the possession of one of the family of Dr. Thomas Williams, who served as a surgeon in the same army; and evinces great skill in the use of a tool, no better than a penknife.

RELATIVE DUTIES.

The condition of man in a state of society includes several particular connexions and relations, or such as he does not bear to the whole society, but to individuals of the society. These relations, though not universal as connecting man with the whole society, yet are universal as comprehending all the individuals of the society, and connecting each with some other. These are the private domestic relations of parent and child, husband and wife, master and servant, guardian and ward. The consequences of marriage are to make the husband and wife one person, or so to incorporate the interests of the wife with the husband, and the reverse, that each has thereby new rights and disabilities not incident to them in their single state, or to others who do not bear this relation. By marriage, the husband becomes liable for the debts which his wife owed prior to the marriage, and also is bound to pay those which she incurs afterwards during the marriage, so far as they are for things necessary to her support, and to provide for her comfortable maintenance. As an offset however to him for this obligation, her personal property, if she have any, becomes his, and her earnings belong to him. He acquires a right also to the income of her real estate, while she lives, and also if there is issue of the marriage surviving her, he is entitled to the income after her decease. She acquires a right to a support from him while he lives, and after his decease is entitled to one third of his personal property, and to the income of one third of his real estate. If there is no child, she has half of the personal property. He cannot make any grant to her by deed, or make any covenant with her. She cannot make a deed to him, or to any other person, nor a contract with any. He can, however, by will give her any estate, though he cannot take property by devise from her; it having been supposed, anciently, when this law originated, that the wife was under his control, and acted by his coercion. As the law is favorable to the wife it remains unchanged, though by the greater politeness of the times, the reason for it has, in the majority of cases, ceased. In some crimes, also supposed to be committed by the constraint of the husband, the wife is excused. And this anciently furnished a reason for allowing the constraint of the husband to prevent her misdemeanors. He might therefore give his wife *moderate* chastisement, but it should be no more than was *necessary* for her government and correction. This is now obsolete, and a wife may have legal process against her husband to punish him for any assault. W.

If every person will amend *one*, all will be improved.

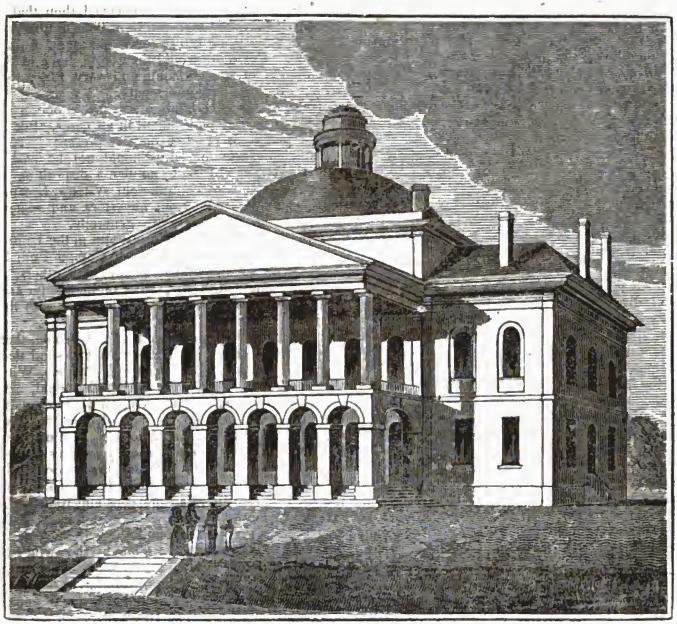
THE CORK OAK.—[QUERCUS SUBER.]

The Cork Oak is not a native of America; but its introduction into the United States has been particularly recommended. It is a native of the countries about the Mediterranean: and is cultivated in Spain, Portugal, and also in the south of France.

It is best adapted to a dry, sandy, mountainous soil. This tree furnishes the cork of commerce, and hence its name: for it has not generally, the properties of other oaks. The cork is made of the outer, thick fungous covering of the bark; and is detached at intervals of ten or twelve years. In some countries, where it is abundant, the people use it for lining and covering their houses, and for various other purposes. It is only in its general appearance, that it resembles the family of oaks.

THICK SHELL-BARK HICKORY.—[JUGLANS LACINIOSA.]

In the genus *Juglans* there are numerous species; and we have before referred to several. The *thick* Shell-bark Hickory has a general likeness or analogy to the *shell-bark*; and is generally confounded with it. It abounds in the western parts of the United States; and is seldom found east of the Alleghanies: but is sometimes seen on the Schuylkill, forty or fifty miles from the Delaware. It is also found in some parts of Virginia. Near the river Ohio it grows among the black walnut, wild cherry, black maple, white maple, and button wood. It grows to a great height like the common shell-bark hickory. The bark also is arranged like that of the last mentioned tree; being divided into strips from one to three feet. The outer scales of the barks do not adhere closely throughout to the inner ones, but retire like the common shell-bark hickory. But the nut differs from that of the other, being almost of double the size, and is of an oblong form. The shell of the nut is *thicker*, and of a yellow hue, while that of the other shell-bark is white. The nut of the thick Shell-bark Hickory is sometimes in the market, at Philadelphia, but it is not common, nor in large quantities.



CAPITOL OF MAINE.

This spacious and elegant building has been finished about two years. It is situated near the western bank of the Kennebeck river, within the town of Augusta, and between that village and Hallowell, on rather an elevated site, from which is an extensive and pleasant view. Augusta is at the head of the navigable waters of the Kennebeck, except for small craft without sails, which ascend to Winslow and Waterville, eighteen miles above. Augusta is about forty miles from the mouth of the river. The capitol is built of granite, and is of agreeable proportions. It has a spacious room or hall for the representatives; and two of convenient size for the senate, and the executive council. On some accounts, it is pronounced superior to any other building in the New England States. Augusta is a flourishing place, and a place of considerable trade. In this town is an arsenal of the United States, consisting of ten buildings of stone.

CAPITAL PUNISHMENT.

[Concluded from the August Number.]

The result has been such as he expected and predicted. Solitary confinement by night is found to be, in this prison, and in all others, highly advantageous, and to operate as a great preventive of evil, and a means of good, by leading to self-examination and serious reflection. Before, when four, six, and even eight criminals were lodged in one room for the night, some of them very depraved and hardened, the effect was truly deplorable. The young, and those comparatively guiltless, were exposed to the corrupt language and evil communications of the more abandoned and the more skilful in vice. The employment of a pious, intelligent and judicious minister the whole time, is also a great improvement on the original plan of the penitentiary. This, and the solitary confinement by night, are necessary to the moral benefits, which all good men have in view, by the institution. It is not merely and solely a place of punishment, of entire punishment,—but there is time and opportunity given the criminal for reflection; there is opportunity and the means of religious instruction and advice, (at the very time the punishment of human government is in course of infliction, in con-

fining the guilty, that they may not depredate on society) by the consoling and cheering truths of religion, which are suggested to the heart. And who so depraved and guilty, as to justify us in saying, that his case is hopeless, and there is no call for efforts to arouse and reform him?

I am fully aware, that the first and chief object of human governments, in the infliction of punishment, is to render society safe. I do not oppose this object, nor contend that it should give way to any visionary plan of reforming the guilty. But I do contend, that if society can be made secure, by a penalty or punishment, which at the same time places the criminal in a situation favorable to his reformation, human government is bound, the christian legislator is bound, to provide such punishment for the guilty, and thus afford the means and the hope of his repentance.

And now to apply these remarks to the penitentiary system. There has, indeed, been an outcry against it, as to inefficiency and failure. It has been said that none are reformed, and that many are rendered more depraved and made more ready "for stratagems, spoils and death." Before the additional building was erected so as to provide for solitary confinement, (I speak of Massachusetts State Prison,) there was perhaps some foundation for such an objection or complaint. But even then the results were far less unfavorable than have been pretended. And it is a little surprising, that from prejudice or pride of former opinions, or from ignorance, any men can be found who listened to and circulated such complaints. In 1820, the (then) Warden of the State Prison in Charlestown, fourteen or fifteen years after it had been in operation, (in a public document, never contradicted, and no doubt, strictly correct) stated, that of fourteen hundred convicts sent to the prison, only one hundred and twenty had been sentenced a second time; which gives only one in twelve who committed crimes after their discharge from the prison; and that, after allowing a number to have left the State, when discharged, there would be eight in twelve (or two-thirds) who were *known* not to have repeated their offences, and who probably became industrious, peaceable and orderly citizens. But even then, indeed, there was weekly religious instruction given, and the young were taught and kept separate, as far as the rooms would admit. Now I think it just to ask, if the old modes of punishment, setting in the pillory, and public whipping, ever produced as great a proportion of reformed offenders. I speak from reference to public documents which came, officially, under my notice. It may also be proper here to interrogate, what would probably have been the number of offenders, and the number of injured in the State, for the fifteen years, if there had been no State Prison? The results now, since there is entire solitary confinement, and regular, and frequent, and faithful religious instruction is given, I understand, are far more favorable; but I am not able to state how much better comparatively. Many, it is stated, are rendered thoughtful and sober, and some give evidence of sincere and deep repentance. And a great portion, after two or three years, return to society, with the characters of industry, sobriety and moral virtue. It is believed, then, that no pious or benevolent man can be willing to abandon the penitentiary and return to the old mode of punishment. For there would then be no hope of the reformation of the criminal, and very little, that society would be safe and secure.

The question is certainly a very grave one, as to abolishing capital punishment in all cases, after so long a period of practice on the present system. Great changes in the laws should not be hastily made. It is as unwise to indulge a disposition to innovate, as it is to continue old systems, because they were approved by our ancestors, and society kept together and was secure, generally.

Public opinion, both in Europe and in the United States is become more opposed to Capital Punishment—with some, as to its policy, with others, as to its agreement with the rights of humanity, and with others again, as to its inconsistency with the spirit of Christianity.

It is believed, by a portion of the people, that Christianity does not justify or sanction it—and that this consideration is superior to all others. With the sincere Christian, this suggestion should, and will have influence. If the Gospel does not allow one individual to take the life of another, how can a society of men justly do it? It must first be shown, that the safety of society requires it, and cannot be safe without it. But this is doubted: and some remarks have already been made with the hope of showing, that the cells and walls are a sufficient guaranty for the welfare of society, both as it regards the criminal, and the bad in society, who are to be terrified from crime by the awful example of others. And as to humanity and mercy, they certainly plead for the guilty, so far, as that they may have an opportunity and the means of reformation, if consistent with the welfare of the virtuous. And as to the policy of the milder system, many believe, and something has been offered above to confirm it, that severe punishments rather increase than diminish crime. It has been fully proved, both in Europe and in America, that where the penalty is severe, the effect has been, that few, very few, are convicted or complained of, and that a vast majority of offenders, therefore, escape all punishment. And this evidently serves only to corrupt society, and bring the civil authority into contempt. To the operation of the severe system in England, we have already referred. It is much the same in the United States, though not at present to so great an extent. It is difficult to find a jury who will bring in a verdict of guilty, against one charged and convicted of a crime which is to be followed by a capital punishment. They will be casuists enough to find some reason for saying not guilty; when, if the punishment were confinement to hard labor in the state prison, they would readily have said guilty. There is no reasoning against this feeling, or this result. So it is. Many men think human governments cannot rightfully take away the life of man. There are cases which might be named; one within two years in a neighboring state, particularly, when the spectators thought, and the judges thought, and the jurors no doubt thought, the prisoner at the bar guilty. But death was the penalty of the crime

charged, and they said not guilty. And the prisoner was discharged. But had the punishment been confinement to hard labor for life, there is no doubt the verdict would have promptly been "guilty."

There is a portion of the people, and I am inclined to believe a large portion of the reflecting and judicious, who are in favor of abolishing the punishment of death, in all cases except wilful and deliberate murder. The capital offences according to the present laws of Massachusetts, are five,—murder, arson, rape, burglary in the night time armed with a deadly weapon, and highway robbery, armed with a deadly weapon; to which may perhaps be justly added, piracy on the high seas, by the laws of the United States. If capital punishment for all crimes, except wilful and deliberate murder, were abolished, (and even for murder, it may be a question,) and confinement to hard labor for life substituted, those in favor of reforming the code of criminal law believe that society would be safe, the punishment would be a sufficient terror and check to the evil-minded, and the criminal at the same time have an opportunity for repentance and reformation.

It is admitted that the state prisons now are strong enough to prevent all escape; and it is admitted by most, that the fear of confinement to hard labor for life, will prove as sure and powerful a preventive of crime, as the punishment of death. And surely, with every man, something is due, with the benevolent much is due, to the consideration of giving a poor miserable sinner time to reflect, to repent, and become prepared for heaven.

As the state prisons are now generally regulated and conducted, I believe they afford an opportunity for reformation, and do often effect that most desirable object. It is true that the principal design and purpose of human government is to punish for the violation of law, for the welfare and protection of its subjects, and heretofore this has been the *only* design. The spirit of this enlightened age, chastened and guided by the spirit of Christianity, has suggested the penitentiary system; by which the criminal may have an opportunity to reform, at the same time, that he is subjected to the restraint or punishment inflicted by society for its safety; and many benevolent and pious individuals are seeking for the accomplishment of this object. I see not how the plan can be opposed by any enlightened philanthropist. No objection to it will satisfy the humane and benevolent, which does not go to show, either that confinement in a state prison will not be a safe and effectual restraining of the criminal from farther mischief: or that this punishment will prove a far less preventive of crime, with the bad who are abroad in society, than the gallows, and will therefore not be so great a terror to the wicked as capital punishment. It is not necessary to go again into the argument on this point. For it is believed, that it has been already shown, that, with the most abandoned and depraved, confinement to hard labor for life will be more dreaded than a sudden death; and that while capital punishment is the penalty of crime, there is great reason to expect most who are guilty will escape all punishment, through the influence of public opinion, and the humane feelings of the jurors. I believe we are far more sure of having the guilty detected, convicted and punished, if capital punishment should be abolished, and confinement to hard labor for life in the state prison substituted, in all cases where now the statutes require the penalty of death; except perhaps in the case of wilful, deliberate murder; and even in that case, the change of punishment might, as some believe, be safely made.

But there is another objection to the penitentiary system, and to punishment in the state prison, instead of ***hanging:*** it is said, that the criminal through the influence of friends and of the chaplain who may possibly be deceived by the professions of the prisoner, as to his sincere penitence, may be discharged, and let loose on society, while his evil passions and dispositions are unsubdued. Such a case is possible, and the consideration deserves attention. But it ought not to operate to prevent the penitentiary system of punishment; but to induce the keepers and officers one and all, as well as the supreme executive of the state, to be on their guard against all such deception; and the pardoning power might by law be rendered more definite, and in some cases, perhaps, not permitted to be exercised. There is reason to believe, that mistakes of this kind have been made, though very seldom indeed.

It may be asked further, what real hope can a sober reflecting man have, that a criminal will reform in a state prison, when in society he has been growing worse and worse for thirty years, under the means of religious instruction. There are many persons so unfortunately situated, that they have had little or no religious instruction, either from parents or clergymen; and have been exposed to temptations from vicious associates, who have led them astray, and hurried them on to the commission of the greatest offences. With regard to such, it appears to me we may hope, that solitary confinement, with occasional friendly advice and suggestions will produce favorable results. The voice and the wish of every benevolent man must be,—let the system be further tried before it be condemned and abandoned. It will be admitted probably without dispute, that to produce a sincere and thorough reformation, the criminal must be made sensible of his guilt: and it has been observed, with great propriety, that the severest punishment which can be inflicted on a person for his crimes, is to convince him of his ill deserts, and thus to awaken him to a due sense of his moral condition. This will prove a severe as well as salutary punishment. It is a punishment which God has indissolubly annexed to crime, (in some degree through the power of conscience,) and until this is effected, all other punishment will be of little or no avail.

Whether then, in conclusion, perpetual confinement to hard labor for life, be in all cases so great a terror to evil-doers and evil-disposed, as the prospect of speedy death; still, if that mode of punishment be a safeguard to society, and at the same time afford an opportunity to the guilty to reform, we have a strong argument in favor of such punishment over that which requires the prompt death

of the convict. Let this mode of punishment, I repeat it, be fairly and fully tested; for if it is found sufficient to deter men from crimes and lead to the discontinuance of capital punishment, it will be a measure in favor of humanity, not less honorable to the present age than the abolition of the *slave trade.*

THE LAST LINES OF MRS. HEMANS.

THE POETRY OF THE PSALMS.

Nobly thy song, O minstrel, rush'd to meet
Th' ETERNAL on the pathway of the blast,
With darkness round him, as a mantle cast,
And cherubim to waft his flying seat,
Amidst the hills, which smok'd beneath his feet—
With trumpet voice thy spirit called aloud,
And bade the trembling rocks his name repeat,
And the bent cedars and the bursting cloud—
But far more gloriously to earth made known
By that high strain than by the thunder's tone,
Than flashing torrent, or the ocean's roll;
Jehovah spoke through the inbreathing fire,
Nature's vast realms forever to inspire
With the deep worship of a living soul.

Dublin, April, 1835.

THE TELESCOPE.

Being lately present when an astronomical telescope was purchased for a country school, I was led to inquire why so few of these instruments are used; not one school, probably, in a hundred being furnished with one. I concluded, that the great reason was, that little was known of their cost and uses; and I inquired of Mr. Widdifield, (an optician of this city, who has an assortment,) the prices of those of such size and power, as would be best to assist young persons in the study of that interesting branch of astronomy, the contemplation of the starry heavens. To those familiar with the telescope, it is unnecessary to say more of its uses than merely to state what is its power. But as few perhaps who are just beginning the study of astronomy know what is here meant by power, a word may be proper on this point. "What can you see?" "How large will the moon look?" are questions often proposed, without receiving satisfactory answers. I shall not now undertake to state every thing which may be seen by the telescope; yet we will give some idea of what may be expected to be performed by them.

If we look at an object, a post for instance, at a certain distance, say ten feet in height, with a telescope of a power of *ten*, we shall find it (apparently) magnified to the height of a steeple, of 100 feet, as seen by the naked eye at the same distance. And if a steeple subtend an angle, at the eye, of three degrees, the angle will be enlarged by the telescope to thirty. If we view the moon with the same instrument, her diameter being about thirty, it will be seen enlarged to five degrees. And if we view it with a power of ninety, the diameter will be magnified to forty-five degrees; that is, if its lower limb touches the horizon, the upper limb reaches half way to the zenith.

The telescopes of Mr. Widdifield are of different powers, from seventy to one hundred and twenty. I shall refer particularly to the former, as it is most convenient for common use. The moon's disk is magnified by it from thirty to thirty-five degrees. Spots on the moon's surface, such as mountains, cavities, &c., are not seen by the naked eye, unless of the extent of seventy miles. But by a telescope of seventy power, objects may be seen, of only one mile in extent. Sharp mountainous peaks, casting their long and well defined shadows always on their sides opposite the sun, and deep cavities with their shadows on their sides next the sun, are now distinctly seen. Bright ragged ridges are also seen extending from the enlightened into the dark parts of the moon's disk. Brilliant spots are seen in the dark part, at such distances from its intersection with the illuminated portion as indicate them to be mountainous peaks, some of great height.

Saturn's ring and some of his satellites are also seen with a telescope of this power, and form an interesting and beautiful object; the disk of the planet being magnified to more than half that of the moon's; and the diameter of the ring to more than the moon's whole diameter. His belts are also discernible.

Jupiter's belts and satellites are seen to great advantage: his disk being magnified to almost double that of the moon. His satellites may be seen by a much lower power. And with the planet, they present an interesting sight, with a power as low as twenty or fifteen.

Many of the nebulæ, which appear to the naked eye as misty spots, are restored, by the power of seventy, to splendid clusters of stars: and many of the double and treble stars, and Castor, a binary one, are easily distinguished as such, by this power.

Telescopes of a very large size do not afford gratification or benefit commensurate to their great additional expense. Their use is requisite only for a few purposes of the science, in an advanced state, but which would be of little benefit to the student in astronomy.

The prices of telescopes generally selected for the use of schools and academies, are the following:

A 2 1-2 feet telescope, highest power	70	$75
A 3 feet telescope, highest power	104	120
A 3 1-2 feet telescope, highest power	120	150

These instruments are handsomely and conveniently mounted on brass tripod stands.

When it is seen at how moderate an expense an instrument may be furnished, which is capable of affording so much rational gratification to all, and especially to the young, (for now quite young children would be ashamed of being entirely ignorant of astronomy,) it is a matter of great surprise, that so few telescopes are found in our populous or common country towns. We wonder any village should be without one. As I hope the defect, with regard to this instrument, may be soon remedied, and children attending public schools favored with the use of the telescope, I shall let them hear from me again (by leave of the editor of the Magazine) on this subject, when I will endeavor to describe some of the heavenly bodies, which may afford them gratification, and render them some assistance in extending their inquiries beyond our own planet.

The more honesty a man has, the less he affects the air of a saint: the affectation of sanctity is a blotch on the face of piety.

MOUNT TABOR.

JUDGES iv. 6, 12, 14. 1 SAM. x. 3. PSALM lxxxix. 12. JER. xlvi. 18. HOS. v. 1.

MOUNT TABOR.

This is the spot generally supposed, as well by travellers, as by biblical commentators, to be the mount of *transfiguration*. But some persons, who have recently visited the Holy Land, have expressed doubts on the subject. The account of the evangelical historian is, "that our Lord took three of his disciples, Peter, James, and John, and went up into a high mountain apart," or privately. His design, no doubt, was to favor them with a new and remarkable proof of his divine character, or mission, that they might be prepared for the severe trial of their faith at his condemnation and crucifixion, by the Jewish rulers, which approached. He often took occasion during the latter part of his life especially, to prepare and fortify their minds for that calamitous and disastrous event. Peter alludes to it, in one of his public letters, as a most memorable occasion, and one which left a deep and lasting impression in favor of Jesus as the true Messiah. Then appeared (in vision) to the trembling and astonished disciples, Moses and Elijah, who held converse with our Lord. And a voice proceeded from a bright and extraordinary cloud which surrounded them, "This is my beloved Son." A similar attestation to our Saviour had before been given. It was soon after this event, that Jesus expressly told his disciples, "that he should shortly go to Jerusalem, and there suffer death."

This memorable spot is about the centre of Galilee. It is a high mountain, and of rough and difficult ascent; but on the top there is a considerable space, nearly level, which was fortified by Josephus, the Jewish general, who lived soon after Christ, and in the time of the Roman army besieging Jerusalem and overrunning Judea. There was formerly something of a village there; and latterly, a monastery. It rises in the midst of a large plain, and is about thirty stadia high. Mount Hermon is not far distant from it; nor is the eminence far off where our Lord delivered his celebrated discourse, usually called his Sermon on the Mount.

THE THREE HOMES.

"Where is thy home?" I asked a child,
Who in the morning air
Was twisting flowers most sweet and wild
In garlands for her hair;
"My home," the happy heart replied,
Smiling in childish glee,
"Is on the sunny mountain side,
"Where soft winds wander free."
O! blessings fall on artless youth,
And all its rosy hours,
When every word is joy and truth,
And treasures live in flowers!

"Where is thy home?" I asked of one
Who bent with flushing face,
To hear a warrior's tender tone
In the wild wood's secret place;
She spoke not, but her varying cheek
The tale might well impart;
The home of her young spirit meek
Was in a kindred heart.
Ah! souls that well might soar above,
To earth will fondly cling,
And build their hopes on human love,
That light and fragile thing!

"Where is thy home, thou lonely man?"
I asked a pilgrim gray,
Who came with furrowed brow and wan
Slow musing on his way;
He paused and with a solemn mien
Upturned his holy eyes,
"The land I seek thou ne'er hast seen,
My home is in the skies!"
O! blest, thrice blest the heart must be
To whom such thoughts are given,
That walk from worldly fetters free,
Its only home is heaven!

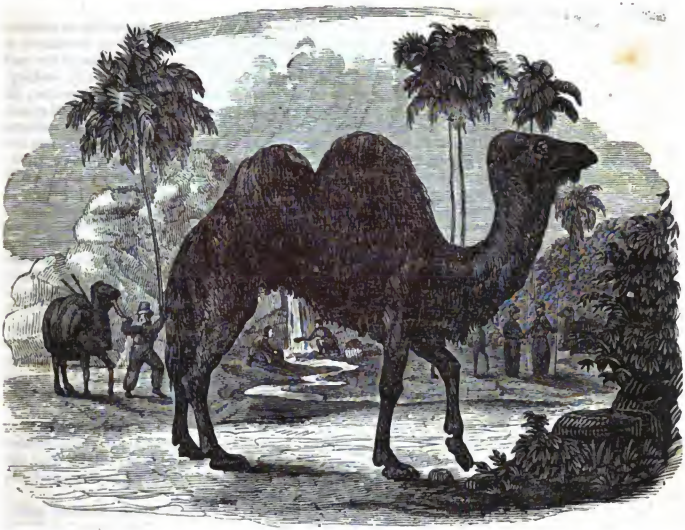
H. A. ROELL.

Among the enlightened theological writers, near the close of the seventeenth century, Herman Alexander Roell held a distinguished place, particularly in Holland. His chief peculiarity was in advancing the claims of reason to judge in matters of religion. He denied, "that the volume of revelation, or the sacred writings propose any thing to us as an object of faith, which is repugnant to the dictates of right reason;" and he affirmed, "that the divine origin of the holy scriptures can be demonstrated by reason alone;" and thus denied the doctrine, then advanced by many theologians, that "the inward testimony of the Holy Spirit in the heart was necessary to a firm belief of their divine inspiration." Roell held some other opinions differing somewhat, (at least in manner of explaining them and speaking of them,) from the *popular* creed of the time. These related particularly to the nature of Christ, and to his Son-ship. "His notions," says the learned translator of Mosheim's Ecclesiastical History, "concerning the Trinity did not essentially differ from the doctrine generally received, upon that mysterious and *unintelligible* subject; and his design seemed to be no more than to prevent Christians from *humanizing* the relation between the Father and the Son. But this was wounding his brethren, the vigorous *systematic* divines, in a tender point: For if *Anthropomorphism* (or the custom of attributing to *God* the kind of precedence, in acting and judging which is usual among men) was banished from theology, *orthodoxy* would be deprived of some of its most precious phrases; and our confessions of faith and systems of doctrine could be reduced within much narrower bounds." We give no opinion as to the correctness of the above remarks; but refer to them as matter of historical curiosity.

A MOTHER'S LOVE.—BY BULWER.

Oh! in our sterner manhood, when no ray
Of earlier sunshine glimmers on our way,
When girt with sins and sorrows, and the toil
Of cares which rend the bosom that they soil;
Oh! if there be in retrospection's chain
One link that knits us with young life again,
One thought so sweet we scarcely dare to muse
On all the hoarded raptures it reviews,
Which seems an instant in its backward range
The heart to soften, and its ties to change;
And every spring, untouched for years, to move,
It is—*the memory of a mother's love.*

CUTTING REPROOF.—A boy who used profane words, was asked by some of his playfellows, who were better educated, who learnt him to swear? He answered, father. And why does your father swear? Because he drinks *rum*. When he drinks rum, he swears at me and mother.



THE CAMEL.

The Camel is among the most singular and useful of all animals. It is possessed of some of the qualities of the horse, the cow and the sheep; indeed it serves all the purposes to the Arabs and some others, which those animals do where they are found. The milk of the Camel is very nutritious; the flesh is a wholesome and good food; and the hair is made into various kinds of cloths and stuffs. For travelling and conveying heavy articles, it is also highly useful. It is fleet in its movements, and the Arab, if in danger or fear, will travel into the wilderness the distance of one hundred and fifty miles in twenty-four hours; and it is capable of carrying a load of four hundred weight.

The Camel has been supposed to be a native of Arabia; but there appear to be two species, one peculiar to Arabia, and sometimes known by the name of Dromedary; and the other called the *Bactrian* Camel, which is found in Turkey and the Levant. The Bactrian Camel has two bunches on its back, and the Arabian but one. But generally their properties and habits are similar. "Efforts have been made to introduce this Camel into other countries, but without success. Still it is not confined to the places above named, but is employed in Persia, and in Egypt and other parts of Africa. They have been of great use to traders and travellers, from the most remote ages, where navigation is unknown or neglected. They often journey in large companies, called caravans, in unsettled parts of Arabia and Africa, amounting to several thousands. The Camel seems remarkably fitted for those countries where it has been so long employed. This is owing to their existing long without water. The structure of its stomach is peculiar, having a reservoir for water, where it remains some time without corruption or mixing with the other aliments, and they generally take a large quantity at a draught. It is said also, that they can discover water by smell, at a great distance. The Arabian Camel is more swift in travelling than the other. Those used by the Jewish patriarchs in early ages were probably of the Bactrian species. They were highly convenient for those wandering families; for they are very tractable, and carry an immense quantity of baggage.

NATURAL THEOLOGY.

A volume on this highly important and interesting subject has been lately published, from the pen of the celebrated Lord Brougham, an eminent British statesman, and sometime lord high chancellor of England. A learned and ingenious work, on the same subject, was written several years ago by archdeacon Paley. It was a happy effort of that popular writer. If it was not profound, it was intelligible and satisfactory. Wollaston and Butler, and others had written on the subject long before, with great ability and learning, but not in so popular a manner as Paley. The work of Lord Brougham presents some new views, and his illustrations are at once striking and convincing. It is not wonderful that such a man should write ably and with some

originality on any topic; but it is remarkable that, amidst his various public duties, he should have found leisure for such a work; and that one whose whole life seemed devoted to politics, should have given his mind so much to theology. Lord Brougham has long been distinguished for his successful labors in the cause of civil liberty and of human learning. No one has done more to extend the means of education among the common people, and to diffuse useful knowledge. And now he has published a work on natural religion; which cannot fail to be of great benefit to society, and to the present generation especially, when there are so many unbelievers and skeptics laboring to unsettle the minds and to corrupt the hearts of the people. Revealed religion is, indeed, most important, as it clears up many difficult points in theology, which no effort of human reason seems adequate to explain or to discover. But natural religion is the foundation (if we may so say, without intending to undervalue revelation) of, or equally necessary to, our belief in the wisdom, power and goodness of God. The *natural* attributes of the Deity (so to speak) are to be assumed, or first proved, before one can reasonably argue on the evidences of revelation. And these divine attributes are to be proved by a knowledge of the works and providence of the Great Creator and Governor of the Universe. A close and thorough contemplation of the works of God, and of the laws which sustain, regulate and control them, abundantly indicate intelligent, and benevolent design, as well as infinite power. Who can examine the mechanism of the human or animal frame, without exclaiming, "We are wonderfully and skilfully made!" Who can look abroad in the earth, without seeing "that it is full of the goodness and the riches of its Creator?" Who can look to the heavens above, and not cry out, "the heavens declare the glory of God, and the firmament showeth forth his handy work! Day after day uttereth speech, and night after night sheweth knowledge of him," that he is almighty, all-wise, and all-beneficent. And who that examines the powers, the capacity and the operations of his own mind can possibly doubt, "that the Father of his spirit," is a Spirit, infinite, unbounded, universal. By an analysis of the mind, he undertakes to prove that it is entirely distinct from matter. This is not indeed a new theory. It has been admitted and advocated by the greatest philosophers in every age of the world. The nature and properties of matter are by no means adequate to account for the phenomena of mind. Lord Brougham refers to the reasoning powers of the mind, its power of attention and comparison, to its consciousness of existence and of action; in a word, to its power of volition, its self-moving power, its freedom: And concludes, that it cannot be affected by the decomposition or dissolution of matter. The mind of man, then, is immaterial; and therefore, *immortal*.

The whole solar system, consisting of the sun, the earth, and other planets with their satellites, are supposed to move through space. What is its orbit, or what the period of its revolution, has not been calculated or conjectured.

A CHILD.

What object in nature so beautiful, so interesting, so attractive, as a child? It is so because it is innocent, and because it has a capacity for endless improvement, and will be constantly making advances in an intellectual and moral course, unless there is some great neglect in its natural guardians and directors, or some very singularly unfavorable events occur to entice it to evil, and divert it from its high destiny. This child is to be formed and moulded, I had almost said *anew*. It has been created, and endowed with inherent powers, or capacities for a boundless progress, for a glorious and happy race. But is it certain to advance and to gain the prize? Who is to direct and cultivate the unfolding germ of intellect? Who is to control and discipline the feelings, as growing years shall draw them forth? Who shall patiently, steadily, and kindly, though firmly, govern the child? There is a great responsibility resting somewhere, and where but on the parents? On them it depends, in a great measure, whether it shall be an angel or a demon; whether its powers and faculties shall be employed for good or for evil; whether it shall become virtuous and mild, and self-denying, and benevolent, and pious, and therefore happy; or whether it shall be wayward, perverse, mischievous, selfish, malignant, and *devilish*, and therefore wretched; ah, wretched beyond expression, and beyond conception.

Look on that lovely child, without guile and without sin; with a mind and heart easily formed and moulded almost at your will; it is docile, full of feeling, and confiding in a parent's love and judgment. And can you who are parents be indifferent to its future character and future lot? No. But you have other cares, and other pleasures, and other engagements, which prevent that attention you know you ought to bestow, for their improvement and their good. One now addresses you, who has had experience in the education of children; and who knows that much, very much depends on the kindness, and firmness, and fidelity of parents. The motive is strong to discharge this high parental duty; and the hope is a reasonable one, that it will not be discharged in vain. They may not all be every thing you would wish; but you will reap the fruits of your labor, and escape the unutterable pangs which negligence and unfaithfulness must produce.

SLAVERY.

The subject of domestic slavery is discussed anew in some parts of the country with a vehement zeal which threatens deeply to agitate, if not to put in jeopardy, the union of these States. By every wise and discreet man, this is a matter of extreme regret and concern. When the Constitution, which is the law of the land, has settled this matter as fully as it could justly interfere, and when the people in the non-slave-holding States have no authority, no business in the affair, what can it avail that appeals are made to the prejudices, and the passions of the people, that inflammatory addresses are delivered to the young and the uninformed, towards curing the

evil? It is at best aiming at a doubtful good,—doubtful as to the results and as to a just right to interfere, with a certainty of much evil and suffering; evil and suffering to an extent which it is impossible to foresee.

We all regret the existence of slavery, as inconsistent with republican freedom and the rights of humanity. We consider it an evil, and would be glad if, in a just, lawful and peaceable way, it might be gradually discontinued and brought to an end. But it is against our principles to use means evidently unjustifiable and wrong, for the attainment even of what we suppose right. On ourselves we may inflict present evil for greater future good, but we have no right to do this with the property, and concerns, and happiness of others. We have no political right to interfere with slavery in other States; nor are we called on as Christians or philanthropists to do more than to give an opinion calmly, and to use cool arguments against it. All beyond this, is improper, unwise, unjust, and dangerous.

It is enough for us, that Washington and his patriotic colleagues, who formed the Federal Constitution, gave their consent to, and acquiesced in, the domestic slavery of the colored people. It is enough for us, that the holy apostles of Christ speak of slaves, and give advice both to slaves and their masters or owners, without condemning slavery; which they would not have failed to do, had it been absolutely and in all cases a moral wrong. Are we wiser and better or more benevolent than they were?

Without doing any thing to uphold slavery, or to justify it, we must say, that we disapprove of the conduct and proceedings of those who are urging the immediate abolition of slavery at every hazard. Their efforts and speeches tend to agitate and jeopardize the Union, as well as to render the slaves unhappy and desperate, when no feasible remedy is proposed. It is matter of joy to find the intelligent and discreet people in the north, expressing their disapprobation of the conduct of the over-zealous abolitionists. And we hope our brethren in the south will see in it, a disposition to conciliate, to adhere to the Constitution, to be just, and more than just, to act the part of brothers of one great republican family.

B.

GENERAL VIEW OF THE SOLAR SYSTEM.

Ten stars, among the countless number with which the firmament appears resplendent, are known, from numerous observations and demonstrations, to be *planets* revolving about the sun, and deriving light from it. The earth has a similar motion and belongs to the same class of bodies. Several of these planets are attended by *satellites*; and the whole are preserved in their courses or orbits, by a centripetal and centrifugal force united or combined. And thus relations exist among these bodies, by which they may be justly regarded as belonging to one system; having the sun in the centre; and therefore called the *solar system*. As to the other planets, we conclude from analogy, that, like the earth, they are designed and fitted, by infinite wisdom and goodness, for the accommodation of inhabitants, and probably millions of sentient and rational beings are placed upon them. The rotation of the other planets, their atmospheres, of which there is proof, and the changes which may be seen taking place in their atmospheres, resemble so much what takes place on our earth, that no one can doubt that the planets are inhabited. As to the *fixed* stars, it may be observed, that the sun, if viewed from a sufficient distance, would appear but a point, (like a star) and the planets which revolve round it would be invisible; and for the same reason it is supposed that every *fixed* star is a sun, and centre of a separate system, surrounded with a number of planets and comets; which, at different distances, and in different periods, perform their revolutions around them respectively.

CORRECTIONS OF STYLE.

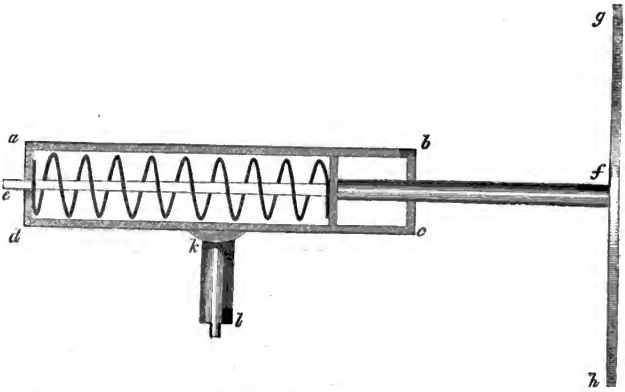
We lately noticed some *American vulgarisms*, taken chiefly from another work. Both the purity and elegance of the English language require that all *superfluous* words should be omitted. We therefore, refer again to the subject to point out the following phrases, in which there is a *superfluous* word, which neither elegance nor force of expression require. "Or else," we often hear spoken, and find in the composition of good writers, but one of the words is sufficient; and if one only were used, it would be an improvement; for redundant words are not a beauty, but a defect. The compound word "oftentimes" may be seen written, and heard uttered; but "often" expresses the same idea, and is therefore better for the reason just given. Instead of saying, "underneath," it would be better, as well as more concise, to say "under." The phrase "at all," is often found written as well as heard spoken, but it is redundant and therefore inelegant. Nor can it make the sentence more emphatical; for the negative word always used in the sentence with it, is sufficiently expressive; and certainly euphony does not require these hard words. The same remark applies to the *obtrusive* word "got." It is redundant and inelegant in ninety cases in a hundred, in which it is used. It cannot be used for the sake of euphony; nor does it add to the strength of an expression, nor serve to explain its meaning. I have, or we have; or I have procured, or have obtained, (where more than the term "have," is necessary,) would be more proper, more elegant, and more harmonious. Besides, the word "got," or "gotten," has another, and very appropriate meaning, for which only it should be used.

We venture also to suggest, that "despite" is better than "in despite." And there are the minor redundances, of "that one," and "this one," "that same one" (as inelegant as "this here," and "that are,") instead of this, that, the same; which are worthy of correction. Every one now studies the English language; but I find as many inaccuracies and redundances of speech in common conversation as there were forty years ago.

He who cheats me once, shame fa' him, but he who cheats me twice, shame fa' me.

THE ANEMOMETER, OR WIND-GAGE.

It consists of a hollow cylindrical tube, in which is placed a spiral wire, that may be compressed by means of a rod passing through the tube. Having observed how much different weights are capable of compressing the spiral, mark the corresponding points on one end of the rod. Let there be affixed to the other end of the rod, so as to set at right angles to it, a plane surface at any given area, say, a square foot. Now set this surface in the "eye of the wind," and the mark, to which the rod is driven, will indicate the force in pounds, &c., that the wind exerts on a square foot.



a b c d, a brass cylindrical tube; *e f*, a piston passing through the tube and spiral; *g h*, the surface exposed to the eye of the wind; *k l*, the support which is fitted to be received into a tripod or table. The piston toward *e*, is marked at the places to which different weights would force it out.

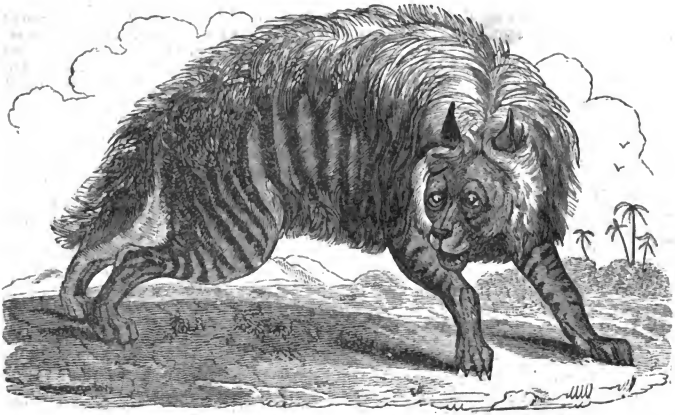
COMETS.

So much has been lately said about Halley's Comet, (as it is commonly called) which is expected to appear this month, that nothing need now be added. But there was a comet visible to some parts of our globe a short time before the one so fully described by Halley, (viz. in 1680,) and a reference to it may not be uninteresting. Its tail, at that time, extended 70° and was very brilliant; but the most remarkable fact, with regard to it is, that it approached nearer to the sun than any other comet; and that Sir Isaac Newton calculated it would approach much nearer at its next *perhelion*, It was within 540,000 miles of the sun in 1680. Its revolution takes up five hundred and seventy-five years; and its return to our system will be in 2255. Several visits of this comet have been noticed and recorded. In the 44th year before Christ; A.D. 531, A.D. 1106; and in the latter part of 1680, and first of 1681.

There is another remarkable fact, respecting this comet. Assuming, as there is good reason to do, that five hundred and seventy-five years, or five hundred and seventy-five and a half years is the period of the revolution of this comet, and counting back from the close of A.D. 1680, we reach the year 2349 before Christ, the year of the deluge in the days of Noah, according to the date of it, as fixed by most chronologists. The opinion, or suggestion of Newton on this point was alluded to in our last number.

HEBREW AND PHŒNICIAN GEOGRAPHY.

The sacred records, in addition to their higher claims on our attention, possess the advantage of giving an account of the forms of society in early ages, and the original and primeval races or generations of mankind. They are far more ancient than any records of Egypt or Assyria, of Greece or Rome. The most ancient and obscure of profane or pagan accounts do not go back so far as Abraham, (though they do to Moses,) much less to Noah, who was ten generations and nearly three centuries, (referring to him even after the deluge,) before that faithful patriarch. From the book of Genesis, especially the tenth chapter, we learn the origin and rise of those kingdoms or monarchies, which changed the face of human affairs, and whose history is the history of mankind for eight hundred or one thousand years from the deluge. The distant and separate settlements, which sprung up by occasional emigrations from the more dense population, are not particularly noticed, nor was it important that they should be.



THE STRIPED HYÆNA

The *Hyæna* is as much dreaded as the Tiger or the Lion: while in its general form and character, it resembles somewhat the dog, or the wolf. And there is an animal found near the Cape of Good Hope, which is called the Tiger wolf. Of the real Hyæna, there are two pretty distinct species, the spotted and the striped. The latter is found both in Africa and Asia. It inhabits Asia as far as India, and the northern parts of Africa. It does not appear that the two species occupy the same region. The striped Hyæna, also called the vulgar Hyæna by the moderns, was known to and described by the ancients. The ground colour of this animal is a brown gray, with dark stripes, transverse and irregular. The ear is broad and rather long. The hair of the body is long, especially on the neck, where it forms a thick mane. This animal chooses the night for its rambles; and though considered very ferocious, it is far from being daring in its attacks. It is only on smaller and weaker animals that they seize. They fly from the presence of man; and even when ill-treated or taken by force, they do not attempt to avenge themselves. They venture to new settlements near the deserts or forests, in the dark, and depredate on domestic animals, or consume the most filthy offals. They are very voracious; and their teeth are of great size and strength. As to their gait and movement, they cannot be said to be very fleet; but when pursued, they move with considerable swiftness, though with apparent lameness; owing probably to their crooked hind legs. The Hyæna, may therefore be said to be more ferocious in appearance than its character will justify. It has only four toes, or claws, on a foot—the head is rather broad and flat; its fore legs are longer than the hinder, and its eyes are very fierce and wild. The ancients speak of the Hyæna as very formidable and fearful; and describe it as possessing wonderful properties. Its howl was said to be like the human voice; it was supposed also to have a power to charm its destined prey, and even to change its sex. But it is now known to have no *miraculous* power, and to be far less dangerous than formerly represented. In its size as well as in some other respects, it approaches very nearly to the wolf.

THE BOTANIST'S SONG.

"Sleep'st thou or wak'st thou? fairest creature?
Rosy morn now lifts her eye,
Numb'ring ilka bud, which nature
Waters wi' the tears of joy." *Burns.*

Awake thou, my love, (tho' thy visions be bright)
While the dews of the morn, in each ray
Of yon glowing God of the new risen day,
O'er mountain and mead are reflecting the light,
Like gems of an Eastern fay:

While the air is resounding, as thro' it there wheel
Bright insects, deck'd out in their azure and green,
Or in mails of gold and polished steel;
And the trees and the flowers enmantled in sheen
Are fairer and fresher than words can reveal.

Come forth, O my loved one, come forth to the field;
I'll gather for thee the bright flowers,—
While Aurora is leading the wakened hours;
Far sweeter and purer 's the incense they yield
Than e'er breathed from fairy bowers.

Come, fairest and loveliest! The spirit before us,
That shakes not the dew from the blade;
As it springs unrestrained from every bright glade,
The flowers that bloom round, the trees that wave o'er us
Invite us to roam thro' the shade.

P.

American Gardener's Magazine, for August, has been published; and contains much interesting matter. It is published under the superintendence of the Horticultural Society; which is a guarantee for the correctness of the statements. It treats much of flowers, but more of fruits and vegetables, with information for the proper culture of them, so as to have the best products.

BUNKER HILL.

I have often, in former years, visited the heights of Charlestown, where the first great battle was fought in defence of constitutional freedom. The associations called up by a visit to this memorable spot are highly interesting and exciting. We are carried back to the beginning of that wonderful revolution achieved by our fathers, a brave, a high-minded and virtuous generation, who were extremely reluctant in opposing the administration of the government under which they lived, and who never would have opposed it, had not its measures become very oppressive, and the principles advanced by it so arbitrary as to render personal liberty and property wholly insecure. They were not a restless or innovating people; they were not averse to paying taxes constitutionally imposed, more than their ancestors had been; nor of a spirit to complain of just laws and light burdens. They long clung to the parent government, they had hazarded life and poured out abundantly of their treasures in support of that government. But then, the government was just and parental in its measures. And when in 1765, new and arbitrary principles were advanced, going the whole extent of a despotic power, claiming a right to govern, and asserting the duty of the subject to submit, in all cases whatever; they were surprised, they were grieved; and they petitioned, remonstrated; pointed out the limits of rulers and the rights of the people, and appealed to constitutional principles, which were fully recognised in 1688, and professed at least to be correct ever after. For ten years, they endured this state of things, but without relaxing in their claims, their appeals, their remonstrances and petitions. Some rash and turbulent acts were committed by a few of the people, when goaded, oppressed, threatened and insulted. But the government of the province did not rebel; it only reasoned, and argued, and pleaded,—but this was done so powerfully, that a military force was sent over, in 1768, to Boston, to keep the people in awe, and to *enforce* submission, to any measure the administration might order. This force might have been put down, or sent back to England by the brave yeomanry of the country. But it was not attempted, it was not thought of; the people, and their more able advisers supposed the king was misinformed, and had been deceived. And they therefore still submitted to, and endured repeated arbitrary acts; nor did they resort to force till they found force was to be used by the government to destroy their rights and to enslave them; and even then, it was expressly declared and honestly intended not to use that force, except in self-defence, and to ward off the blow first aimed at their vitals. But, spite of the counsels of her ablest statesmen, and heedless of the resentment of an abused but brave people, whose spirits corresponded to the justice of their cause, the British rulers drew the sword, and rushed upon "the thick bosses of the freemens' buckler;" when the latter, having endured till endurance would have been pusillanimity, and forborne till forbearance would have been an invitation to oppression and a criminal surrender of their natural rights, breasted the dagger's point and resisted the ruffian arm of tyranny raised to crush them: and Bunker Hill, on the 17th of June, 1775, was the place and the day, when America announced to the world, that she would be free, or that tyrants should possess the land only by shedding the blood of her hardy and virtuous sons.

Within a few days, being in the spirit of sixty years ago, and knowing that I must soon put off this mortal body, I again turned my feeble steps to this consecrated spot; consecrated by the number and value of the victims who offered themselves on the altar of their country's freedom; by the blood of Warren, Gardner, Parker, McClary, Moore, and others.

The massy monument is rising to perpetuate their noble daring and their heroic deeds in defence of liberty; and it shall stand long as the proud eminence on which it rests; to tell the story of our fathers' bravery, to read a lesson of warning and of terror to arbitrary rulers, and declaring to the world, in all future time, "that resistance to tyrants is obedience to God."

After the affair at Lexington and Concord on the 19th of April, which, however, was not decisive of a contest by force, but only a new proof of the designs of an arbitrary ministry calling for more energetic measures for defence, the militia of Massachusetts, of Connecticut, New Hampshire, and Rhode Island, assembled at Cambridge and vicinity to protect the country from further inroads of the British army, then in possession of Boston. By advice of the Executive Committee of the Provincial Congress of Massachusetts, with the consent of the chief officers of the militia, on the night of the 16th of June, a detachment was ordered from Cambridge to fortify Bunker Hill, though it was opposed by some who were consulted, as a rash or dangerous plan. It had been in contemplation for several days before to occupy either this spot, or the heights of Dorchester on the south of Boston, or both of them at once; in the hope that it would induce the British troops to depart from the metropolis and from the province. The detachment consisted of about twelve or fifteen hundred, under the immediate command of Colonel William Prescott, of Middlesex county; General Israel Putnam, of Connecticut, having the superintendence and direction of the enterprise. When the detachment reached Bunker Hill, it was concluded that the spot was too far from Boston; and it was soon determined to advance to another eminence (called Breed's Hill) distant nearly half a mile, on an air line, and directly towards the metropolis. At this latter spot, an entrenchment was began, of nearly a square form, and of about five rods each side; and by sunrise on the 17th was nearly completed. General Putnam was on the ground during the night, and gave directions or advice in laying out the plan for the entrenchment which was made. But he rode off the peninsula, at an early hour, no doubt, to forward recruits, for he must have anticipated an attack from the British; and soon after returned, to direct in the operations and movements which might be more necessary if an assault should be made. Meantime a portion of the troops in the metropolis, under General Gage, were ordered to

the north part of Boston, and directly opposite to Breed's Hill, (the distance of three quarters of a mile, and separated by Charles River,) to fire on the militia laboring at the entrenchment. A heavy cannonade was soon began and continued from this part of Boston, and from two large ships of war then riding in the river, between Boston and Charlestown. And at an early hour in the forenoon, two floating batteries were sent up an arm of the river, on the west and north-west side of Charlestown, to annoy the recruits which might pass over the neck for the newly erected fortifications. The forenoon was probably occupied by the British officers in devising and maturing a plan for an attack on the American militia, at Breed's Hill. Aware of a powerful assault, Prescott despatched Major Brooks (a colonel during the war, and afterwards governor of Massachusetts) to Cambridge, to request a seasonable reinforcement from the main body of the militia there assembled, under command of General Ward. But Ward thought he was in danger of an attack from the British, and declined sending any of his men to Charlestown. Brooks then proceeded to Medford, (and all this on foot, as he was unable to procure a horse,) to urge on the New Hampshire troops stationed there under Colonels Stark and Read. Most of these marched for Charlestown, but did not arrive till between two and three o'clock, and just as the first attack was made by the British.

Between one and two o'clock, the British troops, to the number of three thousand or more, left Boston in boats, and landed at a point in Charlestown, about south-east from the works thrown up by the militia, and half a mile from them. The accounts vary as to the number, but three thousand is the lowest given, while the Americans were estimated at two thousand, then on or near the heights; for some recruits had been brought on at this time by the influence of Putnam. Some time was spent by the British troops in forming, when a large detachment of them proceeded northerly, near the banks of the Mystic river, instead of marching up north-west, directly for the entrenchment. But they advanced slowly, which gave Putnam time to place men in front to oppose them, as it appeared to be their design to advance some way in that direction, and then make an attack on the militia at the entrenchment in the rear. The Connecticut troops, and some others, and among them the New Hampshire militia, who had then reached the ground, (it being nearly three o'clock,) were posted at a rail fence, near Mystic river, north-east of the entrenchment, a little more than one-fourth of a mile, to check the British advancing there, as above stated. The militia threw up some grass newly mown against the fence, to form what shelter they might, slight as it was. The British fired on these men soon as they came sufficiently near; but the Americans were ordered to reserve their fire till the assailants approached within a short distance, that it might be with more effect. The British had expected the Americans would not stand their fire, but would retreat on their approach. But they soon found their mistake, by a most tremendous and destructive fire, which led them precipitately to retreat to their boats, or near them; having lost as great a number of the detachment as ever fell in the field, where no greater numbers were engaged. The British officers soon rallied their men, and advanced again to the American lines. They were received in the same cool and resolute manner, by the militia as at the first assault; who pouring into their ranks a deadly fire soon routed them, and they retreated a second time to the vicinity of their first landing place. The British generals in Boston witnessed these defeats, and soon ordered a reinforcement. The additional number of troops sent over is not known; but probably not less than fifteen hundred or one thousand. Two general officers accompanied them. And a part of the reinforcement consisted of light artillery. In the meantime some additional men were added to the American forces, who were ordered on to the heights by Putnam; making, probably, in the whole thus on the field of battle, nearly two thousand five hundred. Some cannon were also brought on by the Americans; but a part were unfit for use, or wanted balls or cartridges of a proper size. It is in evidence, however, that one or more was near the rail fence, and was several times fired. In artillery, the British had greatly the superiority; and in men also, they were nearly double. The third attack was made more directly and fully against the entrenchment on the hill; and it was now approached by the British on three sides. Between the second and third attack, and just before the last, the town of Charlestown, then consisting of about two hundred wooden houses and stores, was fired, no doubt by design of the British, which added to the horrors of the occasion. The militia had very little ammunition remaining on the third attack, and that was soon expended; and few recruits had arrived after the battle began. The British soon took advantage of this, and rushed over the breastwork within the entrenchments; and on the east side, their artillery fired through an opening on the militia posted there. Word was then given to the militia to retreat; but many fell at this time, and as they were leaving the fort. It was then that the brave Warren also fell, a few rods from the entrenchment, whither he had come a short time before the retreat. The militia stationed at the rail fence on the east, and near Mystic river, were not so powerfully attacked as before, and they were ordered up the hill to support those in the breast-work, but the retreat had began just before they arrived; and all the assistance which could be given, was to cover them in part as they left the entrenchments. In this, General Putnam appears to have been active; and when the militia reached the real Bunker Hill, nearly half a mile in rear of the breastwork, and which was in the way to pass over the neck from Charlestown, he attempted to stop them there, to throw up an entrenchment, and make a stand against the British troops then pursuing them. But the attempt failed, and all the militia passed over the neck to Cambridge and Medford, before or by six o'clock.

The loss of the British, in killed, wounded and missing, was stated to be from sixteen hundred to seventeen hundred; about eight hundred of

which were killed, and among them a large portion of commissioned officers; not less than eighty. The accounts given were various. Of the Americans the killed, wounded and taken, were about four hundred; one hundred killed, nearly three hundred wounded, and between thirty and forty taken prisoners, in consequence of their wounds.

This first great battle of the revolutionary contest, convinced the British of the daring character of the Americans, and made them cautious in their future attacks. The militia soon poured into the camp at Cambridge and Roxbury in great numbers; and on the third of July, General Washington, of Virginia, took command of all the American troops, by special appointment of the Continental Congress, then convened in Philadelphia. Indeed, a numerous band of brave and generous citizens of the south, hastened to the defence of Boston, and Massachusetts, and resolved to oppose the tools of oppression and tyranny at every hazard. And at all times, when danger should threaten their brethren in the north, in New England, they would be found rushing powerfully to the *rescue*. Let the same spirit be cherished by the citizens in this section of the country: And whenever any part of the Union is threatened, whenever our fellow-citizens of the south or west need our aid, let us unite for their protection and welfare.

LINES.—BY MRS. HEMANS.

If thou hast crushed a flower,
The root may not be blighted,
If thou hast quenched a lamp,
Once more it may be lighted;
But on thy harp or on thy lute,
The string which thou hast broken,
Shall never in sweet sound again
Give to thyself a token.

If thou hast loosed a bird,
Whose voice of song could cheer thee,
Still, he may be won,
From the skies to warble near thee;
But if upon the troubled sea
Thou hast thrown a gem unheeded,
Hope not that wind or wave shall bring
The treasure back when needed.

If thou hast bruised a vine,
The summer's breath is healing,
Its clusters yet may glow,
Through the leaves their bloom revealing;
But if thou hast a cup o'erthrown,
Filled with a bright draught, never
Shall earth give back that lavish'd wealth,
To cool thy parched lip's fever.

The heart is like that cup,
If thou waste the love it bore thee,
And like that jewel gone,
Which the deep will not restore thee;
And like that string of harp or lute,
Whence the sweetest sound is scatter'd,—
Gently, oh! gently touch the chords,
So soon for ever shatter'd!

SLAVERY DISCOUNTENANCED IN MASSACHUSETTS.

We give the following extract from Bradford's History of Massachusetts, lately published, referring to the subject of slavery in this State, in past times. It is a concise statement of facts, and may gratify our readers at this time, when so much is said and written on the subject.

"In 1783, the involuntary slavery of the people of color in Massachusetts was in effect condemned and prohibited, by a decision of the highest judicial tribunal in the State. An action was commenced in 1781, before a lower court, in the county of Worcester, against the master and owner of a slave for an assault and battery made by the master. The defence set up was, that the person on whom the assault was alleged to be made, being a slave, the owner might beat him at his pleasure; and was not therefore amenable to the law for an assault. The case appears to have been decided on great constitutional principles, recognised in the declaration of the bill of rights, "that all men are born free and equal."* The master was convicted of an assault and fined. Those who continued in service afterwards, in the state, remained so rather voluntarily than by compulsion. Public opinion was altogether against domestic slavery. It was believed to be in compatible with the principles of civil liberty, for which the people had been contending, and contrary to the spirit of Christianity. Instances were to be found, however, after that period, of the continuance of slavery, though it was probably voluntary; as some aged persons, of this description, chose rather to remain in the families where they had long lived, than to be cast destitute on society. Before the revolution, domestic slavery was not uncommon in the large towns in Massachusetts; and as late as the year 1774, the public papers usually contained notices of black slaves for sale. The slave-trade had indeed been long discountenanced and forbidden, even from a very early period, (1645,) though both Governor Bernard, in 1765, and Governor Hutchinson, in 1773, were instructed, to give a negative to bills to suppress it, passed by the house of assembly of Massachusetts. The judicial courts were opposed to it. In 1770, when an African was brought into the province by a British vessel, as a slave, he was urged to sue for his freedom; and the court ordered him to be set at liberty. The case was decided, by reference, (as a precedent,) to the principles then recognised in England, that whenever a slave put foot on its territory he became *free*."†

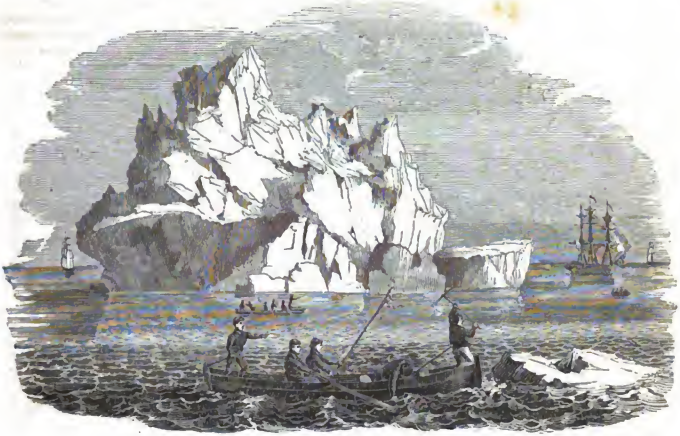
* The decision of the court was, "that the man assaulted or beaten was not a slave;" and was founded on the opinion that slavery was not authorized by law or statute, and though it had been permitted to keep negroes in such a condition, the principle could not be legally recognised and sanctioned, and that the plea of the master in defence of the beating could not be justified.

† John Lowell, a celebrated lawyer, took an active part in favor of the colored people held in bondage, and offered them his professional aid without fees.

MIDNIGHT.

'Tis sweet at midnight, by the soothing fire,
When all the world is lock'd in silence deep,
To bid imagination's wings aspire
To *Edens*, beauteous as the dreams of sleep;
While view'd at distance, breaking on our fear,
The idols of the past arise again,—
The eye of mind embodies the once dear,
In shapes of fairer mould, and free from pain.
They come, they come; and their fond looks of yore
Again to fancy seek to soothe our grief;
We *feel* their presence—feel at our heart's core,
And woo deceit, less palpable than brief;
We fain would speak, but hear no answering tone;
We start, and weep, to find ourselves alone.

London Literary Gaz.



ICE ISLANDS, OR ICE-BERGS.

In particular situations on the American coasts in the high northern latitudes, the ice of successive years is piled into glaciers, which often rise to a great height and are of large extent, till their foundation being undermined by the waves, they descend into the ocean, and are carried by the current to great distances. They are frequently met in the latitudes passed by vessels sailing between Europe and America. In passages from England to Canada, Nova Scotia, and the northern parts of the United States, they are frequently encountered; and they form to the mariners, much more to the passengers, a fearful spectacle. They are carried at the rate of a league an hour by the current, and often are surrounded with a thick vapour, so as not to be seen till very near; and if they come in sudden contact with a vessel may dash it in pieces. Scarcely a year passes, that we do not hear of shipwreck from this cause.

TOMATO, OR LOVE APPLE.

This plant or vegetable, sometimes also called the Jerusalem Apple, which belongs to the same genus, with the potato and egg-plant, was first found in South America. It is now cultivated in various parts of Europe, and in North America, but chiefly in the southern and middle states. In warm climates they are more used than in northern, and have a more pleasant taste. The Italians make great use of this plant in cooking, and it is becoming more common in England. In northern latitudes it is raised against walls and artificial banks, being first brought forward in hot-beds, and then transplanted like other tender annuals. The Tomato is a tender, herbaceous plant, of rank growth, but weak, fetid and glutinous. The leaves resemble those of the potato, but the flowers are yellow and arranged in large divided bunches; the fruit is ornamental, of a bright red color, and pendulous. It is now much used in various parts of the United States; and many people consider it a great luxury. It is used in sauces and soups; and when boiled and seasoned with pepper and salt makes an excellent sauce for fish and meat. A learned medical professor in the West pronounces the Tomato, a very wholesome food in various ways, and advises to the daily use of it. He says that it is very salutary in dyspepsia and indigestion; and is a good antidote to bilious disorders, to which persons are liable in going from a northern to a warmer climate. He recommends the use of it also in diarrhœa, and thinks it preferable to calomel. If this vegetable, or fruit, has the properties here ascribed to it, it will no doubt soon be universally cultivated. For most other vegetables except rice, are supposed to be unfavorable to dyspepsia.

IS HE RICH?

He is rich in sense, he is rich in worth,
And rich in the blood of an honest birth;
He is rich in his country's heart and fame,
And rich in the thought that high souls claim;
He is rich in the books of olden time,
And rich in the air of a freeman's clime;
He needs no star to shine on his breast,
For the crimson drops of his father's crest
Fell, noble gems on the battle field,
Where the haughty foemen were taught to yield.
Then ask no more, "Is he rich in gold?"
His riches were bought—but can no'er be sold.

FIRST AND EARLY SETTLEMENT OF THE EARTH.

According to the opinion commonly received, the general deluge, recorded by Moses, occurred about the year of the world 1650: and 2350 before the christian era. There is a difference however among chronologists, from 100 to 300 years, on account of different ages assigned to some of the antedeluvian patriarchs. In about 150 from the deluge, that is about the 2200 before our era, according to the common computation, the inhabitants were considerable in the part of the earth where they lived, there being then five generations, including the sons of Noah, who lived to a great age. The building, or the attempt to build Babel, the separation of the human race and their dispersion into distant regions, is usually fixed at this period.* Some of them, the children and grand-children of Ham, went south to Canaan or Palestine; and thence some of them into Egypt, where the climate is mild and the soil rich, and soon became a numerous people. The descendants of Japhet settled in the more northern or northwestern parts of Asia, and thence passed into Europe. And the posterity of Shem settled Chaldea, and thence emigrated into the eastern and southeastern parts of Asia. The people of India are certainly an ancient race. Some suppose that Noah himself who lived 300 years after the flood, and therefore 120 or 150 after the dispersion, travelled far east of the Euphrates, with some of his more favored descendants. Those who descended from Ham and settled Egypt, and then other parts of Africa, would be likely in a few generations to differ greatly from the other families of mankind. And the posterity of Japhet, who settled in a more northern climate, would also, in a few generations, certainly in a few centuries, become a hardy, enterprising race, and in many respects differ from those both of the south in Africa, and of the east in India. In the time of Abraham, about 320 or 350 after the deluge, and before our era 1950, who was of the tenth generation from Noah, the population of the world was great and extensive. Every generation would naturally emigrate to new regions, for the sake of more land for themselves and posterity. The northern parts of Africa, and probably Nubia and Ethiopia, Arabia, middle and western Asia, reaching also some way to the north and the more eastern parts of Europe, were probably inhabited in his day. Four hundred, or four hundred and fifty years later, in the time of Moses, being about 800 years after the deluge, the greater part of the eastern continent was settled. Some extreme parts, no doubt, were vacant, and also large tracts between some of the settlements. In the time of David and Solomon, about 1000 years before our era, and 1400 or nearly that period from the deluge of Noah, most of the countries of the old continent were *full* of inhabitants. Wars were frequent; and large armies were easily assembled, especially in the older and more populous countries, while those in the distant parts were cultivating and replenishing the earth. There is no reason then to disbelieve the accounts of armies of *hundred of thousands*, and of many thousands slaughtered even in a single battle.

* Various causes have been assigned for this attempt. That it was intended for a place of safety, if another deluge should occur, is as probable as any. It could hardly have been for a place of worship; and Nimrod could not have aimed at a fortress in that state of mankind. Were not the Pyramids in Egypt designed originally for the same object, though afterwards used as cemeteries?

TRUTH AND FALSEHOOD.

BY R. H. WILDE.

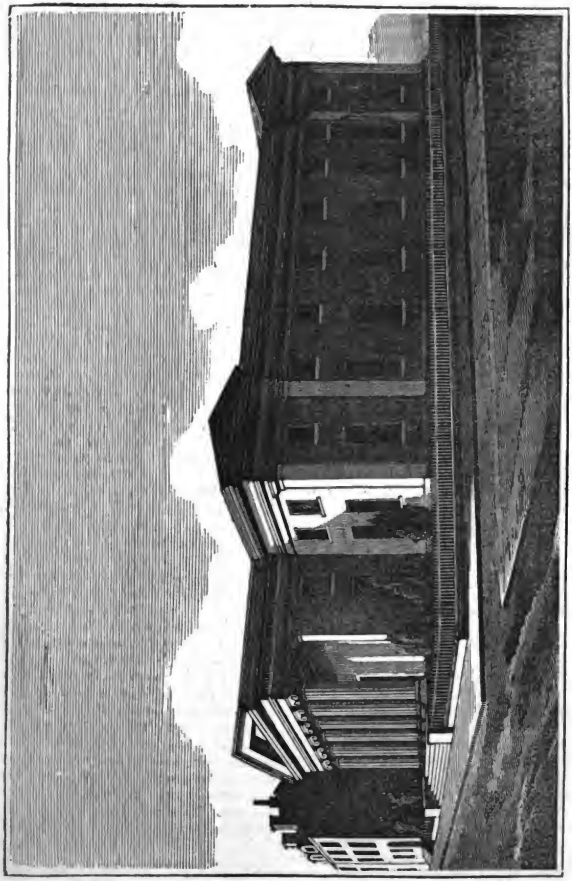
There 's a tuneful river,
In Erin's Isle,—
Where the sunbeams quiver
In silvery smile;
Where the leaves that fall
'Neath the Autumn sky,
Grow gem-like all,
And never die;
And such is the stream, by Truth enlightened,
That leaves the breast by Wisdom brightened,
Where even the joys that the storms dissever,
Are turned to gems that flow forever.

There's a darkling tide
In the Indian clime,
By whose herbless side
There's a sulphury slime—
To the flower that it touches,
A scorching wave—
To the bird that approaches,
A weltering grave:—
And such are the waters of bitterness rising
In the desert bosom of dark disguising;
And the birds of Joy, and the flowers of Feeling,
Must perish wherever that wave is stealing.

BEAUTIFUL EXTRACT.

Oh if there is one law above the rest
Written in Wisdom—if there is a word
That I would trace as with a pen of fire
Upon the unsullied temper of a child—
If there is anything that keeps the mind
Open to angel visits, and repels
The ministry of ill—*'tis human love!*
God has made nothing worthy of contempt.
The smallest pebble in the well of truth
Has its peculiar meanings, and will stand
When man's best monuments wear fast away.
The law of Heaven is *love*, and though its name
Has been usurped by passion, and profan'd
To its unholy uses through all time,
Still, the eternal principle is pure;
And in these deep affections that we feel
Omnipotent within us, we but see
The lavish measure in which love is given.
And in the yearning tenderness of a child,
For every bird that sings above its head,
And every creature feeding on the hills,
And every tree, and flower, and running brook,
We see how everything was *made to love;*
And how they err, who in a world like this,
Find anything to hate but human pride.

For Young Ladies.—Let them never forget that mental improvement should always be conducive to moral excellence; which consists in piety, sincerity, fidelity, activity, charity, and benevolence. And these moral qualities are called into daily exercise, in all stations of life. The first and chief of these is piety. And yet it is to be constantly remembered, that the social duties and personal virtues are to be performed and cultivated. So far from being incompatible with piety, that they are required by the same authority which enjoins love and gratitude to God. And it is a great error of some females, that they imagine they shall fall under the displeasure of heaven by attending to the ordinary duties of life. This is the perversion of true religion, and there have been instances of its injurious and unhappy effects.



[United States Mint, Chestnut Street, Philadelphia.]

THE UNITED STATES MINT.

This establishment has been in Philadelphia from its origin in 1791. The buildings used for the business were formerly in Seventh Street, between Arch and Market Streets. The building, of which we here present a view, was begun in 1829, and is in Chestnut Street, near Broad Street. "The front is one hundred and twenty-two feet, divided into a portico sixty-two feet long, and two wings, each of thirty feet. The building is of the Ionic order, taken from a Grecian temple near Athens. The portico has six columns, three feet in diameter and twenty-five feet high. The material of the building is brick, but is faced with thick marble."

In 1827, the coinage effected at this establishment amounted to $3,000,000, and consisted of 9,000,000 pieces of coin, of gold, silver and copper; the gold being of the value of $131,000, the silver of $2,860,000, and the copper of $23,000. Since the establishment (up to 1829) the whole coinage amounted to $30,465,000, and the number of pieces of coin were 103,081,000; of gold to the amount of $8,255,000, of silver $21,899, and of

copper $513,876. From that time to the beginning of the year 1834, the amount coined was annually, between three and four millions; and for 1834, it was upwards of 7,000,000; of gold, nearly 4,000,000, and of silver 3,000,000.

THE BREAD FRUIT.—[ARTOCARPUS.]

This very useful tree is found in most of the *Polynesian* Islands: in the Sandwich Islands, and especially in *Tahiti*, (or Otaheite.) It sometimes grows to the height of forty feet; and its branches spread widely, with large leaves. Its appearance is rich and luxuriant. The fruit is egg-shaped, the longest diameter being about eight inches, and its shortest seven. The rind, or outer covering, is smooth and green, and marked with hexagonal specks. The part eaten is between the skin and the core, which is hard and unpleasant to the taste. The fruit cannot be long kept after it is gathered unless baked, before it is unfit for food. There is an acid taste, which Europeans do not consider pleasant when they first use it. It serves both for vegetables and bread. It is most salutary when cooked, and is seldom eaten without being baked. The tree is used for timber, and the bark for canoes: and the inner thin bark is made into cloth. This tree and its fruit are justly considered a great blessing to the inhabitants of the Pacific islands. They would find it difficult to subsist without the fruit. It is cooked in various ways, sometimes with milk. And like other fruit or bread stuffs, much depends on the cooking, whether it be either palatable or wholesome. A milky juice also issues from incisions made in the tree, which serves as a glue or cement. The English have transplanted the Bread-fruit tree, to the West Indies: but the black population have a prejudice against it, and prefer the plantain, to which they have been long accustomed. By most of the English planters it is esteemed a delicacy, and they use it in the form of puddings. It is very white, if duly gathered and prepared, and of the consistence of new bread.

Messenger pigeons are employed to convey news from Paris to Antwerp and back. This appears to be a better method than the project of conveying intelligence by balloons.

COSMOGONY.

The only account of the creation or origin of our globe, is that furnished by Moses in the first chapter of Genesis. All others, not derived from him, are mere fable, or exaggerated and obscure tradition. His statement is also the most probable, and the most philosophical; or, if not clearly agreeable to philosophy, it is not contrary to it, as commonly explained. Tradition, indeed, does not go further back than the deluge; all which was previous is derived wholly from Moses, who might have received it, through three or four individuals, from Noah himself.

The account by Moses, however, may be considered rather a new *formation*, than actually a new *creation* of the earth. That our earth, as it existed before the flood, was not a new creation, but a new formation, is quite probable; nor is there any inconsistency in such an opinion with the representation given by Moses. Either opinion may be held, without impugning the Mosaic account. Our earth might have previously existed in some other form, without supposing error or mistake in the Jewish historian. But, that our earth and all other matter was created in time, by the omnipotent, all-wise and eternal Spirit, there can be no question; whether Moses be understood as speaking of a new creation, or not; for true philosophy, as well as revelation teaches this fundamental doctrine. Excepting Moses, the most ancient and authentic *cosmogony* extant, is that of *Sanconiatho*, a Phœnician, probably contemporary with the prophet Isaiah, about 800 years before Christ. But there are only some fragments of his treatise remaining. And so far as his opinion and views can be collected from the remains of his writings, he agreed with Moses; and it is not improbable that he was indebted to that more ancient and learned writer, for the statement he gave, respecting the formation of the earth and of the early history of mankind. Some ancient heathen philosophers supposed the world to be eternal; and others, that matter was eternal, but had received or assumed different forms in different periods of time. They said "the Divine Spirit was essentially active, and therefore as he was eternal, he had been eternally active in creation." But the most general opinion, even among heathens, was that God created the world, in time and out of nothing. This was the doctrine of the Magi, the Brahmins, the Druids, &c. derived probably from a vague tradition from the early patriarchs, or the Mosaic history.

PARADISE LOST IN A FRENCH TRANSLATION BY M. DE CHATEAUBRIAND, is soon to be published, with a preliminary dissertation on English poetry from its origin to the present time. This is a work of great expectation, as the translator is a man both of genius and learning. He is an elegant writer and an accomplished scholar: and his peculiar style seems well adapted to the work he has undertaken. Besides the political writings of Chateaubriand, his 'Genius of Christianity' has given him a name among the eminent *Savans* of France, particularly in the department of ethics and theology.

GENERAL BENEDICT ARNOLD.

Mr. Sparks, of Cambridge, the intelligent and industrious historian and biographer, has written the life of the famous, *alias* infamous traitor, Benedict Arnold. And it is an extremely interesting work. Mr. Sparks seems to have spared no efforts to collect every thing relating to Arnold, which would serve to make his biography entire and complete. The great events respecting the alarming treachery of General Arnold have been long known to almost every American. Still this volume will amply repay for the perusal, though that be a small tax of money and time. One likes to know the duplicity and wickedness of men, (when they are detected,) however humiliating it is to learn how bad human nature is capable of becoming. General Benedict Arnold was born in 1740, at Norwich, in the state of Connecticut; where his father moved some years before, from Newport, in Rhode Island. The family was one of the most ancient and respectable in that State.

In his youth and early manhood, Arnold was headstrong, refractory and mischievous. When an apprentice to an apothecary, he gave his master great trouble. He was often unfaithful, and exhibited a degree of recklessness, not often seen in well educated and well governed young men. Whether he was properly restrained by his parents does not appear. At the age of sixteen, he enlisted in the army then at the northward opposing the French from Canada. When the war of the revolution broke out, in April 1775, he was living at New Haven. He raised a company, and marched to Cambridge with many others from Connecticut. Early in the month of May, there was a plan projected at Hartford for taking possession of the British forts on Lake Champlain. Arnold probably had knowledge of the project. He applied to the provincial congress of Massachusetts for authority to take a regiment and march to that quarter for the capture of those forts; and he soon after proceeded on the enterprise, being joined by some men from the county of Berkshire, Mass. Ethan Allen from the Green Mountains (afterward Vermont) was commander of the Americans assembled for the same object, when Arnold arrived. And there was a dispute between them, as to the chief command of the whole. Arnold complained against Allen; but in vain. In the fall of 1775, he commanded the troops which invaded Quebec, by the way of Kennebec river; when they suffered greatly in travelling through a wilderness of 150 miles. That expedition was unsuccessful; and General Montgomery the commander in chief was slain. Colonel Arnold was wounded. He was distinguished in 1777, in the attacks on General Bourgoyne, previously to his surrender. When the American army pursued the British from Philadelphia, in June 1778, Arnold was left in command of that city, by General Washington. His conduct in that situation was very arbitrary, and in other respects reprehensible. He was accused of retaining property left by the British, which belonged to the public. And both the citizens of Philadelphia and members of the Legislature complained loudly against him. A Court Martial was ordered, touching these complaints by General Washington. But he was acquitted. Yet was probably so mortified and embittered, that he was seeking an opportunity to injure the country ever after. He was too avaricious and too envious to be a good patriot. But he had the policy to cloak his designs, till he thought he had a fair opportunity to gratify his revengeful temper, or his love of gold. He was detected, and the country saved. The particulars of his conduct in this atrocious affair, are detailed by Mr. Sparks with great accuracy and interest. Arnold died in London many years ago. And while he lived, he was an object of disgust and abhorrence to every honorable man.

HOPE'S BRIGHTER SHORE.

[From the London Court Journal.]

O'er the wild waste, th' Autumnal leaf careers,
Nor vale nor mountain now is ripe with flowers;
Nature's fair brow, the snow of Winter sears,
And all but Hope hath fled her once green bowers,—
Hope with her sunny hair.
And why thus lonely lingers she, when all
The glorious gifts of Summer are no more?
Her foot already treads Spring's leafy hall,
Her eye sees sunbeams gild the distant shore,
Distant, yet still how fair.

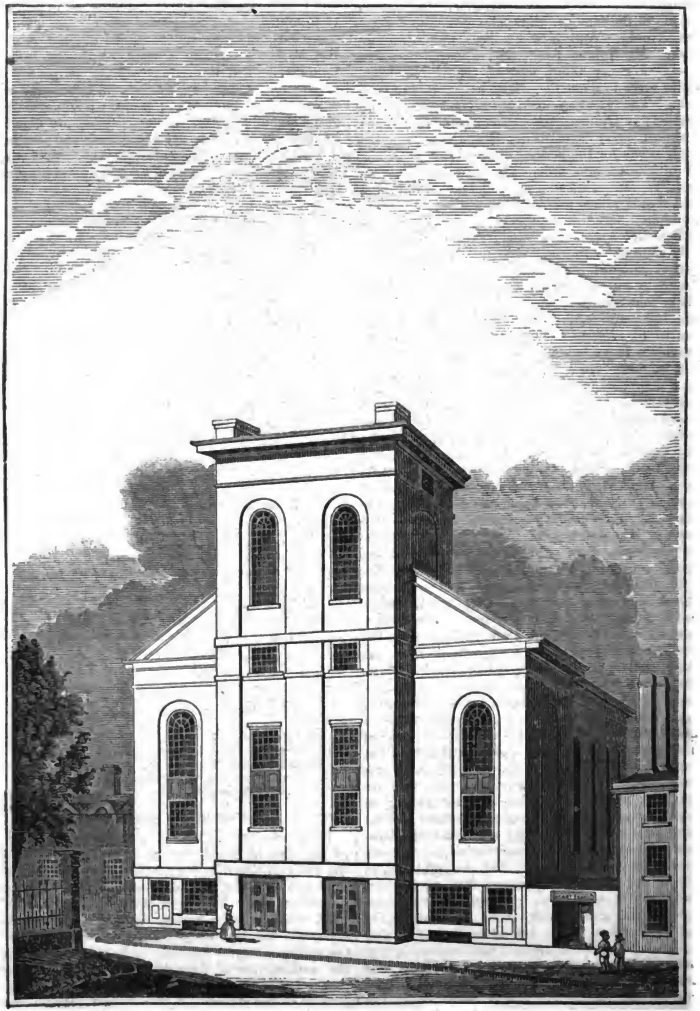
So when the laugh of Childhood and the song
Are heard no longer as in other days,
Hope, with her rainbow wand, still leads along
To where, all flush'd with manhood's noontide rays,
Succeeds a prouder age.
Who loveth Fame? lo where her temple stands!
Who mad Ambition? there, the laurel waves!
All that the majesty of mind commands,
All that the heart of man insatiate craves,
Is found in Hope's bright page.

And yet the mighty majesty of mind,—
Ambition, Fame, are mixed with earthly leaven.
What are their purest joys to the refined
And spotless ones, the promised ones of heaven,
Joys that shall ne'er decay!
The tear of sorrow hath no dwelling there,—
Earth is its birth-place; why should angels weep?
They know not sorrow, as they know not Care,
But, as Life's pilgrim climbs the rugged steep,
They cheer him on his way.

Thrice happy he, whom, through each devious path,
The lamp of Faith conducts with steady light!
His spirit quails not at the tempest's wrath;
He trembles not when low'rs the moonless night,
Nor fears the Ocean's roar.
Oh! life may have its sorrows and its cares,
Yet come they but from sin to purify;
While Death itself, the power that never spares,
Is but the soul bark of Mortality,
Seeking a brighter shore. H.

A CURIOUS SPRING.

In a low situation, and in a place like a cavern, on the coast of Brazil, there is a spring, (*Caldeira.*) the water of which boils up with a violent ebullition, as from a chaldron, and accompanied by a variety of loud noises. It throws up large quantities of mud, which is of a healing quality in cutaneous diseases. But the most remarkable phenomenon of the spring is, that if persons make a loud noise at the embouchure of the caldeira, the boiling water rushes out beyond the spring, to a distance in proportion to the violence of the concussion, and has been known to be thrown ten feet; and sometimes a smoke and flame accompany the violent ebullitions.



SEAMENS' CHURCH, IN BOSTON.

SEAMEN'S CHURCH, IN BOSTON.

This church has been finished and used as a house of public religious worship for the seamen belonging to, or residing in Boston, for about two years. It is located in the north part of the city, and near North Square, so called. Its front faces that square, and is fifty feet, with a handsome tower; and the north side of the building is contiguous to Sun-court Street, and extends seventy feet. The lower story is rough stone, and the upper story is of brick.

It will accommodate as many sailors as are generally in port, and are not connected with families who belong to some other religious society: and it is usually well filled, with apparently sincere and pious worshippers. The Rev. E. T. Taylor, the pastor and teacher, is peculiarly well qualified for the important office which he fills. He was many years a sailor, and he knows the character of sailors thoroughly. He knows their great ignorance of religious subjects; their temptations and trials; their wants and sufferings. And he knows too that they have kind and tender feelings. With his experience, and warm benevolence, and ardent piety, his instructions promise to be highly useful; they have already been useful. The sailors are fond of going to his church, and of hearing his discourses, and his exhortations. They evidently feel impressed with his benevolent and warm appeals to their hearts. He aims also to instruct, as well as to arouse and to impress. We believe it would be impossible to find a religious guide for the seamen better qualified for, or more devoted to the benevolent work. They believe him to be their sincere and disinterested friend; and they confide in his wise and affectionate counsels. It is pleasant to record that Mr. Taylor, though of the denomination of Methodists, is not sectarian in his creed; but is truly liberal in his feelings; and that gentlemen of all sects who have assisted in this benevolent work, have a friendly and christian fellowship with him personally, as a man and a religious teacher.

A part of the basement is used for a reading room, for the benefit of those seamen who have leisure and inclination to visit it. There are several newspapers, and a variety of tracts and small volumes of a moral and religious character. The advantage of this place to sailors, for worship and instruction, are incalculable. The city is saved from brawls and riots, and the poor sailor may find a friend to assist, to teach and guide him.

This house of worship has been raised by the benevolent exertions of several individuals of the city. It is not necessary to name them. They find their reward in the consciousness of having provided the means of moral and religious improvement for a portion of their fellow men, who seemed to be almost abandoned or forgotten by the more prosperous part of the community. A number of mechanics were among the contributors for the church, and were active in calling the attention of others to the subject. And merchants and professional men came forward on this, as on former similar occasions, and gave them liberal aid, without which the object might not have been accomplished.

[Old Seamen's Church, Salutation Street.]

Ancient Customs.—What wise man would ever think of clinging to a foolish practice, because it has become a habit, or is an *old* custom? Or would oppose *reform* merely because it is deviating from the fashion of the last century? Yet such a principle is sometimes gravely avowed, and a salutary change condemned as *innovation;* as if there were any thing dangerous in change. This plea is set up in defence of *tobacco.* The same apology may be made for the use of alcohol. It was almost the universal practice twenty years ago, to drink *brandy, rum, gin,* and *whiskey,* three or four times a day. And the dram-drinkers complain of the *innovation* made by the Temperance Societies. Had they more reason to complain than the lovers of *tobacco,* because this *vile weed* is reprobated by physicians? The latter is not attended or followed indeed by so great evils as the former. But it should be enough, that it is pronounced unhealthy, and is generally offensive.

PARENTAL HOPE.

BY MRS. SIGOURNEY.

"Lo, God hath given thee all them that sail with thee."—Acts xxvii. 24.

Father! who o'er Time's boisterous tide,
A precious bark art steering;
Mother! who, anxious at his side,
Each distant storm art hearing;
Bind ye the promise to your breast,
Thus by the angel spoken?
Believe ye that your circle blest
Shall gain the port unbroken?

Wide sever'd o'er his voyage course,
Some idle child ye cherish—
'Mid stranger-seas and billows hoarse,
Far from your side may perish;
Still trust ye o'er these waves of care
To meet in God's communion?
Oh! be your life one sleepless prayer
To gain that glorious union.

When stranded on the rock of woe,
Life's last faint watch-light burneth,
And shuddering toward that bourne ye go,
From whence no guest returneth—
Then may each bark your love has launch'd,
Gliding with a sail unriven,
Send forth a seraph soul, to form
Your "family in heaven."

DESPONDENCY, AND ASPIRATIONS OF FAITH AND HOPE.—By Mrs. Hemans.

My soul was mantled with dark shadows, born
Of lonely Fear, disquieted in vain;
Its phantoms hung around the star of Morn,
A cloud-like weeping train;
Through the long day that dimmed the autumn-gold
On all the glistening leaves; and wildly roll'd,
When the last farewell flush of light was glowing,
Across the sunset sky;
O'er its rich isles of vaporous glory throwing
One melancholy dye.

And when the solemn Night
Came rushing with her might
O'er stormy oracles from caves unknown,
Then with each fitful blast
Prophetic murmurs pass'd,
Wakening or answering some deep Sybil tone,
Far buried in my breast, yet prompt to rise
With every gusty wail that o'er the wind-harp flies.

"Fold, fold thy wings," they cried, "and strive no more,
Faint spirit, strive no more!—for thee too strong
Are outward ill and wrong,
And inward wasting fires!—Thou canst not soar
Free on a starry way.
Beyond their blighting sway,
At Heaven's high gate serenely to adore!
How should'st *thou* hope Earth's fetters to unbind?
O passionate, yet weak! O trembler to the wind!

"Never shall aught but broken music flow
From joy of thine, deep love, or tearful wo;
Such homeless notes as through the forest sigh,
From the reed's hollow shaken,
When sudden breezes waken
Their vague, wild symphony:
No power is theirs, and no abiding place
In human hearts; their sweetness leaves no trace,—
Born only so to die!

"Never shall aught but perfume, faint and vain,
On the fleet pinion of the changeful hour,
From my brais'd life again
A moment's essence breathe;
Thy life whose trampled flower
Into the blessed wreath
Of household charities no longer bound,
Lies pale and withering on the barren ground.

"So fade, fade on! thy gift of love shall cling
A coiling sadness, round thy heart and brain,
A silent, fruitless, yet undying thing,
All sensitive to pain!
And still the shadow of vain dreams shall fall
O'er thy mind's world, a daily darkening pall
Fold, then, thy wounded wing, and sink subdued,
In cold and unrepining quietude!"

Then my soul yielded; spells of numbing breath
Crept o'er it, heavy with a dew of death,
Its powers like leaves before the night-rain closing;
And, as by conflict of wild sea-waves toss'd
On the chill bosom of some desert coast,
Mutely and hopelessly I lay reposing.

When silently it seem'd
As if a soft mist gleam'd
Before my passive sight, and slowly curling,
To many a shape and hue
Of vision'd beauty grew.
Like a wrought banner, fold by fold unfurling.
Oh! the rich scenes that o'er mine inward eye
Unrolling, then swept by,
With dreamy motion! Silvery seas were there
Lit by large dazzling stars, and arch'd by skies
Of Southern midnight's most transparent dyes,
And gemm'd with many an island, wildly fair,
Which floated past me into orient day,
Still gathering lustre on th' illumin'd way,
Till its high groves of wondrous flowering trees
Color'd the silvery seas.

And then a glorious mountain-chain uprose,
Height above spiry height!
A soaring solitude of woods and snows,
All steep'd in golden light!
While as it pass'd, those regal peaks unveiling,
I heard, methought, a waving of dread wings
And mighty sounds, as if the vision hailing,
From lyres that quiver'd through ten thousand strings:
Or, as if waters forth to music leaping
From many a cave, the Alpine Echo's hall,
On their bold way victoriously were sweeping,
Linked in majestic anthems; while through all
That billowy swell and fall,
Voices, like ringing chrystal fill'd the air
With inarticulate melody, that stirr'd
My being's core; then moulding into word
Their piercing sweetness, bade me rise and bear
In that great choral strain my trembling part
Of tones, by Faith and Hope struck from a human heart.

Return no more, vain bodings of the night!
A happier oracle within my soul
Hath swell'd to power:—a clear, unwavering light
Mounts through the battling clouds that round me roll.
And to a new control
Nature's full harp gives forth rejoicing tones,
Wherein my glad sense owns
Th' accordant rush of elemental sound
To one consummate harmony profound;
One grand Creation-Hymn,
Whose notes the Seraphim
Lift to the glorious height of music wing'd and crown'd.

Shall not those notes find echoes in my lyre,
Faithful though faint?—shall not my spirit's fire,
If slowly, yet unswervingly, ascend
Now to its fount and end?
Shall not my earthly love, all purified,
Shine forth a heavenward guide?
An angel of bright power?—and strongly bear
My being upward into holier air,
Where fiery passion-clouds have no abode,
And the sky's temple-arch o'erflows with God?

The radiant hope new-born
Expands like rising morn
In my life's life: and as a ripening rose,
The crimson shadow of its glory throws
More vivid, hour by hour, on some pure stream;
So from that *Hope* are spreading
Rich hues, o'er nature shedding,
Each day a clearer, spiritual gleam.

Let not those rays fade from me;—once enjoy'd,
Father of spirits! let them not depart!
Leaving the chill'd earth, without form and void,
Darken'd by mine own heart!
Lift, aid, sustain me! Thou, by whom alone
All lovely gifts and pure
In the soul's grasp endure:—
Thou, to the steps of whose eternal throne
All knowledge flows—a sea for evermore
Breaking its crested waves on that sole shore—
O consecrate my life! that I may sing
Of Thee with joy that hath a living spring
In a full heart of music!—Let my lays
Through the resounding mountains waft thy praise,
And with that theme the wood's green cloisters fill,
And make their quivering leafy dunness thrill
To the rich breeze of song! O! let me wake
The deep *Religion* which hath dwelt from yore,
Silently brooding by lone cliff and lake,
And wildest river shore!
And let me summon all the voices dwelling
Where eagles build, and caverned rills are welling,
And where the cataract's organ peal is swelling,
In that one spirit gathered to adore!

Forgive, O Father! if presumptuous thought
Too daringly in aspirations rise!
Let not thy child all vainly have been taught
By weakness, and by wanderings, and by sighs
Of sad confession!—lowly be my heart,
And on its penitential altar spread
The offerings worthless, till thy *grace* impart

The fire from Heaven, whose touch alone can shed
Life, radiance, virtue !—let that vital spark
Pierce my whole being, 'wildered else and dark !
Thine are all holy things—O make *me* Thine,
So shall I too be pure—a living shrine
Unto that spirit, which goes forth from Thee,
Strong and divinely free,
Bearing thy gifts of wisdom on its flight,
And brooding o'er them with a dove-like wing,
Till thought, word, song, to Thee in worship spring,
Immortally endow'd for liberty and light.

MORAL AND RELIGIOUS INSTRUCTION.

In the apprehension of some good men, there is danger that knowledge or science may be considered as the only object of study and acquisition; and that moral and religious culture may be wholly neglected. Knowledge, and mere knowledge, seems to be the chief, if not the sole object of desire; and the chastening influence of religious principles is little regarded. We boast of our knowledge and learning, and we are ambitious of exceeding other nations in science and the arts. Are we as desirous of surpassing them in moral virtue? And are there proper exertions made to provide the means of moral culture, which an advance in civilization will render necessary? Knowledge is certainly far more favorable to good morals, than ignorance; but knowledge is not virtue, nor does it always conduct to good morals. And yet we seem to be in danger of thinking that little more is necessary, to provide for the virtue of the young, than to give them the means of learning. We surely forget the history of other times and nations, when we expect that a literary education is all which is necessary for our children: and that we may safely dispense with moral and religious instructions, if we can make them learned. When Athens was at the height of its literary renown, it was exceedingly lax in morals and corrupt in manners. When France was enlightened by a constellation of *Savans* fifty years ago, there was never a greater degree of moral degeneracy and licentiousness. Mere learning often leads to skepticism, and skepticism leads to dissoluteness of manners. We are not therefore to omit making our children as learned and scientific as we can: but religious, or moral instruction should not be neglected. And it is encouraging to reflect, that the youthful mind is favorable to moral culture. It has a susceptibility disposing it to receive and profit by instruction.—We mean not, that the mind of the young should be filled with mere speculative opinions, and obliged to receive disputed points in theology; but they should be taught to feel their responsibility to God, and the duties of justice, truth, kindness and charity. These instructions are necessary to save them from practical errors,—from errors of the heart; and to give them moral sentiments, and assist in forming good habits; for which all the learning of Solomon would be a miserable substitute, and without which, the wealth and power of the world would afford no security from corruption and suffering

PHENOMENA OF VISION.

Appearances which are unusual, but as readily accounted for on principles of natural philosophy as the most common occurrences, are noticed by the ignorant with superstitious fears; and are calculated also to make false impressions on the minds of the young. Some references to them of an explanatory kind, may not be useless or uninteresting to a portion of our readers. We refer to a few mentioned by Brewster, in his letters on natural magic. In the electorate of Hanover, there is a range of mountains, the highest of which is Brocken. Its height is 3,300 feet, and it commands an extensive view. It has long been the seat of the marvellous with the ignorant people. A spectre is said to haunt the summit. One who witnessed it, May 1797, gives the following account of it: but it does not appear every day, and depends on the state of the atmosphere. "The sun rose about 4 o'clock, in a serene sky: but in the southwest, a brisk wind carried before it the thin vapors, which had not then been condensed with thick and heavy clouds. He soon went towards the inn, and looked round to see if the atmosphere would afford a free prospect to the southwest; when he observed, at some distance, a human figure of monstrous size. Being in danger of losing his hat by the gusts of wind, he raised his hand to his head to protect it, and the gigantic figure did the same. He then made another movement by bending his body; and this also was repeated by the spectral figure. It then vanished for a few minutes; but soon appeared again, acting over all his gestures and motions. He then called the keeper of the inn; and soon two colossal figures appeared in the distance, and over the eminence where the other had been seen; and for some minutes imitated the gestures and motions of the two spectators; then disappeared. But soon again appeared joined by a third: and the three made the same motions which was first made by the gentleman and his host. The year following, the gentleman witnessed the same phenomena; but not altogether so strong and distinct." "Similar phenomena, it is added, are often witnessed. Our own shadow seen in an opposite direction to the sun on a thin vapor near it, will imitate our movements, and the head is usually encircled with a halo of light." Near the lakes of Cumberland, at particular states of the air, horses and dogs have been distinctly seen running for some time, causing great alarm to the inhabitants, till later periods, when the principles of atmospherical refraction on which they depended, were explained. The castles of the faery Morgana, so called, often seen in the straits of Messina, between Sicily and the coast of Italy, which is the appearance of superb palaces, &c. on the surface of the water, are accounted for on the same principles. A spectator standing on an eminence with his back to the sun and his face to the sea, observes buildings, trees, flocks, &c. on the water, but they pass rapidly away. They are pictures of objects on shore, and are owing to the state of the atmosphere, and the position of the spectator. The phenomenon of an inverted ship, which is often witnessed, is accounted for on the same principle. In former periods, it was ominous of shipwreck, or other great calamity.

The young prince of Tuscany was baptized by the archbishop of Florence, by the name of Ferdinand-Sauveur-Marie-Joseph-Jean-Baptiste-Francois-Louis-Goonzague-Raphael-Revnier-Janvier.

EXPERIENCE COMES TOO LATE:

OR A DISREGARD OF THE WARNING VOICE OF AGE.

It does not, indeed, partake of the character of moral evil; but while it exposes to error and suffering, it also argues great want of wisdom and prudence. The child who refuses to observe the lessons, or to learn from the better knowledge of a parent, is considered sadly deficient in docility, or in good judgment. The young apprentice who disregards the instructions and directions of his master, in the vain belief of knowing better or as well, as one who has had several years experience, renders himself liable to the charge of obstinacy or conceit. As we are in the ranks of the aged, it would be hardly decorous to refer to the old proverb, "young folks thinks old folks to be fools, but old folks know young folks," &c. And yet we do honestly believe there is much homely truth in the proverb.

Any one who has lived sixty-five, or sixty, or even fifty years, and has been only commonly observing and discriminating, must be far more able to point out the sources and occasions of danger, the mistakes to which all are liable, the path which leads to honor and enjoyment, and that which tends to disgrace and misery; than those just entering on the stage of active life, the theatre of the world. We are aware, that in these remarks there is nothing but what every one knows and will acknowledge. And yet these self-evident truths are frequently wholly unheeded by ardent, and sometimes, by generous young men. And it is an evil much to be lamented; it is an obliquity in the character of the young, which the wise and good regret, and wish sincerely to remedy. It is not very important to what this defect is to be attributed; and whether it be called depravity, or only an imperfection, the consequence is the same. This disposition, or quality, of our nature, prevents the attainment of much good, and leads to numerous errors and sufferings.—We shall assume, that parents are truly desirous of the improvement and prosperity of their children, and that, without any selfish feelings, they are chiefly anxious for their welfare and respectability in the world. We speak too, with reference to parents of good sense and good habits. But how often does one see the parental advice and warning grossly disregarded. It may be, as to occupation or business, the son is ready to say, "I will find out a shorter or a better way in business, and to wealth, than my elders have pursued. I will try new experiments, which I think promise to give more prosperity or to secure it sooner, than if I follow the plan recommended by my parents. I do not see all the evils which he predicts. He has been mistaken or short-sighted; I will act on my own judgment and according to my more sanguine wishes!" And what is the consequence? He finds himself mistaken, mortified, and perhaps ruined; certainly subject to great loss. But "experience comes too late." He may indeed, afterwards profit of his own mistake, and retrieve his affairs, by doing as he should have done from his first entering on business, and by then following the advice of one who knew better than himself. Still he has suffered by his own folly, when he thought himself wiser than others, and by taking a new way, he has strayed far from the object he proposed so easily to attain.

This imperfection of man is not confined to the young, in the common meaning of that term. Men approaching to middle life, when entering on a new line of business, and, of course, without much personal knowledge respecting it, confident of their own superior wisdom, are very apt to spurn the advice and example of their superiors, and venture on a different course, in expectation of securing greater and more efficient benefits. Thus it often is, with the legislator. He has no experience to teach the difficulties of the subject; and he proposes, with a rash hand, to alter every thing which was done by his wise predecessors. He must have new laws, and different from the old, till his own experience shows him, that he is not so wise as he once thought himself, and that his ancestors were far wiser than he had supposed. He learns, that legislation is a very difficult subject; that little change is necessary, and that he shall see his way much better, if he avail of the lights of a former age.

So it is in making acquaintance, and in the pursuit of pleasure. The young will profit greatly by the advice and information given by a kind, intelligent father, who has seen much of the world, and has had opportunity to study human nature. In forming acquaintance, it is most important to attend to character, and to fix on those of good habits and principles; and in matters of recreation or amusement, the voice of experience, if the young will listen to it, will save from many dangers, if not from fatal evils. The experience of evil may teach us a useful lesson, which we shall never forget; but the remedy is a sore one, and it would be far wiser to follow the advice of those who do not err and will not deceive. And often, too "experience comes so late," that we cannot regain the good standing, or the innocence, we once had; and vain regrets will continually harass our minds, for our past waywardness and folly.

Dr. Watts, when almost worn out with infirmity, observed to a friend who visited him, that he remembered an aged minister, who used to say, that the most learned and knowing Christians, when they came to die, had only the same plain promises of the Gospel for their support, as the common and unlearned. "And so," said he, "I find it. It is the plain promises of the Gospel that are my support; and I bless God they are plain promises, that do not require much labor and pains to understand them; for I can do nothing but look in my Bible for some promise to support me, and live upon that."

In a conversation as to the proper division, or employment of the twenty-four hours, of a day and night, how much was suitable for rest, and how many to labor or study, or other business, there were various opinions expressed—And the sayings of ancient eminent men on the subject were quoted—so many hours for labor, and so many for sleep, and so many for recreation, and so many for meditation and prayer—Sir W. Jones said,

> Seven hours to law, to soothing slumber seven,
> Ten to the world allot, and *all* to heaven.

DAVID RITTENHOUSE.

The United States may justly boast of having given birth to many individuals of philosophical research, and of ingenuity in the physical sciences. Many might be justly named who have made discoveries in these respects, or have improved the systems before received. In mathematics, astronomy, and the mechanic arts, in mineralogy, and geology, it would be no difficult task to find names which deserve to be placed with distinguished men of science in Europe. Among these, DAVID RITTENHOUSE was one of the most eminent. He was born in the province of Pennsylvania in 1732, at a village near Philadelphia: And at an early age he gave presages of his peculiar genius. When engaged in the usual business of a farm, with his father and brothers, he was often detected in sketching mathematical figures. The first evidence which he gave of his mechanical talents, was the construction of a wooden clock, when he was only seventeen years old; and before he received any instruction in mathematics, or mechanics. From eighteen to twenty-five, he applied himself with great diligence to studies connected with the business of a clock and mathematical instrument maker, in which he was then engaged. As he found leisure from the labor of his trade, he read Newton, and other writers on the mathematical sciences. It is asserted, that he deserves the honor of having discovered the method of fluxions, as he was ignorant of the previous invention of Newton and Leibnitz. About this time he planned and executed the orrery; which was the fruit of his united study and mechanical employment. It is true, that before this time, instruments had been constructed, capable of giving the student of astronomy a general idea of the relative motion of heavenly bodies; but his orrery was a great improvement on them, in several respects. He made two orreries with his own hands, and they answered the purpose he had proposed to himself to accomplish. In 1769, Mr. Rittenhouse was appointed with others, by the American Philosophical Society, to observe the transit of the planet Venus over the sun's disc. His observations on the occasion were considered uncommonly accurate; the event was one of great interest to him, and his reputation was increased as an able mathematician and astronomer. His anxiety was so great, that when the planet reached the point of apparent contact with the sun, he fainted: but soon recovered from it, and made the observations he wished. Mr. Rittenhouse was afterwards employed in fixing the boundary line between Pennsylvania and Virginia, between Pennsylvania and New York, between New York and New Jersey, and between New York and Massachusetts. He was a member, and on the death of Franklin in 1790, he was elected President, of the American Philosophical Society; he was also a member of the American Academy of Arts and Sciences in Massachsetts, and of the Royal Society in England. In 1792, he was appointed Director of the Mint of the United States by Washington. For mechanical ingenuity and skill, he has probably not been surpassed by any individual in America, and by very few in Europe.

MOUNTAIN POPOCATEPEL IN MEXICO.

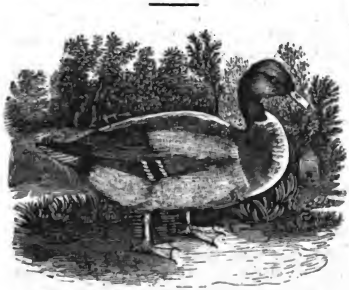
In the southeast part of the valley of Mexico, which is one of the most beautiful and fertile tracts in the world, there are several mountains, some of which are eighteen thousand feet high. On two of the highest peaks there are volcanoes, but not always in operation. Some Europeans have lately succeeded in reaching the top of one of these lofty mountains. The snow was lying on a great portion of it, and far below the summit. They found no vegetation after one third of the ascent. They passed through all the varieties of climate; and found it very cold in some parts; and at, and near the summit a great difficulty and pain in breathing.

One attempt had been before made by some of the party, but their strength failed, and the rains were great. The air was so rarified that it was difficult to be heard. They were nearly two days in ascending, after reaching the sides of the mountain. The mouth of the crater is a mile in diameter, and judged to be one thousand feet deep. The walls or sides of the crater are nearly perpendicular; so that it was impossible to enter it but by ropes fastened at the edge. The volcano was not active, except in emitting smoke and vapor, which was so highly sulphurous as to be offensive near the crater. The sulphur attaches to stones and rocks on the sides of the mountain, and is sometimes collected for the manufacture of gun powder. Snow was observed within the crater, at points on which the sun did not shine; and on the outside the snow and sulphur were often found deposited near together. The prospect is represented as most magnificent and sublime. The adventurers were excessively fatigued, and their pulse one hundred and forty-five; but after a little rest, only one hundred and eight. Their cheeks were deadly pale, and their lips of livid blue.

As no roads are so rough as those that have just been mended, so no sinners are so intolerant as those that have just turned saints.

THE GUINEA HEN: OR PINTADO.

This bird must be referred to Africa, as the place of its origin. But it has been diffused over great part of Europe, the West Indies, and the American Continent. The young are considered a great delicacy; and it is said generally formed a part of the Roman feasts. The females lay a larger number of eggs than the common domestic hens. And on this account, the Guinea Hen is particularly raised and kept. It seems to be a restless animal, and is almost constantly in motion. It is very noisy, and its sounds are harsh and unpleasant. When it is disturbed, it is very clamorous, as if it would raise an alarm for its protection. The Guinea Hen is of a larger body than the more common one; but its wings are quite short. The tail is pendulous like the partridge. It has no feathers on the head, but on the top is a callous protuberance of a conical form. The general color of the plumage is a dark bluish gray.



THE TAME DUCK.—[ANAS DOMESTICA.]

The Duck feeds on grain, herbs and grass. There are several species of this, as of most other *genera* of birds; but all are converted into food by "the lords of creation." The Duck, with the hen, the turkey and the goose, has been made useful by being domesticated, and thus subjected at all times to man's benefit and pleasure. The Tame Duck differs from some others chiefly in its habits, while from others it varies in several respects. Its origin is traced to the common wild duck, or mallard; but it has been domesticated from time immemorial. In its plumage, the Tame Duck resembles the wild; and yet its colors are various. The domestic bird, as would be natural to expect, is not so keen and quick in its look, as the wild one. In their wild, or natural state, it is said, they always pair, and are confined and true in their sexual intercourse. But this is not the case with the Tame Duck. The Tame Duck is very prolific; and it is matter of some surprise that more attention is not given to raise them. Every farmer can find a pond, or make one, by help of a brook, where the Duck might be kept and raised, with little expense.

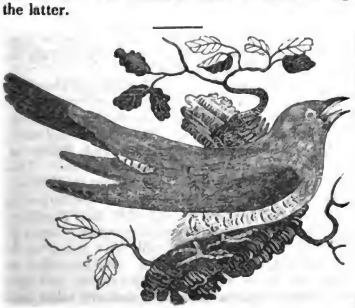
MORALITY ALONE INSUFFICIENT.

Morality, to be uniform, stable and habitual, must be supported by principle, and fortified by some comprehensive doctrine whose influence is powerful and constant. If it rest on the opinion of the individual of what is right, or on his belief of what is useful merely, or on public opinion, it may not always be correct, nor uniform. It must be founded on something more fixed and permanent. Conscience, if enlightened and free from all influence of the passions and of interest, would be a safe guide, perhaps; but who does not know, that conscience may be darkened by ignorance, and blinded by passions. And the opinion of the world, as a guide to what is correct in all cases,—that too, is defective and erroneous. Public opinion can indeed do something; and conscience may do more, in favor of moral virtue. Still a surer and stronger foundation is necessary for its support. A man who regards his own peace of mind, who wishes to avoid censure and reproach from the world, and to preserve a good name in society, has powerful considerations for an upright and honorable course. But religious faith and principles seem necessary to give security to our virtue, and to furnish motives for a pure moral conduct in all situations of life. Religion is but another name for the divine law; and should therefore be the standard and guide of moral actions. And it is sufficient for every situation and every condition of life. It reaches the springs and motives of action. It would direct the affections, control the thoughts, and govern even the desires of the heart. Whatever can effect this, is a sufficient foundation and guard of habitual virtue; and that is insufficient and inadequate, which cannot do it. Faith then, in divine revelation, and an acknowledgement of our obligations to conform to its requirements, must be considered essential to the cause of moral virtue. This will induce men to do every thing, and suffer every thing, and attempt every thing, in discharge of duty; and enable them to attain, as far as is possible for human nature, the highest degree of moral excellence.

Plays were first acted, at Athens, about five hundred and sixty years before our era. Comedy was first attempted; tragedy was introduced twenty years later. They were introduced into England in 1550, in the time of Henry VIII. They seem to have been adopted by the Athenians, as a resting time for singers. The reverse has since been the object.

THE SUMMER DUCK.—[ANAS SPONSA.]

This is an American bird, and is generally called "the Wood Duck." It is found in most parts of the United States and in Mexico. It leaves the more northern latitudes in winter, but is found in the southern parts through the whole year. They frequent solitary and muddy creeks and ponds; and feed on water plants and their seeds, as well as on insects, reptiles and small fish. They prefer fresh water; and they fly with great rapidity. It is not quite so large as the domestic or tame duck, (these indeed, are sometimes tamed) but its feathers are of various colors and very beautiful. Their eggs are numerous, and they have their nests in the same places for many successive years. The teal differs in some respects from the Wood Duck. But its habits are very similar. The canvas-back Duck, is said to be peculiar to the United States. It is most frequently found about the river Potomac; and was known to epicures long before it was described by naturalists. The species of the *Anas* are about thirty in America, and an equal number in Europe; but some of these are common to both continents. The common black duck is among the latter.



CUCKOO.—[CUCULUS.]

The Cuckoo is found in most parts of Europe and Asia. There is a bird in America frequently so called; but it is of a different genus, yet it has some likeness in color and size to the bird of the old continent; and like that, is said to lay its eggs in the nests of other birds. The bird, with this name, in the United States, has a long tail, and is of the size of the robin or thrush. It frequents the thick parts of trees, as if to conceal itself. The Cuckoo of the old continent, migrates from more southern climes to the north, about the middle of April; and their residence usually is not more than two months. They do not pair, like other birds, and their eggs are deposited in the nests of others; viz. the hedge-sparrow, the titlark and water-wagtail. This is a very remarkable fact in natural history. The Cuckoo prepares no nest for itself, but commits its eggs to a stranger. And what is still more wonderful, the bird in whose nest they are deposited, acquiesces in this intrusion; and even takes better care of the eggs and the young of the Cuckoo than of its own. It throws out its own eggs sometimes to have sufficient room for the eggs of the Cuckoo: while the latter it seems to preserve with special care. And either the parent bird which owns the nest, casts out its own young, or permits the young Cuckoos to do it, that the latter may have the whole occupancy of the nest. The young Cuckoo has been seen throwing the true heir from the nest, very young, when it perishes.

MY LIFE IS LIKE THE SUMMER ROSE.

BY HON. R. H. WILDE.

My life is like the Summer rose
That opens to the morning sky,
And, ere the shades of evening close,
Is scattered on the ground to die:*
Yet on that rose's humble bed
The softest dews of night are shed:
As if she wept such waste to see—
But none shall drop a tear for me!

My life is like the Autumn leaf
That trembles in the moon's pale ray,
Its hold is frail—its date is brief—
Restless, and soon to pass away:
Yet when that leaf shall fall and fade,
The parent tree will mourn its shade,
The wind bewail the leafless tree,
But none shall breathe a sigh for me!

*The daily or Florida rose, opens, fades and perishes, during the Summer, in less than twelve hours.

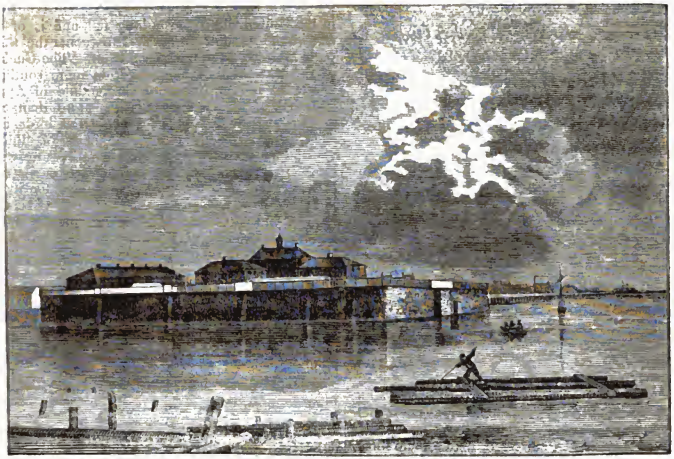
ANSWER.—BY A LADY.

TO "MY LIFE IS LIKE THE SUMMER ROSE."

The dews of night may fall from Heaven
Upon the wither'd *rose's* bed,
And tears of fond regret be given,
To mourn the virtues of the dead!
Yet morning's sun the dews will dry,
And tears will fade from sorrow's eye,
Affection's pangs be lull'd to sleep,
And even love forget to *weep*.

The *tree* may mourn its fallen *leaf*,
And Autumn winds bewail its bloom,
And friends may heave the sigh of grief,
O'er those who sleep within the tomb:
Yet soon will spring renew the flowers,
And time will bring more smiling hours;
In friendship's heart all grief will die,
And even love forget to sigh.

The *sea* may on the desert *shore*
Lament each *trace* it bears away;
The lonely heart its grief may pour
O'er cherished friendship's fast decay.
Yet when all trace is lost and gone,
The waves dance bright and gaily on
Thus soon affection's bonds are torn,
And even love forgets to *mourn*.



THE STATE PRISON, CHARLESTOWN, MASSACHUSETTS.

This State Prison, or Penitentiary, has been established nearly thirty years: and on a similar principle to that in Philadelphia, founded twenty years before. Some alterations in the criminal laws of the State were made at that time; and confinement to hard labour in this prison, was substituted for imprisonment in the county jails, where no employment was provided for the convicts, and for whipping and sitting in the pillory. The number of capital crimes are now five, on conviction of which, death follows, as the legal punishment. For crimes of less enormity, the punishment is confinement in the State Prison, with hard labour. It is intended by this establishment, to keep the wicked secure from depredating on society, to require labour to meet the expenses of the institution, and at the same time to allow opportunity and provide means for the reformation of the prisoners. The object is a combined one—punishment and reform; or rather, the safety of society, and the reformation of the guilty. The design is most praiseworthy, and honourable to the humanity of the present enlightened age. In the opinion of those best qualified to judge, and most entitled to belief, the institution has proved useful, and such as was hoped it would be by the founders. The criminal is safe from doing mischief to others; he is obliged to labour, and thus acquires habits of industry; he is kept in solitary confinement when not at work; and has religious instruction and advice to aid him in his desires to reform.

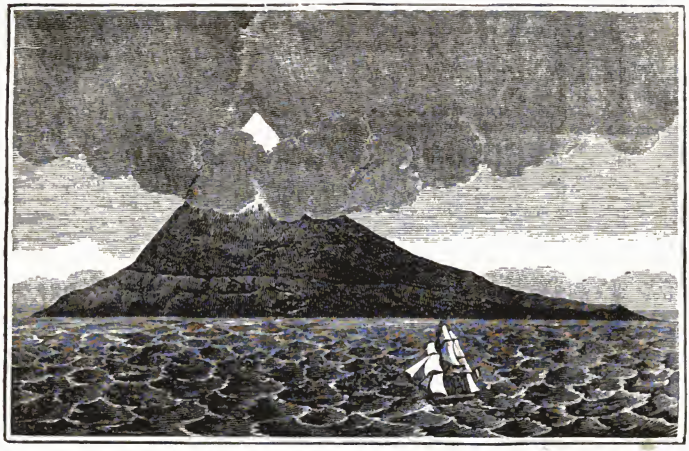
For some years, the buildings were not sufficient to provide a separate cell for each; but that defect is remedied by new buildings. And order generally, as well as individual reform, is now much better promoted and secured. Few who have been discharged, within the last few years, have been returned to the prison, or convicted of new crimes; and there is reason to believe that many afterwards became sober, moral, and industrious citizens. The profits of the labour of the convicts are greater than the expenses, for the two last years, by about seven thousand dollars. The government of the convicts is firm, and strict, but not severe. The error of a severe discipline, and of power in the immediate officers to inflict corporal punishment, has been seen and abandoned; and yet extra confinement is allowed for gross disobedience, or refusal to work. The State Prison of Massachusetts was never better regulated, nor answered more truly to the character of a penitentiary.

The number of convicts in the prison, in October, 1834, was two hundred and seventy-seven, twenty-five more than a year previous to that time. During the year ending in October 1834, the number committed was one hundred and nineteen, fifteen of which had been confined in the prison before. This is a much smaller portion than twelve and fifteen years ago. And though some of those discharged in 1832 and 1833, on the expiration of their sentence, left the State, and *may* have committed crimes in other parts of the country, still there is reason to believe, that now not more than one in twelve or fifteen are found repeating their crimes; and that the residue become reformed, and are sober and industrious citizens. About a fourth part of the convicts are said to be aliens, and not naturalized.

The convicts are obliged to labour the greater part of the twenty-four hours, in which they can have the benefit of day-light; except the time spent in religious worship and in eating. The number of hours of work in a day differ, therefore, in the differ-

ent seasons of the year. They are employed in stone-cutting, at blacksmith work, cabinet-makers, brush-makers, tailoring, shoe-making, upholstering, hatting-making, and tin-workers.

The establishment is situated at the west, or northwest of Charlestown village, near the tide waters of a bay connected with Charles River, and is enclosed by a high solid stone wall; and consists of four large stone buildings, besides a chapel and an extensive work-shed. The whole number of convicts in October 1834, was two hundred and seventy-seven. Two hundred and seven are Americans, and seventy are foreigners. And twenty-seven are sentenced to confinement for life.



THE ISLAND TRISTAN D'ACUNHA.

This island, which lies in the South Atlantic ocean, about 37° S. Latitude, and 11° 44′ W. is fifteen miles in circumference. There are two others in the group, much smaller; one about nine miles, called Inaccessible, and the other about seven miles, by the name of Nightingale. These islands were first discovered by the Portuguese. The island Tristan D'Acunha is but the base of a large mountain, on whose top is a volcano, and is generally covered with snow. The height of the mountain is supposed to be nine hundred or one thousand feet. Fresh water is found on the island; and it is frequently visited by ships from Brazil to the East Indies: But more so by whale ships from the United States. Seals are abundant on the shores of these islands, and great voyages have been made in taking them and saving the skin and oil.

Fig Tree. We lately saw this tree or plant, in Boston in a very flourishing and vigorous state; and was loaded with fruit, which has attained the full size and growth. It was about five feet high, and eight or nine in circumference in the most spreading part. This plant was from a hot-house in the vicinity; but it is believed they will be safe exposed to the open air, for the greatest part of the year. In the latitudes 38 and 40, it is supposed, they may be cultivated with profit. It is probable that attempts will soon be more generally made in the middle and southern parts of the United States to raise them. Many exotics succeed quite well in our country. In England and even in the northern parts of France, very few of their fruits and flowers are indigenous.

A new way to learn a dunce to spell.—A printer had a boy who was an incurable blunderer in spelling, and who gave him great trouble by his mistakes. He made many efforts to teach him; and he scolded and threatened in vain; and as a last resort, ordered him to *boil a dictionary in milk and eat it for his supper.*

Twelve thousand coins and medals of the Roman Emperors have been lately found in an old building at Nievre, inclosed in an iron box; and are curious from their great variety.

ASTRONOMY. NO. II.

In a former number, some remarks were made of a preliminary nature, respecting this globe, and its relation to the other planets and bodies in the solar system, and referring also to the physical circumstances under which the science of astronomy must be studied and acquired. It may be proper to remark here, that the student of astronomy has great facilities in pursuing his inquiries, by the telescope, which has been much improved within a few years. Without a good telescope, his labors will be difficult and his progress very slow. This instrument should be made by one used to the business, and on whose accuracy full reliance may be justly placed. But with a good telescope, the student must be exact in his observations, as to time, and guard against deception from a thick atmosphere and indistinct vision. One must be able to detect errors and mistakes thus arising; and this can be done only by some practice, and by nice observations. And for this purpose it is necessary to use such instruments only as are made by skilful mechanists, and of the most perfect kind possible. The *pendulum clock* and *balance watch* are the most important: and they are now constructed with so much skill that there is scarcely the irregularity of a second in twenty-four hours. It is important also to check these instruments often, to ascertain any errors, by referring to natural events. While chronology gives the order of succession of events, according to years and days, the application of chronometry (or the use of these instruments) enables us to fix the moments in which phenomena occur, with the greatest precision. One such *natural event* is the culmination or transit of a star; that is, its crossing the meridian: And the largest or brightest stars are usually selected for this purpose. The transit instrument is well known to the teacher of Astronomy, and need not be described. Nor is it deemed necessary to describe the quadrant, the zenith, the sector, the theodolite, or the azumuth.

To determine the exact distances between the stars by direct observation is of little service, (such being their immense distance,) but for nautical purposes, the measurement of their apparent distances from the moon, and also of their altitudes is necessary; and as the sextant, or quadrant, can be held in the hand, (and requires no other stand,) its utility on ship-board must be very obvious.

Astronomy cannot be usefully studied, without some knowledge of geography. A general description of the earth is therefore first necessary. As the motions of the heavenly bodies are noticed from the earth, it is essential to know what are the motions of our planet, what its form, and what its relations to the other planets, and to the stars.

The figure of the earth is nearly that of a sphere or globe, and is usually so considered; yet it is not really and strictly such; but its form is elliptical, (somewhat like that of an orange) having the polar diameter shorter than the equatorial, by one three hundredth part; which is so small a proportion, as to be hardly perceivable, except by the nicest observations. Now the sections of such a figure by a plane are not circles, but ellipses, so that the horizon of a spectator would nowhere, except at the poles, be exactly circular, but somewhat elliptical. The circumference of a circle being a little more than three times that of the diameter, (or as 3.141 to 1.000) we have only to ascertain the length of the circumference of a great circle, as a meridian, to know the diameter.

The supposition of an elliptic form of the earth's section through the axis, is recommended by its simplicity, and confirmed by comparing the numerical results with those of actual measurement; and it is satisfactory to find, that the elliptical figure thus practically proved to exist is precisely what ought *theoretically* to result from the rotation of the earth on its axis. If we were to suppose the earth a sphere, and at rest, covered with an ocean of equal depth, it would be in a state of equilibrium, and the water would run neither one way nor another: Suppose a quantity of the earth's materials taken from the polar regions and piled up at the equator, so as to produce the difference of the polar and equatorial diameters of 26 miles, (the real difference according to received theory,) a mountain ridge would be thus raised about the equator, and the water would run to the poles; and the effect would seem to be two great polar seas. But this is not true in nature. The ocean occupies all latitudes, without more partiality to the polar than to the equatorial. Now, the water occupying an elevation above the centre, no less than 13 miles greater at the equator than at the poles, and yet showing no tendency to leave the former and to run towards the latter, it is evident that it is prevented by some adequate power. But no such power would exist in the case supposed; therefore the spherical form is not the figure of equilibrium. And hence it is said, that either the earth is not at rest, or is so *internally* constituted, as to attract water to the equatorial parts, and there retain it. For the latter supposition, there is no evidence nor probability. The other (that the earth is not at rest) is in accordance with all the phenomena of the apparent diurnal motions of the heavens; and therefore, if it will furnish us with the power in question, there is no hesitation in adopting it.

Every one knows that when a weight is whirled round, it acquires a tendency to recede from the centre of its motion, which is called the centrifugal force. So a pail of water suspended by a cord and made to spin round, the surface of the water will become concave; and the centrifugal force begets a tendency in the water to leave the axis and press towards the circumference; and it is urged against the sides of the pail, till the excess of height and increase of pressure downward counterbalances the centrifugal force, and a state of equilibrium is attained. If we allow the rotation to cease by degrees, we shall see the concavity of the water regularly diminish as it becomes slower, the elevated outward parts will descend, and the depressed central will rise, while all the time a smooth surface is maintained, till the rotation is exhausted, when the water resumes its horizontal state.

Striking alliteration in a Scotch proverb—'When the steed's stow'n steek the stable-door.'

BLACK HAWK: OR MAKATAIMESHEKIAKIAK.

This celebrated Indian Chief, of whose bravery much was said during the late war, and who has sometimes been compared to Philip, the renowned Sachem of Mount Hope, was of the *Sac* tribe; and was born in 1767. His ancestor of the fourth generation before him was born near Montreal, and was called Nanamakee, or *Thunder;* his father's name was Pyesa. Black Hawk relates some wonderful stories of his great grandfather, mixed up with dreams and suppositions and traditions, too ridiculous to be repeated. His remote ancestor, it appears, was reputed a prophet; and his descendants believed in his predictions, as to their future condition and fortunes. When driven from the vicinity of Montreal, the tribe went to Mackinac; and thence to a river near Green Bay, to which they gave the name of Sac, and hence the appellation of the tribe. Here they made a treaty with the tribe called the Foxes, who were in that vicinity. But from this settlement they were driven to the Wisconsin; and thence they migrated to Rock River; of which they received a favorable account, drove off the Kaskaskias, and built a village. In this village, Black Hawk was born. He says, that he was not allowed to paint, nor to wear feathers; yet he was distinguished, at an early age, for his courage, in attacking and wounding an enemy of his tribe: and soon after was placed in the ranks of the *Braves.* Black Hawk signalized himself, a little later, in a war against the Osages. When he saw his father strike down an Osage chief, who assaulted him, he also was fired with courage, and smote one of the enemy, and tore off his scalp. These scenes of savage cruelty induced a warlike spirit in his youthful breast; and for several years he was a distinguished warrior in his tribe. He commanded parties of his nation, of one hundred and two hundred, against the Osages and other tribes; and was generally victorious. On one occasion, he went against the Cherokees, when his father was the Chief of the Sac tribe. The Cherokees were the most numerous, but were defeated by the Sacs. In this expedition, his father was mortally wounded, and Black Hawk took the command. Owing to the death of his father, on his return to the village of his tribe, "he blacked his face, fasted and prayed to the Great Spirit for five years, and remained in a civil capacity, hunting and fishing."

But the aggressions of the Osages, again aroused his spirit of revenge, and he went against them with six hundred warriors of Sacs and Foxes. In this expedition they fell on *forty lodges*, and killed all the inhabitants but *two squaws:* and Black Hawk killed seven men and two boys with his own hand. In this attack and slaughter, he thought the Great Spirit directed him! He marched with a party, soon after, against the Cherokees, to revenge his father's death; but he found only five of the tribe in the country where he went for them; and he says, "he had not the heart to kill so few." Again, he led a large number of his tribe against the Chippewas, Osages and Kaskaskias; which proved a long contest, and he was engaged in seven regular battles. He boasted of slaying thirteen brave warriors himself, in these engagements. This was about the year 1801. And soon after he made a visit to his *Spanish father* at St. Louis. He says, that he gave up his Spanish father with reluctance, as he had treated him and his tribe kindly, and he had heard bad accounts of the Americans, who were come to possess the country. But his prejudices wore off, as he became more acquainted with them; and he was much pleased with Lieutenant (afterwards General) Pike.

Not long after this period, Black Hawk and his tribe became much dissatisfied with the conduct of the Americans; one of his nation killed an American, and was arrested and confined. Four principal men of the tribe were sent to St. Louis, then in the hands of Americans, to obtain the discharge of the murderer, by *paying* for the person killed; such being the way with the Indians for saving the life of one who killed another. These deputies were absent, on this business, a long time; and when they returned they had *medals* and *fine coats;* and their story was, that they had been encouraged to hope for the relief of their Indian brother in confinement; and that they had been urged to dispose of large tracts of land to the Americans; and that the prisoner had been executed, though they had been led to expect he would be discharged. It also appeared that they had been kept intoxicated much of the time. Then the Americans passed far up the Mississippi and built a fort, without consulting the Indians, for protection of some traders, who proposed settling to sell spirits and goods to the Indians; which was very disagreeable to the Indians.

In 1811, Black Hawk and others, made an attack on fort Madison, erected on the frontiers by American officers, but did not succeed in taking it; and the Americans made no attempt to attack the Indians. The next year, the news of war between the United States and England reached the tribe; and by the influence of some British officers in that region, the Sacs and other tribes near them refused to join the Americans. The British agents held *talks* with the Indians, and made them *presents.* "I had discovered no good trait in the character of the Americans," said Black Hawk, "who came into our country. They made fair promises, but did not fulfil them, but the British made few promises, yet we could rely on their word. Why did the Great Spirit send the whites among us to drive us from our homes; and to bring among us poisonous liquors, disease and death?"

During this year, the tribe sent deputies to Washington city, where they received fair promises, and were urged to remain neutral. But they wanted credit for goods, which the American traders would not let them have without payment at the time, but which the British traders furnished, and were willing to wait for pay till the following year. Most of the Sacs and others therefore, soon joined the British in the war against the United States.

Situated as were the tribe of Indians, of which Black Hawk was the Chief, it is not surprising that they finally engaged in the British service; though for some time they remained neutral. They gave as a reason also for joining with the English troops, that the agents of the American government had deceived them. Black Hawk had the command of

five hundred of the Indians who marched to Detroit. But he soon became dissatisfied, and returned home accompanied by a part of his tribe. In several of his expeditions when not attacked by great numbers, he discovered much pity for the distressed; and was often known to afford relief to the destitute and aged. He now professed to be averse from war, and returned to his family with pleasure, when others continued with the British army. But when in danger, or when aroused by assaults on his tribe or village, he always distinguished himself by great courage and resolution. In one of these enterprises he found a box full of bottles and packages, which, he said, contained such things as the *medicine men kill the white people with when they are sick.*

When a fort was built by the Americans, near the country of the Sacs, Black Hawk was alarmed, and attacked it in the night with a few men, and soon after the fort was abandoned. When peace returned, the Foxes sought the friendship of the Americans; and the Sacs soon followed their example. A treaty was made, but Black Hawk complained afterwards, that he knew not what he signed. He said, "the whites may do bad all their lives, and if they are sorry for it when about to die, all is well. But with us it is different; we must continue to do what we think right through our whole lives."

Black Hawk seems to have been a man of much thought and reflection, and of devout feelings also. "We thank the Great Spirit for all the blessings he has conferred upon us. For myself, I never take a drink of water from the spring, without being mindful of his goodness." Again, he says, "he used all his efforts to prevent drunkenness, but without effect." When he lost two of his children, he gave away all his property, and lived in solitude; and for two years fasted, drinking only water, and eating sparingly once a day. He complained that the whites in his neighborhood ill treated him on several occasions, and accused him of doing them wrong, without just cause for the charge. The military was sent to drive him and his tribe from their lands, pretending it had been ceded to the United States. But he refused to leave the village, and declared he would defend himself to the last. But he was afterwards urged by his tribe, not to resist the white armed men, but to depart to the far west. He left the village with most of the tribe, and passed several months in hunting at a distance; but resolved again to take possession of the land of his tribe and their fathers. This he was able to do, with some hard fighting; but the American troops were recruited; and he found it in vain to contend. He then took his final departure, with the survivors of his tribe, and bid farewell to the place of his fathers' sepulchres. During this journey the tribe suffered extremely, especially the women and children; and being considered enemies to the United States, they were often harassed and attacked by the soldiers in that part of the country.

Being unable successfully to resist the force sent against them, he surrendered himself; and after some weeks confinement, he was permitted to go to Washington and visit the President. He was disappointed in his application for redress or relief. He was told his village and land had been purchased by the government; and that he must remove farther west or be a beggar. This ill reception grieved, rather than surprised him. But he was much gratified with his visit to Washington, Baltimore, Philadelphia, and New York. Some of his remarks however, show that he was not pleased with all which he saw; and that some of his views of right and wrong, justice and injustice, were quite as correct as the ideas of those in more refined society, who, are apt to judge according to merely conventional rules, and to follow the laws of fashion, or of a worldly policy, instead of what is strictly right and just, and agreeable to conscience. It appears that Black Hawk was much acquainted with the *prophet*, and was under his influence in many of his enterprises. He believed the prophet had influence with the Great Spirit by his prayers; and that he could foretell future events.

PATRIOTIC REPLY OF MR. GADSDEN OF SOUTH CAROLINA.

During the war of the Revolution, Mr. Gadsden was taken prisoner by the British and kept in the castle of St. Augustine forty-two weeks, in violation of the articles of capitulation of Charleston. When liberated, he was chosen governor, which he declined; and this was his patriotic reply, "I have served the public for thirty years in various stations, and would now readily make one of a forlorn hope in an assault on the enemy in our Capitol, if the probable loss of life would reinstate you in possession of it. What I can do, for my country, I am willing to do. My sentiments of the American cause from the Stamp Act down to this time have never changed. I am still of opinion, it is the cause of liberty, and of human nature. But the present times require vigor and activity, and I feel the infirmities of age, and am conscious I cannot serve you to advantage; for the sake of the cause and the public, I request you therefore to indulge me the liberty to decline."

SAILING CARRIAGE.

The following account of very rapid travelling, is taken from the Massachusetts Magazine, for June 1790.

"The carriage in which Mr. Slater, who lately went over land with despatches to the East Indies, traversed the Arabian deserts, went at the rate of twenty miles an hour, so that it was supposed from Alexandria, it would reach Bassora in a few days. It was constructed with broad wheels, and impelled by sails in the same manner as a ship, and so contrived, that it went as close to the wind as any cutter, and carried swivels to guard against the wandering Arabs. When Mr. Slater first set off in this machine, the wind was fair and moderate, and he was accompanied many miles by a considerable number of persons, mounted on camels and fleet horses, whom curiosity attracted; but in some time the wind freshened, the motion became so rapid, that they were obliged to give up the pursuit.

At Alexandria, several ingenious mechanics have improved upon this original mode of progression; and it is said that machines are now contriving, which will travel even with more expedition, and yet with perfect security."

THE COMMON, OR WILD PIGEON.

The genus *Columba* includes, what are commonly called the dove and the pigeon, with all their varieties: And they intermix and amalgamate without any apparent reluctance. They are easily domesticated, and are far less mischievous or troublesome than other tamed birds. When ill treated, however, they quit their old abodes, and seek the haunts of the distant forest. The Wild Pigeon is found both in the western and eastern continent, and their peculiar habits are generally well known. Both the domestic and the wild are proverbially faithful in their connubial attachment and condition. They procreate almost every month in the year, and their increase therefore is remarkably rapid. As to the form of the Dove or Pigeon, it is beautiful as any bird known, and its colors are attractive though not so gaudy as some others. They are very rapid on the wing, and are known to pass over a great distance of country in a short time. From very remote ages, they have been employed to convey intelligence on particular occasions. They are so used, even now, in some parts of Europe. Very recently, some were thus employed as "swift messengers," from Paris to Antwerp. The Pigeons to be used for such a purpose, are taken from the place, to which the intelligence is intended to be sent, and the letter, of as little weight as possible, is fastened to the wings in such a way as not to impede their use; and then they are let loose, when they return directly and quickly to their home, by an unaccountable instinct.

The Wild Pigeon is a migratory bird, and yet they are not so regular nor do they wander so far, as some others, which go from the extreme north to the far south. They visit different parts of the United States, however, at different seasons. They are not often found in the New England States, except in summer, or the latter part of spring. They abound in the month of May; and again in August, when they are still more abundant. In some parts of New York, Ohio, &c. they are very numerous; and a century ago, were in far greater numbers in Massachusetts than they now are. As food, they are much sought and valued.

COLUMN ON BEACON HILL.

In 1790, a plain column of the Doric order, placed on a proper pedestal, and well built of stone and brick, was erected on Beacon Hill, Boston, at the expense of some of its patriotic and public-spirited citizens. The column was sixty feet high, the diameter of the column was four feet, and the pedestal eight feet. When the hill was removed, some years ago, for putting dwelling-houses thereon, the column was taken down. The inscriptions were placed in the State House; but are somewhat defaced. We give them as they were placed on the column when standing.

Inscription on the South side.

To commemorate
that TRAIN of EVENTS,
which led
to the AMERICAN REVOLUTION
and finally secured
LIBERTY and INDEPENDENCE,
to the UNITED STATES,
This COLUMN is erected
by the voluntary contribution
of the CITIZENS
of BOSTON.
MDCCXC.

On the West side.

Stamp Act passed 1765, repealed 1766.
Board of customs established 1767.
British Troops fired on the inhabitants
of Boston, March 5, 1770.
Tea Act passed 1773.
Tea destroyed in Boston, Dec. 16, 1773.
Port of Boston shut and guarded June 1, 1774.
General Congress at Philadelphia, Sept. 5.
Provincial Congress at Concord, Oct. 11.
Battle at Lexington, April 19, 1775.
Battle at Bunker hill, June 17.
WASHINGTON took command of the Army, July 2.
Boston evacuated, March 17, 1776.
Independence declared by Congress July 4.
JOHN HANCOCK, President.

On the North side.

Capture of Hessians at Trenton, December 26, 1776.
Capture of Hessians at Bennington, August 16, 1777.
Capture of British Army at Saratoga, October 17.
Alliance with France, Feb. 6, 1778.
Confederation of the United States, formed, July 9.
Constitution of Massachusetts, formed, 1780.
BOWDOIN, President of Convention.
Capture of British Army at York, October 19, 1781.
Preliminaries of Peace, Nov. 30, 1782.
Definitive Treaty of Peace, Sept, 10, 1783.
Federal Constitution, formed September 17, 1787,
and Ratified by the United States, 1787 to 1790.
New Congress assembled at New York, April 6, 1789.
WASHINGTON inaugurated President, April 30
Public Debts Funded, August 4, 1790.

On the East side.

AMERICANS!
While from this EMINENCE,
scenes of LUXURIANT FERTILITY,
of flourishing COMMERCE,
and the abodes
of SOCIAL HAPPINESS,
meet your view,
Forget not THOSE,
who, by their exertions,
have secured to you
these BLESSINGS.

RESISTANCE OF LIQUIDS TO SOLID BODIES.

It is a well known and admitted axiom in physics, that in all fluids, there is a resistance to solid bodies moving in them. This is true of the air, a much lighter or attenuated fluid than water. In the latter, the resistance is much greater. The practical effect of this law or property of nature is important, as it respects the motion of vessels in the water; and it seems lately to have excited much attention. It seems almost a contradiction, and yet has been long known to be the fact, that there was less wave, and probably, therefore, less resistance, when a boat was propelled at the rate of ten miles an hour, than at five; at least, that less proportional force was required to propel it when its motion was rapid than when slow. One reason for this may indeed be, that a vessel which is propelled very rapidly is raised more out of the water, than one which passes more slowly. It has been found that a wave, where the water was one foot deep, moved 5 feet and a half (nearly) in a second; and that the velocity of waves, of different depths of water, are as the square roots of the depths; the wave in a canal of four feet depth, will then move about eleven feet in a second, or seven and a half miles an hour. It is also found that the velocity of waves, the motion being similar, is in a certain proportion to the depth of water, and not to the force or impulse of the boat.—Some experiments have been made to learn the resistance of fluids. A reservoir of water was prepared 200 feet long, 100 wide, and eight and a half deep. A solid body was used of the form of a cube, the sides of which was five feet. It was sunk four feet in water, and was moved with different velocities, for ninety-six feet. (To one side of the cubic body were attached triangular prows of various angles, from 12° to 168°.) The experiments showed a resistance at all angles, greater than the squares of the sines, and also greater than the sines, for angles between 0° and 50° but less than the sines, between 50° and 180°. The different velocities of the solid, however are not stated, which renders it difficult to decide accurately on the subject. To displace the water, and also to replace it with the least disturbance, seems to be the great desideratum. Some attention has been given to the displacement, but none to the replacement. The water-line of boats and vessels near the stern are (now) generally concave, which is detrimental to fast sailing; because the *concavity* next the stern requires a *convexity*, of a shorter radius than would be required if the water-line presented a convexity from the stern to the midship section: these two curves in contrary directions virtually double the *inertia* of the water; the concavity throws it off at right angles to the vessel, and then it has to assume a new direction, and pass round a curve of shorter radius to approach the stern. The concavity of the stern retards the replacement, by causing the water to pass along a curve instead of a straight line, which is evidently the shortest; and because the water will not pass along even a straight line, in a direction from the broad part of the vessel to the stern, when the velocity is considerable, but leaves a cavity near the stern-post and deprives the vessel of the benefit of the reaction of the water there. A certain convexity in all the water-lines near the stern, would, therefore, improve the sailing. It may be said, that such a vessel would steer badly; but we hear no complaint of difficulty in steering vessels or boats with sharp or pink sterns. All the water-lines should be convex in every part of them.

Many years since, experiments were made by a committee, at the expense of the French Government, for the purpose of determining the resistance of floating bodies. For this purpose they made use of fifteen vessels, two feet wide, two deep, and four long, one of them being a parallelopiped, the others having prows of a wedge form, the angle running from 12° to 180°. The resistance was measured by the weight employed after deducting a certain quantity for friction and for the accumulation of water against the head surface. The results were as follows

Angle of head or prow.	Resistance.	Angle of head.	Resistance.
180°	1000°	84°	5433
168	9893	72	4800
156	9578	60	4404
144	9084	48	4240
132	8446	36	4142
120	7710	24	4063
108	6925	12	3999
96	6148		

Experiments were made in 1796 and in 1798 in England. In '96 the bodies subjected to experiment were water soaked but clean from slime or dirt; in '98 the bodies were not soaked. The resistance against the last were less than against the first as in the following table.

Nautical miles an hour.	1	2	3	4	5	6	7
	motion power in pounds and decimals.						
Friction against one square foot of surface, 1796	0.014	0.047	0.095	0.155	0.266	0.309	0.400
Friction against one square foot, 1798.	0.012	0.043	0.080	0.144	0.209	0.279	0.354

The plague has been lately making great ravages in Egypt and Scythia. Political changes have also occurred, and the signs of the times in the latter country indicate formidable revolutions, and opposition to the authority of the Sultan of Constantinople.

TEMPERANCE.—The king of Sweden (formerly the French General *Bernadotte*) is now President of a Society for promoting temperance. If any member of the Society violates his *pledge*, his name is handed into the church, and prayers are requested for him.

NOTE.—We have given a longer piece of poetry in this Number than usual. It might be a sufficient apology, that it is from the pen of the late Mrs. Hemans, one of the sweetest poetical writers of the age. And these lines, in a most remarkable degree, unite the finest poesy, with deep, and (we believe,) correct views of *vital* religion. She describes, in a far happier strain than even Cowper, the distressing doubts and obtrusive skepticism so apt to visit a contemplative mind, when it first turns its inquiries to religion: and the subsequent light, and hope, and faith, and joy of the believer. If it is read it must be admired, and may make a good impression.

We have ventured on a few remarks on the Federal Constitution; not for any party purpose, nor to press our own views on others as the only correct ones. It is rather to excite attention to the subject, and to induce those entering on public life and duties, to examine carefully and impartially that important instrument which is binding on us all.

OCTOBER.

Give me a spot whereon to rest my lever, and I will move the world.

ARCHIMEDES.

We cannot expect to say any thing, relating to the long celebrated mathematician of Syracuse, or his knowledge of geometry and the mechanical powers, not already known by men of science. The study of geometry and mathematics is so important, however, as leading to what is useful in practice, that it cannot be too often recommended; and a reference to one of the most distinguished proficients in the sublime science of antiquity, will not be without its interest. Archimedes lived before our era, about 290—210. His birth-place was Syracuse, in Sicily: which, in his day, was a powerful kingdom, and long resisted the attacks of the Roman generals. It is related of Archimedes that he early devoted himself to the study of geometry and mechanics. Egypt was then the land of letters and of science, and the lovers of wisdom and knowledge, the philosophers of the west, were in the habit of vis-

ting that country, for literary improvement: It is said he resided several years in this cradle of the arts. It is well known that both the Greeks and Romans were much indebted to Egypt for the light of science, which they afterwards diffused through a great part of Europe. Archimedes is justly entitled to the praise of having a strong love of the physical sciences and of great devotion in acquiring a knowledge of them, though it is probable he was indebted to the Egyptians for a knowledge of machinery, such as he afterwards used in defence of Syracuse when besieged by a Roman army. It is matter of history, that long before the time of Archimedes, the Egyptians had a knowledge of machinery, by which they were enabled to produce astonishing effects, such as raising immense masses of stone to great heights; and which were even superior to the results of the works of the philosopher of Syracuse.

Euclid, who was a native of Alexandria in Egypt, flourished about 100, or 130 years before Archimedes: and had some eminent pupils in the study of geometry, in the knowledge of which he had made great advances. Ptolemy Philadelphus, king of Egypt, was one of his most diligent pupils. It is of this Prince of whom the following anecdote is related:—When weary with long and close calculations in order to solve some difficult problem in geometry, he asked his teacher, Euclid, "if he could not point out some easier method of investigation and solution." The reply of the philosopher is also well known; "No, Sire," said the master; "there is no royal road to geometry."

After the return of Archimedes from Egypt, he pursued the study of geometry and the mathematics, with brilliant success. But when the dangers of his country called on all its citizens to defend it against the Roman arms, he joined in the public service, as a good patriot. He caused vast machines to be erected under the walls of Syracuse, with which heavy articles were thrown with such force on the besiegers, as to astonish the Roman troops. They even supposed that there was some power more than human exerted, to produce such extraordinary effects. All this was performed by a knowledge of the mechanical powers.

Syracuse, however, was finally taken by the Romans; but in a moment of too confident security, and by surprise. Archimedes fell with the rest of the citizens; but the Roman generals, who knew how to appreciate his character and learning, ordered a monument to be erected near where he was entombed. A sphere, inscribed in a cylinder, was engraved on the monument. His discoveries in geometry were very great. In his book on the sphere and cylinder, he has proved the following theorem—that the surface, as well as the solidity of a sphere, is equal to two-thirds of its circumscribing cylinder. And he also showed, that the ratio of the diameter of a circle, to the circumference, is as 7 to 22. The spiral was invented by Conan, his friend; but Archimedes has the merit of making its properties fully known. He also demonstrated the property and power of the lever, and showed that a balance with unequal arms will be in equilibrio, if the weights in its opposite scales are reciprocally proportional to the arms of the balance. He also made discoveries and gave explanations of the principles of hydrostatics. It was his knowledge of the mechanical powers, particularly of the lever and fulcrum, which led him to say, "that if he had a place to stand on, he could move the earth."

THE FOLLOWING LINES BY LORD BACON ARE PUBLISHED, FOR THE FIRST TIME, IN HIS LIFE BY MARTIN, LATELY ISSUED FROM THE PRESS.

The world's a bubble, and the life of man
Less than a span;
In his conception wretched, from the womb,
So to the tomb;
Curst from the cradle, and brought up to years,
With cares and fears;
Who then to frail mortality shall trust,
But limmes the water, or but writes in dust,

Yet since with sorrow here we live oppress:
What life is best?
Courts are but only superficial schools
To dandle fools—
The rural parts are turn'd into a den
Of savage men.
And where's a city from all vice so free,
But may be termed the worst of all the three?

Domestic cares afflict the husband's bed,
Or paines his head—
Those who live single take it for a curse,
Or do things worse.
Some would have children, those who have them mourn,
Or wish them gone.
What is it then to have or have no wife,
But single thraldom, or a double strife?

Our own affections still at home to please,
Is a disease;
To cross the sea to any foreign soil,
Perils and toil.
Wars with their noise affright us, when they cease,
We are worse in peace.
What then remains? but that we still should cry
Not to be born, or being born to die.

MANUFACTURE OF SILK TWIST.—Mr. Atwood, of Mansfield, Connecticut, has manufactured during the season just past nearly 30,000 sticks of twist, which sell for $2,50 the hundred, equal to $750. Raw silk has been raised by Mr. Church of Bethlehem, in the same State, during the year, of the most perfect and beautiful filature. Imported raw silk is seldom superior to it. The reeling was by a lady, who had been unaccustomed to the process. It is fit for the manufacture of fabrics of any description. Proof is thus given that American ladies can reel as good silk as those of any other country.

DEPENDENCE ON GOD.—When thou art enlarged in duty, supported and most assisted to thy christian course, remember thy strength lies in God, not in thyself. When thou hast thy best suit on, thy best suit of spirituality and strength, remember who made it, who paid for it, who gave it thee. Thy grace, thy comfort, is neither the work of thy own hand, nor the price of thy own desert. Be not, therefore, proud of that which belongs to another, even God. Divine assistance will be suspended, if it becomes the nurse of pride.—*Gurnall.*

The more widely science is diffused, the better will the Author of all things be known, and the less will the people be tossed to and fro, by the sleight and cunning of those whose interest it is to deceive them. *Lord Brougham.*

FRIENDS' MEETING HOUSE, IN PENNSYLVANIA.

The buildings in which the Quakers or Friends hold their religious meetings, are remarkable rather for their *plainness* than their elegance. But they are neat and comfortable, if not showy or ornamental. This sect arose about the middle of the 17th century, or a little earlier; and when they first appeared, they broached strange and extravagant opinions: In some instances, they carried their opposition to the forms and modes of worship observed by other Christians so far as to cause direct interruption of their devotions; and in other respects, their conduct was very unjustifiable and disorderly. In their common speech and dress, they were also so singular and precise, as to render themselves ridiculous. But after a few years they became more regular and correct; and such men as William Penn, by their prudent and discreet conduct, rendered the Friends respectable; and other sects soon forgot their former errors. Governor Penn, the founder, and several years chief magistrate of the colony of Pennsylvania, was a very intelligent, judicious and amiable character. Under his wise and mild government, the Friends increased, and were long the majority in that colony. But they have not increased much for fifty years past; not by any means in proportion to the present population of the country. They have also become less precise in their dress and language, and differ less from the rest of the community. They have some very excellent rules in the government and discipline of their members; and are reputed a sober, industrious and frugal people. They pay more attention than formerly to the education of their children; but do not consider human learning important in their teachers. Particular inspiration is still claimed by those of them who speak publicly. And yet few seem to understand or believe in it. The gifted and the forward are the public speakers. We think their silent meetings, though sometimes perhaps proper for the aged, are not edifying or improving to the young. They, as well as other sects, had their day of severe persecutions; but we rejoice to say, that the days of darkness and violence have passed, and that we can all, if sober and peaceable, (*and not broaching sentiments tending to disorder, revolution and massacre,*) worship God according to the dictates of our consciences, without molestation or fear.

Woollen cloths have been manufactured to a much greater extent, in Massachusetts, especially in the counties of Worcester and Middlesex, the present year than at any former period. The quality is very superior, and the colours fine and brilliant. Five hundred pieces were lately sold in Boston at public auction; and the prices obtained, it is said, were satisfactory to the manufacturers. The appearance of the cloths, at the sale, was gratifying to the numerous spectators. The manufacture of wool promises to be a great business both in the northern and middle States.

The rearing of silk-worms and the manufacture of silk are increasing in several parts of England. But by a little enterprise in our own country we shall be able to manufacture silk enough for the wants of the whole United States.

TRADE OF NEW ORLEANS.

From a late New Orleans Bulletin, we publish the following estimate, said to be correct, as to the value of some of the principal articles of trade, at that city, for the year past.

Cotton	$37,000,000
Sugar and Molasses	9,000,000
Tobacco	3,250,000
Lard, Pork and Bacon	3,500,000
Flour and Corn	1,750,000
Lead	1,000,000
Baggage and Rope	1,300,000
Whiskey	500,000
	57,300,000
Other articles not specified,	12,700,000
	$70,000,000

The amount of the trade coastwise and from abroad, including goods which pass through the city, is supposed to be equal to the former exports.

Natural Production.—A *Thing* without a name, partaking both of the properties of a vegetable and an insect, has been lately discovered at Plymouth, North Carolina. When its entomological (or animal, insect) nature ceases, its vegetable nature commences. And when its vegetable character is matured, its character, as an animal or insect, is developed, and it no longer appears as a vegetable. In other words, it is alternately an insect and a plant. It is shaped like a wasp, when it assumes the insect or animal character; and is about one inch in length. When the insect has attained its growth, it disappears under the surface of the ground, and dies. Soon after, the two hind legs begin to sprout or vegetate. The shoots extend upwards, and the plant reaches the height of six inches in a short time. It has branches and leaves like the trefoil. At the extremities of the branches there is a bud which contains neither leaves nor flowers, but an insect; which, as it grows, falls to the ground, or remains on its parent plant, feeding on the leaves till the plant is exhausted, when the insect returns to the earth, and the plant shoots forth again.

Progressive Stages of Political Societies. First, the unsettled and roving tribes of hunters and shepherds, in which landed property is unknown. Second, the patriarchal state, in which the authority of the father of a family, the magistrate and the priest is united in one person. Third, the theocratical state, in which the authority of the father is separated from that of the magistrate, but the priests form a separate caste, and are the rulers, uniting the civil and religious character in themselves. Fourth, the state of castes, in which the distinctions of family and state, of priest and magistrate exist, but the whole population is divided into distinct hereditary classes. Fifth, the state of privileged orders, in which a part of the population has certain hereditary privileges, and the body of the people is divided into classes distinguished by their wealth, population, &c. Sixth, that state of political society, in which all the members have equal rights and privileges, and are subject to equal burdens.

A LETTER OF GOVERNOR PENN, THE FOUNDER OF THE COLONY OF PENNSYLVANIA, TO GOVERNOR HINCKLEY, OF PLYMOUTH.

Respected Friend,—The duty and decency of my station as a governor, as well as my own inclination, oblige me to begin and observe a kind and friendly correspondence with persons in the like capacity under the same imperial authority. This single consideration is inducement enough to this salute; and I have no reason to doubt its acceptance, because such an intercourse is recommended both by the laws of Christianity and those of civil polity: which said, give me leave to wish thee and the people under thy government all true felicity, and to assure thee that with God's assistance, I shall herein endeavour to acquit and behave myself worthy of the title and character of thy real friend and loving neighbour. Wm. Penn.

Philadelphia, 2d of 5th Mo. 1683.

[At the bottom of the letter.] I take the freedom to present thee with a book.

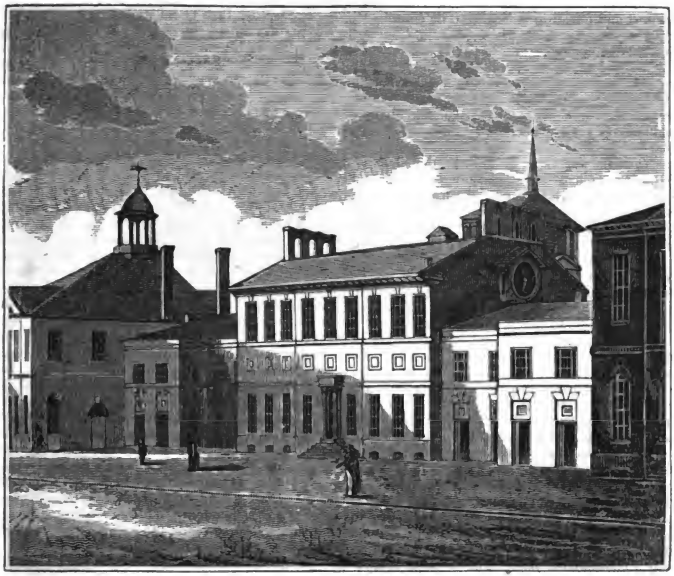
The superscription is as follows—"For my well Respected Friend, the Governor of Plymouth Colony, New England."

This very friendly letter shows alike the good disposition and the good judgment of the writer, especially when it is considered that the Quakers had been persecuted by the Puritans of New England.

RAIL-ROAD TO QUEBEC.

The people in different parts of the State of Maine, are having surveys made for a Rail-road to Quebec. The citizens of Portland are engaged in examining a route from that city, which is far west of Kennebec River; and it must be a long path. Another route has been proposed for a Rail-road to Quebec by the way of the Kennebec, and taking advantage of its waters as far up as a steam-boat can ascend; which by canals, may be to Norfidgewock, (certainly to Waterville) and then the distance by Rail-road would be much less than one from Portland. There is more recently another project for a road to Quebec, and that is from Bangor or Belfast. One from Belfast will be a little longer than one from Bangor; but the land is said to be very favourable. The shortest route will be from Bangor; and the enterprising citizens of that place will probably push the project to a speedy execution. And a road from Bangor to Quebec would lead to Moosehead Lake, of which advantage might be taken by steam-boats. This is sometimes called the Lake George of Maine.

Meteoric Stones.—An able English writer on this subject is in favour of the terrestrial origin of meteoric stones. He is of opinion that they are thrown out by volcanoes, to a considerable distance, and that the rotation of the earth on its axis is the cause of their apparent motion. That they come from the moon or from a comet, or are formed in the upper regions of our atmosphere by certain compositions, are considered as unsupported and untenable; and some facts given in favour of their volcanic origin.



STATE HOUSE, OR HALL OF INDEPENDENCE.

A view is here presented of the spacious building in Philadelphia, formerly occupied as a State-house, or place of the sittings of the Legislature of Pennsylvania. In a large hall in this building, the Declaration of the Independence of the thirteen colonies or provinces in North America, of Great Britain, on the fourth of July 1776, was solemnly made and adopted; and it was afterwards known by the name of "the Hall of Independence." The building is in Chestnut Street, a little back from the Street, and between Fifth and Sixth Streets. The meetings of Congress were held in the front room, and east of the entrance. When the Continental Congress was first held, in September 1774, the meetings were in a building called Carpenters' Hall, and now used for the apprentices' library, and standing up a court, some distance from Chestnut Street. The Hall of Independence was very appropriately chosen for the meeting of the Convention of Delegates from the several States, in 1787, for amending the Articles of Confederation, or forming a new Constitution for the General Government of all the States. This building, then, is justly memorable with the patriotic citizens of the United States. The men of the past generation who jeoparded their property and persons for liberty, and who pledged their sacred honour and their lives in its support, that their posterity might enjoy the blessings of civil freedom, are worthy of grateful and perpetual recollection. They were not a radical nor an ambitious race, but as judicious and virtuous as they were ardent and resolute. Their object was to secure rational liberty, and their opposition was to arbitrary power, and no difficulties or dangers could divert them from their noble purpose. They counted the cost, and knew it to be great; but they were willing to pay it, and trusted their children would appreciate their services, and be careful to maintain the privileges so preserved for them. It was a most portentous crisis in the destinies of our country; but the Declaration of Independence proved to be a wise one, though full of peril and danger. The room where the heroic deed was ventured on, so full both of hope and of apprehension, will be viewed with grateful and honourable pride, and by feelings of intense interest while the building remains. And no doubt the patriotic citizens of Philadelphia will long preserve it from ruin.

The building is almost equally memorable as the place where were held the meetings of the Convention in 1787, to consult on the kind of government proper for the whole United States, and requisite to secure and perpetuate the blessings of liberty and independence already obtained by the country. This also was a very critical period, and the object in view of the highest interest; and the sages and patriots who composed that convention were among

the wisest and purest in America. The continental debt was immense, and when the Old Congress called on the several States to pay in their quota, many refused or declined, on the plea that they were obliged to raise large sums to meet their own separate debts. The finances of the States and of Congress were in a state of confusion and depression almost beyond conception. Both the Continental Congress and the several States had incurred debts from the beginning of 1775 to the close of 1783, and they had borrowed both at home and abroad, as long as it was possible, without paying even interest; and the credit of both was at the lowest point. Numerous complaints and some insurrections were the consequences, and Congress had not authority to assess or collect monies in any way, either by direct tax, or duties on imported goods. The States wanted all which could be collected, and even more, to pay their own debts. It became necessary to clothe Congress with greater authority; and the Convention for this purpose was held at Philadelphia, in the Hall of Independence, in 1787. It was found that the Articles of Confederation could not be amended so as fully to remedy the evils or defects of the old system; and a Constitution was formed, to be submitted to the consideration of the several States for adoption; which provided for a federal or general legislature and government, over all the States; but its authority to extend only to *general* purposes and objects, as particularly pointed out in that instrument, or as necessary to attain those purposes. According to the Constitution, the Government of the United States is a federal and limited, not an unlimited, or strictly a consolidated one. The consent of two-thirds of the States, (not two-thirds of the whole people in the States,) was a condition of the establishment of the Federal Government; and if any State did not consent, it was not bound by it. All the leading features of the government, to be established by the Constitution, are of a federal, not consolidated character; the General Government can only *rightfully* exercise power in cases mentioned in the Constitution, (or fully implied,) and all power not given to the General or Federal Government, remains with the States respectively, or the people of the several States, (not two-thirds of the whole people in the United States) and two-thirds of the States only, can also alter the Constitution. It is the earnest wish of every wise and patriotic citizen, that the government of the United States may retain its *federal* character, instead of becoming strictly a consolidated one; that the separate States may preserve their full power—for as Fisher Ames said, "they are the pillars on which rest the beautiful federal superstructure."

The design of having a line of steam-ships from New York to Liverpool, is not relinquished, but a good deal of spirit and zeal appears in favour of the project. The ships are to be at least twelve hundred tons burthen.

The *gain* which is made at the expense of reputation, should rather be set down as a *loss*.

CONTENTMENT.

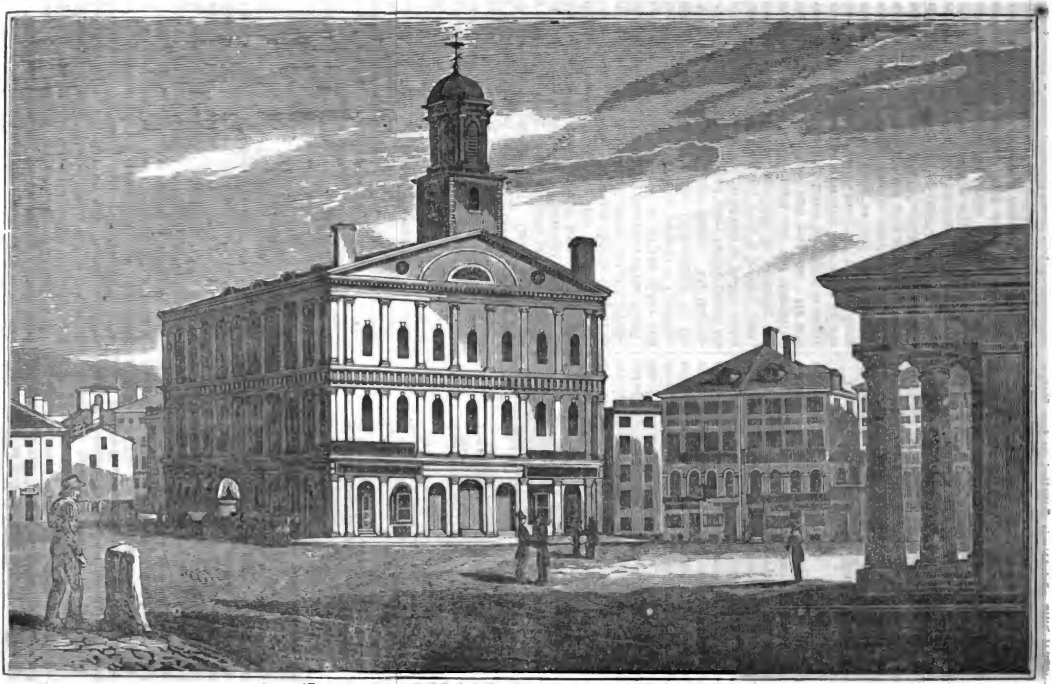
What has often surprised me is to hear people lament the evils of this life, and to call the world a vale of sorrow. Surely enjoyment and well-being is manifestly, throughout the world, the positive and natural state of animated beings: And evil suffering and organic defects, the negative or partial shadow of this general brightness. Is not creation a continual feast to the healthy eye, the contemplation of which and of its beauty and splendour, fills the heart with delight and adoration? And were it only the daily sight of the enkindling sun and glittering stars, the verdure of the trees, the gay and delicate beauty of flowers, the joyous song of birds, and the luxuriant abundance and rich animal enjoyment of all living things, it would give us good cause to rejoice in life. But how much still more wondrous wealth is unfolded in the treasures of our own minds! What mines are laid open by love, art, science, the observation and history of our race, and in the deepest chambers of the soul, the pious, reverential sentiment of God and his universal work! Truly we were less ungrateful, were we less happy; and but too often we stand in need of suffering to make us conscious of this. A cheerful, grateful disposition is a sort of sixth sense, by which we perceive and recognize happiness. He who is fully persuaded of its existence, may, like other unthinking children, break out into occasional complaints, but will soon return to reason; for the deep and intense feeling of the happiness of living, lies like a rose-coloured ground in his inmost heart, and shines softly through the darkest figures which worldly disappointments can draw upon it.

Waldie's Port Folio.

I should like to drink with you, said a person to a Quaker friend, as they entered a hotel in New York. "I shall be happy to," replied the Quaker. "Waiter," said the gentleman, "bring two glasses of brandy." They were brought. "Your health," said he, pouring down the *poison*. The Quaker bowed, took an empty glass, filled it with cold water, and said, "Friend, thou hast done me the favour to wish my health,—I return the compliment; but I can do it as well and as sincerely with pure water, as with a stronger liquor."

Till the year 1752, the English began the year on the 25th of March. This practice has often been the occasion of chronological mistakes. The first settlers in the English colonies in America had this practice, and many errors of dates may be detected owing to this circumstance. A respectable writer of the present age has contended, because the date was March 1629, when the expedition was preparing for Massachusetts Bay, that the settlement of Charlestown and Boston began in 1629!

Magnificent Present.—The king of Oude (in India) has lately sent to the king of England the following articles:—A bedstead and table of solid gold, and two chairs and some other smaller pieces of furniture of pure silver. They are highly ornamented with carved figures.



[East view of Faneuil Hall, including the southwest corner of Quincy Market.]

FANEUIL HALL.

We have given on the preceding page a good view of the old and venerable Faneuil Hall in the city of Boston, so memorable for the eloquent speeches and patriotic resolutions of the citizens of that place during several years immediately before the Revolution. The building was erected in 1742, at the sole expense of Peter Faneuil, Esq., and generously given to the town; the basement for a market, with a spacious and most beautiful hall, and other convenient rooms above, for the accommodation of the citizens on all public occasions. The building was then one hundred feet by forty; and the hall capable of holding two thousand people, or more. This fine and convenient building was consumed by fire in 1761, excepting the brick walls: But the town voted to rebuild it immediately. Mr. Faneuil had then been dead several years. In 1805, it was enlarged by the addition of another story, and of forty feet to the width, thus making it eighty feet wide. There is a cupola on the building, from which is a fine view of the harbour of Boston. The hall is about eighty feet square, and twenty-eight feet in height; with galleries on three sides supported by doric columns. At the west end, the wall is ornamented with a good full-length likeness of Peter Faneuil, of General Washington, Governor John Hancock, General Henry Knox and others; and a bust of President John Adams. The lower part of the building is no longer used as a market; a large and elegant one having been erected by the city for that purpose in 1827. But the hall is still a place of meeting for the citizens on all occasions of extraordinary and general interest; and since it was enlarged in 1805, it will accommodate five thousand people. Among the most important meetings within a few years, was that in support of the Union, when President Jackson issued a proclamation against the nullifying doctrines of the South; and that, still more recently, of all the sober and intelligent people of Boston, in support of Constitutional doctrines, against the proceedings of the Abolitionists of slavery at the South. On this occasion, H. G. Otis, who had often before raised his powerful voice in the hall, in behalf of public order and constitutional freedom, took a leading part; and was as happy as he was able, in pointing out the errors of the Abolitionists, and the dangerous tendency of their measures and projects. He was very decided, but without bitter invective or angry crimination, against the mistaken advocates of the immediate abolition of slavery in the southern States. He spoke of them as very erroneous in their views, and dangerous in their speeches and writings, though he admitted they might have been pure in their motives. But he said also, and justly we think, that the tendency of their proceedings were revolutionary, or highly hazardous to the welfare of the Union; and he therefore warned them against all further proceedings similar to those recently adopted and pursued. And the whole assembly (of five thousand probably) responded heartily and fully to the sentiments he uttered. As in 1770, a good spirit, a spirit of enlightened and disinterested patriotism, has gone forth from Faneuil Hall, kindled or confirmed by the eloquence of an Otis, which we trust will check the rage of fanaticism, and thus save the *Union*, and preserve it entire and harmonious even from the extreme north to the distant south.

There are now very few living who heard the eloquent speeches of James Otis, Samuel Adams, John Hancock, Josiah Quincy, and other patriots of 1765—1775; but many have heard of their addresses, and find the fire of patriotism and the love of liberty warming their bosoms, as they recollect them. They owe them much, very much; and hope to see the same spirit guiding their children: a spirit of order as well as of liberty; an attachment to constitutional principles, as well as to the blessings of freedom, which those principles, are intended and calculated to secure to us and our posterity.

THE COMING OF CHRIST IN THE POWER OF THE GOSPEL.

BY MISS MARTINEAU.

Lord Jesus, come! for here
Our path through wilds is laid;
We watch as for the day-spring near,
Amid the breaking shade.

Lord Jesus, come! for still
Vice shouts her maniac mirth;
And famish'd thousands crave their fill
While teems the fruitful earth.

Lord Jesus come! for hosts
Meet on the battle-plain;
The patriot mourns, the tyrant boasts,
And tears are shed like rain.

Hark! herald voices near
Proclaim thy happier day;
Come, Lord, and our hosannas hear!
We wait to strew thy way.

THE BIBLE IN ENGLAND, IN 1537.—This was a day of rejoicing to Archbishop Cranmer: greater says he, "than had there been given him a thousand pounds." Nor to him only; the people, thirsty for the Word, now rushed to the waters of life, and drank freely: whosoever had the means bought the volume; where the cost was too great for an individual, neighbours and fellow-apprentices might unite purses and buy in common; a man would be seen at the lower end of his church on a Sunday reading it aloud, whilst numbers flocked about him to listen and learn; and the one great topic of the time, made its way even into taverns and alehouses, where it seems to have been often the subject of vehement and angry debate.

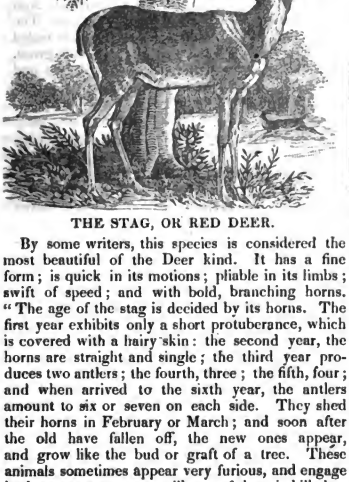
The *Camera Lucida*, or Light Chamber, so called in contradistinction to the *Camera Obscura*, was invented by Dr. Wollaston, in the present century. It enables one to delineate distant objects, and is also used for copying and reducing drawings. It consists of a quadrangular glass prism, with lenses, &c., by which the rays from an object are twice reflected.

The human mind has unlimited curiosity, and a natural disposition for knowledge and science. The earliest amusement of youth is imitation of the acts of their parents and those much older than themselves, and of learning the causes and reasons of things. This disposition should be indulged and gratified.

PICKLING MEAT.

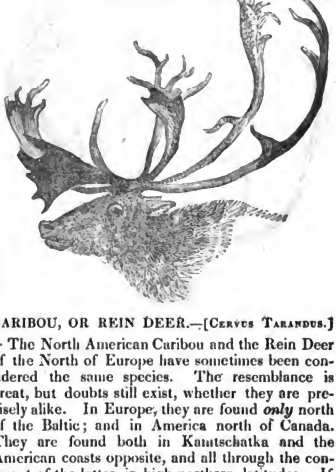
We consider the suggestion in the following paragraph worthy of particular consideration.

Professor Rafinesque strongly denounces the use of saltpetre in brine, intended for the preservation of flesh to keep for food. That part of the saltpetre which is absorbed by the meat he says is nitric acid, or aquafortis, a deadly poison;—animal flesh previous to the addition of the former only possessing a nutritious virtue. This is destroyed by the chemical action of salt and saltpetre; and as the professor remarks, the meat becomes as different a substance from what it should be, as leather is from raw hide before it is subjected to the process of tanning. He ascribes to the pernicious effects of this chemical change, all the diseases which are common to mariners and others, who subsist principally upon salted meat—such as scurvy, sore gums, decayed teeth, ulcers, &c.; and advises a total abandonment of the use of saltpetre in making pickle for beef, pork, &c. The best substitute for which, he says, is sugar, a small quantity, rendering the meat sweeter, more wholesome, and equally as durable.



THE STAG, OR RED DEER.

By some writers, this species is considered the most beautiful of the Deer kind. It has a fine form; is quick in its motions; pliable in its limbs; swift of speed; and with bold, branching horns. "The age of the stag is decided by its horns. The first year exhibits only a short protuberance, which is covered with a hairy skin: the second year, the horns are straight and single; the third year produces two antlers; the fourth, three; the fifth, four; and when arrived to the sixth year, the antlers amount to six or seven on each side. They shed their horns in February or March; and soon after the old have fallen off, the new ones appear, and grow like the bud or graft of a tree. These animals sometimes appear very furious, and engage in desperate encounters till one of them is killed or put to flight. The female of this species is also formidable to the wolf, wild cat, &c., in protecting their young if assaulted. The Red Deer is a native of Europe. The species found in North America, are the Rein Deer or Caribou, the Canada Deer, (sometimes called the American Elk,) and the Virginia Deer.

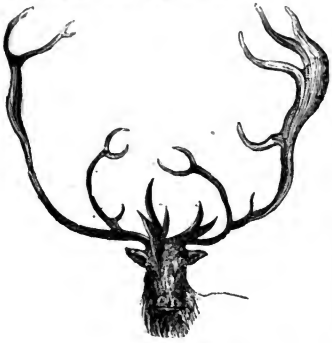


CARIBOU, OR REIN DEER.—[CERVUS TARANDUS.]

The North American Caribou and the Rein Deer of the North of Europe have sometimes been considered the same species. The resemblance is great, but doubts still exist, whether they are precisely alike. In Europe, they are found *only* north of the Baltic; and in America north of Canada. They are found both in Kamtschatka and the American coasts opposite, and all through the continent of the latter, in high northern latitudes. If they passed from Asia to America at Behring's Straits, it is argued that some would be found on the Aleutian Islands; but this is not the fact. They might however have passed on the ice, north of the straits, in latitude 70 or 75. If no difference is detected between the Rein Deer and the Caribou, the conclusion would seem to be that the latter passed over to this Continent from the extreme northeast parts of Asia, (as the American Indians did in a remote period,) and that the only difference between them may be accounted for, by long separation in a different climate.

We have already given an account of the Black-tailed Deer, which is found in the vicinity of the Rocky Mountains. The Caribou, or American Rein Deer, is a different species, and more interesting than the other. Of the Caribou there are also another species, called the Barren-Ground Caribou; at least its habits are different, and it is found near the Rocky mountains, and between them and Hudson's Bay. The former frequents the woods and forests at all times, but the other visit the Arctic Sea in summer, and go farther south in winter. The horns or antlers of the Rein Deer of North America, like those of Europe, spread widely, and are of various shapes. The horns of the Barren-Ground Caribou are larger than those of the Woodland, though the latter is a larger animal. Both

shed their antlers annually; and in June or July also shed their long hair covering for that which is shorter and smoother. Their skin is generally the winter dress of the Indians inhabiting the Barren-Ground Regions, so called; and their flesh serves for food, without which it is not seen how they could subsist. The annexed cuts are from drawings, by Capt. Back, of the *antlers* of two old buck *Caribou*, killed on the Barren-Grounds.

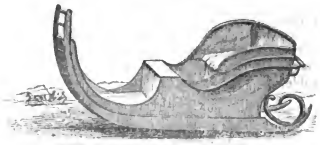


TEMPERANCE.

The evils of intemperance are so great, and still so common, after all the light which has been spread before the public, for several years past, that we consider it due to the community often to refer to them, and again and again to bear testimony against the *beastly* indulgence. Some men must have "line upon line and precept upon precept." Every one who writes for the public, ought to have the common and general good in view, and to throw, if it be but a drop, into the stream which is to purify and cleanse the walks of life. We would recommend the "American Temperance Intelligencer," and the "Temperance Recorder," published in Albany, and the "Temperance Journal," printed in Boston, to be taken by every town or parish Temperance Society in the country, for circulation among the members. These papers give facts, as well as arguments and admonitions, highly important to the cause of Temperance.

It is matter of great satisfaction to the friends of good morals, to observe the increase of temperance hotels and public inns, for the accommodation of travellers, in the country. A very large hotel has just now been opened in Boston, which is to be a temperance house. It will accommodate 150 or 160 boarders. We remember a public house formerly in Hanover Street, near the new hotel, which had a bar-room abounding with strong and alcoholic liquors, and which were great temptations to unreasonable indulgence. It was an excellent house, a regular house, and the visitors and inmates sober and respectable. Yet there were the means at hand, to such as were disposed, for drinking often and unnecessarily. He is a good man, who forbids absolute intoxication and brawls and gambling in his house; but he is a *better* who does not have the means of mischief, and who removes all temptations to evil.

We now have the explicit opinion and declaration of all the respectable physicians in the country, (and those in England have given the like opinion,) "that alcoholic liquors are not necessary for health or strength; that the labouring man is better without them; and that they are even debilitating, deleterious, and gradually destructive of life." It is also true, "that those who have discontinued the use of distilled spirits altogether, have found great benefit in such abstinence; better health, more strength, and fewer complaints of disease and loss of appetite." All we desire is a sober consideration of these *indisputable facts*.



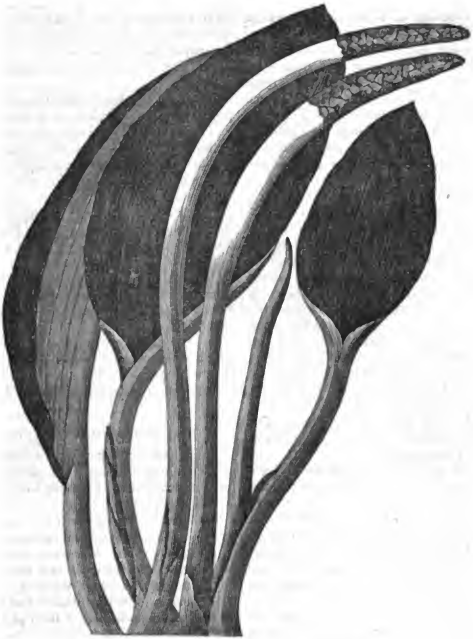
THE CANADIAN CARIOLE.

It is well known that the cold weather in Canada sets in more early and continues longer than in most parts of the United States. The Canadians have good travelling on snow about five months; and this leads them to provide for a comfortable mode of conveyance in winter. They travel on the snow for amusement as well as for business: And parties are frequently formed for this purpose. The vehicle used for this riding, for pleasure, is called a cariole, and a good drawing of one is here given. It has a sharp bottom, and glides over the ice and hard snow like a skate. It has two seats, and is constructed for four persons; and yet it is very light.

Feather Beds.—The want of feathers is altogether artificial, arising from a disregard of the physical and moral well-being of infants and children; and he who has the good fortune never to have been accustomed to a feather bed, will never in health need or desire one, nor in sickness, except in cases of great morbid irritation, or excessive sensibility, or some disease in which the pressure of a firm or elastic substance might occasion pain. But when a rational regard to the preservation of health shall pervade the community, feathers will no more be used without necessity or medical advice, than ardent spirits will be swallowed without the same necessary advice. The physician has frequent occasion to see persons who are heated, sweated, enfeebled, by sleeping on feathers, as if from a fit of sickness; enervated, dispirited, relaxed and miserable.—*Medical Intelligencer.*

I know myself the being of a day—
But when the rolling heavens my thoughts survey,
No more I live on earth—a guest I rise
To heavenly banquets in the starry skies.

A King.



GOLDEN CLUB.—[ORONTIUM AQUATICUM.]

This is an aquatic plant, or flower, as its botanical name imports. One species of this beautiful flower is indigenous to the United States, and grows on the marshy borders of rivers, ditches, ponds and creeks. It requires water, or very low ground where the water flows the greater part of the year. A species of this plant is found in Japan. The water-lily, *(nymphea odorata,)* is also of this genus.

GIANTS.

We read in the sacred volume, "that there were giants in the earth before the flood." It is a question among the learned, whether the persons here referred to had the term applied to them because of being much taller and larger than men commonly were, or because of their great strength and warlike habits. Men of violence and cruelty, who were dreaded by the weak and defenceless, were sometimes called giants as well as men of blood; giants and men of might seem to mean the same. It is probable, however, that those mentioned as giants, were generally men of larger stature than others. Whether there were whole nations of men of gigantic growth and size, is doubtful. But it is probable that individuals of the largest stature were selected to create terror in those whom they attacked. Saul was higher than his countrymen by the length of his head. The giant of the Philistines was but a solitary instance of such exceeding height. In modern times several instances have been known of a person being seven feet: and a few even more than that. A man was exhibited at Rouen in France, in 1735, who was eight feet. One of the Roman Emperors was of the same height. Frederick I. of Prussia sought for men of great stature for his guards: And the most of them were so tall, that a Polish prince of the common stature of man could barely reach the chin of many of them.

HINT TO THE HUSBANDMAN AND THE MECHANIC.—Consider your calling honourable as well as useful: never be ashamed of the apron or frock: and devote leisure hours to mental improvement.

BRIDGES, TURNPIKES, RAIL-ROADS.

Before the Revolution of 1775, there were no large bridges in the English colonies in America: and turnpikes (much more rail-roads) were not heard of. The obstacles to rapid travelling were therefore very great. The detention at ferries, and the circuit taken to head rivers, caused much delay. Three days from Boston to New York was quick travel; and two from Boston to Portland. All rivers of forty or fifty rods wide were passed in boats. The first large bridge in this part of the country was that constructed across Charles River, from Boston to Charlestown. It was built in 1786, and was then the longest in the United States. One of about a third of the extent was built a short time before at York in Maine. And it appeared so strong and efficient, that the artificer was engaged to construct one over Charles River. Most people predicted that it would not stand the breaking up of the ice in winter and spring. It was generally considered merely as an experiment, and the *stock* was not very high at first. But it withstood the violence of the winds and the ice; and others were erected in a few years in various parts of the Union. Since that bridge was erected, now almost a half century, many others have been constructed even of greater extent, in Massachusetts, in most of the eastern States, as well as in the middle and southern sections of the country.

These afford great facilities for travelling, and are evidence of the enterprise and wealth of the people. Turnpike roads have been made in every section of the United States; steam boats have been invented, and rail-roads constructed; all which constitute an amount of improvement which was not even imagined half a century ago, and are indications of more improvements, of which no one can calculate the extent. The benevolent and the patriotic must be anxious that means of a moral power and influence for good be provided, to regulate the mighty population which is to cover the land, abounding in wealth and luxury, which naturally tend to corrupt society, unless adequate checks and preventives are seasonably prepared.

VOLCANOES.

The volcanoes mentioned by the most early writers, are Vesuvius, Etna and Teneriffe. Of those on the Continent of America, we can expect no very ancient account, because the page of history as to this country in remote ages, is a blank. We now know that there are many in America; and their subterranean fires, no doubt, have been throwing out *lava* from the most distant period.

The most formidable of these three was Etna; especially in former times. This is situated on the Island of Sicily, near the coast of Italy. Its base is sixty-three miles in circumference. It is nearly ten thousand feet high, and is seen, in a clear atmosphere, from Malta, a distance of one hundred and fifty miles. It is the largest burning mountain in Europe. The ascent is nearly thirty miles; and a part of it difficult and fatiguing to pass. There is an account of irruptions from this volcano for nearly seventeen centuries before our era, which is about two centuries before the exode of the Israelites from Egypt. Its irruptions, within the last hundred and sixty years, have been highly destructive. The hot ashes run over the walls of the city of Catania, and destroyed five thousand of the inhabitants. Rocks, fifteen feet in length, were thrown to the distance of a mile.

Mount Vesuvius is about seven miles from the populous city of Naples; and is about four thousand feet in height. There have been repeated irruptions within fifty years; but the most devastating was in the year 79 of our era; when the large cities of Pompeii and Herculaneum were buried in entire ruins, with their inhabitants.

The Peak of Teneriffe is the next highest volcanic mountain in Europe, on the island of that name, and one of the group of the Canary Isles. The top of the mountain is more than twelve thousand feet above the level of the sea. During the last century there were several irruptions from this volcano; the most destructive of which was in the year 1798.

In America there are also volcanic mountains, to which reference has been made in former numbers of the Magazine. The most terrific of these is on the mountain Cotopaxi in South America.

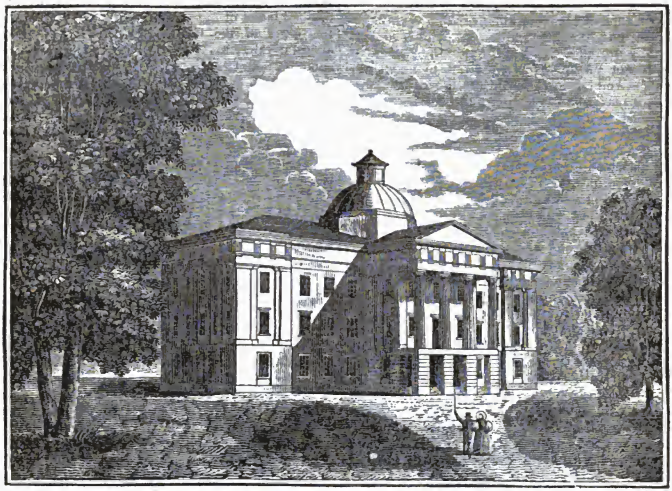
TRANSFERENCE OF VITAL POWER.

A not uncommon cause of loss of vital powers is the young sleeping with the aged. This fact, however explained, has been long remarked, and it is well known to every unprejudiced observer. But it has been most unaccountably overlooked in medicine. I have, on several occasions, met with the counterpart of the following case: I was, a few years since, consulted about a pale, sickly and thin boy, of about five or six years of age. He appeared to have no specific ailment, but there was a slow and remarkable decline of flesh and strength, and of the energy of all the functions,—what his mother very aptly termed, a gradual blight. After inquiring into the history of the case, it came out that he had been a robust and plethoric child up to his third year, when his grandmother, a very aged person, took him to sleep with; that he soon afterwards lost his good looks; and he had continued to decline ever since, notwithstanding medical treatment. I directed him to sleep apart from his aged parent, and prescribed tonics, change of air, &c.—The recovery was rapid. It is not with children only that debility is induced by this mode of abstracting vital power. Young females married to very old men suffer in a similar manner, though not to the same extent. These facts are often well known to the aged themselves, who consider the indulgence favorable to longevity, and therefore often illustrate the selfishness which, in some persons, increase with their years.—*Dr. Copeland's Dictionary.*

THERE IS A BOOK.

There is a book—who runs may read,—
Which heavenly truth imparts;
And all the lore its scholars need,
Pure minds and pious hearts.

Christian Register.



CAPITOL OF NORTH CAROLINA, AT RALEIGH.

We present a view of the new State House, now being built in Raleigh, according to the form and plan adopted, though the edifice is far from being completed. The view is such as is presented to one at the southeast corner of the public square, which is highly decorated with trees. It will be recollected that the former capitol at Raleigh was burnt a few years ago. According to the plan and design of the present State House, it has been predicted that it will be the most chaste and beautiful building in the southern part of the country, and superior in this respect to any State government house in the Union. It is constructed entirely of beautiful cream-coloured granite, (almost free from iron pyrites,) taken from a quarry within the distance of one mile. Some of the blocks weigh ten tons; and those for the outside walls have the face worked, and smoothed, or polished.

The model of the building is from the Temple of Minerva at Athens, and commonly called the Parthenon. The wings are rustic work; but the greatest beauty of the building (probably) will be the capitals and the cornice. It is matter of wonder, that the rough stone in the vicinity could be fluted and fretted and moulded into such beautiful forms. The cost is variously estimated at from $300,000 to $400,000. Those who were opposed to the plan of so large and expensive a building, are now said to be pleased with its appearance, and have ceased complaining of the expense. The Capitol contains, in the lower story, rooms for the Governor, Treasurer, Secretary, and Comptroller. In the second story, which is of the height of thirty-eight feet and a half, are two large halls for the two branches of the Legislature, of fifty-six feet by fifty-four each; and rooms for the Supreme Court, the clerks and a library. The wings contain rooms for Committees, &c. The Rotunda goes the whole height of the building, and is surmounted by a dome and lantern, thirty-six feet in diameter.

The corner stone was laid on the fourth of July, 1833; and the work is rapidly progressing; in July last, the walls were carried up above the windows of the third story, and were to be eight feet higher; which is probably done before this time. The superintendent (Mr. D. Paton) is esteemed fully competent to the work. He is a gentleman of science and taste.

The streets gradually decline on all sides from the square, so that there is a good view of the Governor's house (or *palace?*) and other large new buildings, which have a fine effect.

When the former State House was burnt, the statue of Washington, by Canova, was much injured; but there is still a hope cherished, "that it may be reinstated in the spirit of the original model, by some eminent artist."

The saw in India is made to cut when it is drawn towards the labourer who uses it. The advantage of this is, that the instrument produces a greater effect, as the strength in pulling towards one is superior to that of pushing. It is also said that it may be used with more velocity. If this is true, why has it not been introduced into other countries?

ORIGIN OF IDOLATRY.

In the time of Abraham, 1950, or 2000 years before our era, and 350 years after the deluge, idolatry generally prevailed. That it was *universal*, however, is not probable. Noah lived to about this period. And he surely would not fall into idolatry. Nor is it reasonable to suppose, that all his sons or grandsons, if any, became idolators. Their posterity became so probably, in the fourth, or fifth, or sixth generation, after the death of Noah, and on being dispersed into different countries, where they became regardless of the instructions of Noah and his sons, and introduced images as *emblems* of the Deity. The most early departure from the worship of the *Invisible* One, however, was in the adoration of the sun, moon and stars; and thence to the worship of fire, as the most powerful element in nature, and also as resembling the sun and stars, then supposed to be fire. There is evidence that astronomy was early studied by the Chaldeans, the Indians or Hindoos, and Arabians.

It seems to be a universal sentiment impressed on the mind of man by nature itself, that there "is a power above us." The nature of that Being (or Beings) and the mode of his operating is indeed a mystery; and no wonder there are various theories and systems on the subject. Most men, we might say *all* men, not greatly advanced in science and philosophy, judge altogether according to their senses and to appearances. That they should, therefore, often and greatly err, is not strange: where they saw power, there was God; and physical laws imposed by the Deity on his works, were attributed to his immediate influence and operation. Thus God was in every thing; "was the soul of the world." This was so far true, indeed, as that it recognised the hand of God in all things, and that he was the creator and sustainer and governor of the universe. But it was erroneous, in that it confounded him with his laws, and considered the operations and manifestations of his power, as Deity itself. Hence the notion of destiny or fate; or a blind, unintelligent principle acting, and compelled to act, as it did, by some unexplained necessity. On this theory, God was supposed inseparable from and a part of the material world: and that wherever there was a display of power, there worship and adoration should be given. And the next step was, that there was no Deity distinct from the universe of matter. His spirituality and even his individuality was thus denied. And the worship of stars, of the sun, and moon, and even of reptiles thus prevailed; and not only fire-worship and idol-worship was adopted, but Fetichism,* became the religion of all the more illiterate and barbarous nations of the earth. The Hindoo system of theology is but another name for *pantheism*, or the worship of every thing. Such also was and still is the worship of the people of Africa. In the Hindoo theory also, there are millions of deities. And yet according to Sir William Jones, and other learned English writers, who have studied the history and theology of India; and we might add, Rajah Ramohun Roy, the distinguished native Hindoo of the present age, the original belief of the people of that country was in the unity of the Godhead. Their most remote ancestors, they say, believed in one God, who was supreme. But in process of time, that simple and rational faith became corrupted, and has long been but a mass of errors and absurdities. This account or statement is probably correct. It is scarcely possible that Noah or his children were idolators or polytheists; but that his posterity of the fifth, or sixth, or at farthest, of the eighth or tenth generation were such, through ignorance (in their dispersed situation) there is abundant evidence from history both common and sacred. And this is far more probable as well as rational, than the theory which makes men idolatrous and polytheists, *originally*.

* The worship of the creatures and works of God, instead of the divine, infinite Being himself.

THE NILE.

This is one of the largest rivers in Africa; except perhaps, the Niger, which has not yet been fully explored. The Nile flows through Nubia and Egypt. The mouths of this river have much changed within 2000 years. But we refer to it here, chiefly to notice its periodical overflowings, and the consequent fertility of the soil in its vicinity. The inundations of the Nile are owing to periodical rains which fall near its source. The waters usually begin to rise in June, and continue to increase, three or four inches, every twenty-four hours, till the last of September. And then gradually, fall, or subside nearly in the same proportion. Sixteen cubits' rise was sufficient to water great part of the country; now twenty-two feet are necessary; which shows that the land near the river has been raised about six feet, by alluvial deposits. A rise of 26 feet in 1829, destroyed many houses and villages. These inundations, when not unusually high, are a great benefit to the country, where there is very little rain. The lands which are inundated, and on which the mud brought down by the freshets is deposited becomes exceedingly fertile, and produces abundantly; and lower Egypt still supports a great population.

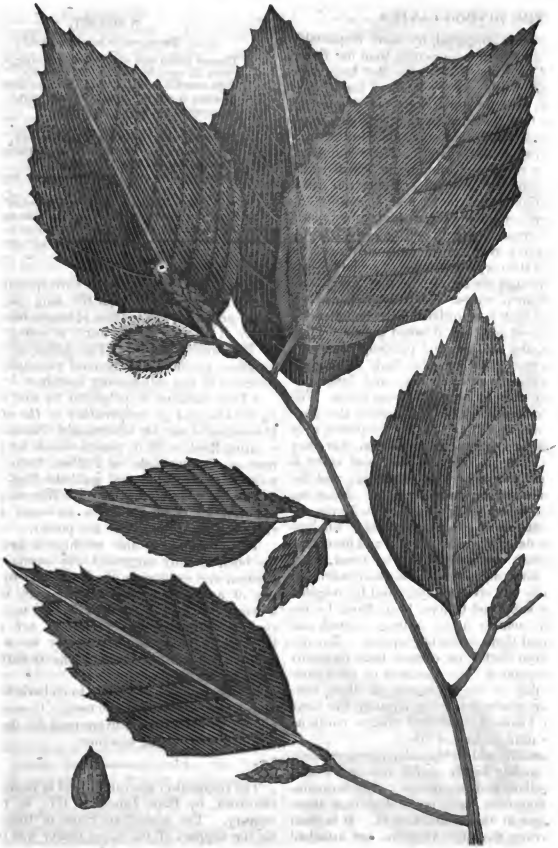
THE SEVENTH DAY.

The sun is set beneath the western wave:
O'er Eden's garden soft-wing'd twilight steals;
Stars, one by one, in golden clusters, pave
The dark'ning sky; while the lone night-bird peals
Her liquid harmony, and nature feels,
O night, thy soothing power, and seeks repose
Man to the God of darkness now appeals,
And in the south, night's silver queen arose,
And o'er the sleeping world her cool, clear beams she throws.

The Night serenely passed—the seventh day came,
And rosy dawn steals o'er the eastern sky;
Nature awakes, and breathes through all her frame
One sigh of praise and prayer to God Most High.
Pleased with his works, thus spake Eternity:
"This day he hallow'd, set apart for rest,
Sacred from toil, in holy memory
Of this new world—a world which we have bless'd·
The SABBATH we appoint, *for man to be our* GUEST."

London Magazine.

The wine of Scripture is called "the fruit of the vine," and was probably the natural juice of the grape, without fermentation, and therefore free from *Alcohol*.



THE WHITE BEECH TREE.

There are two species of the Beech Tree, both in Europe and in North America, the Red and the White; and they are among the tallest and most majestic trees of the forests. The names are given them on account of the colour of the wood. The White most abounds in the middle and western States, and on a deep and moist soil. In Pennsylvania, Maryland and New Jersey it is usually found single; but in Kentucky and Tennessee it grows in large masses. According to Michaux, the finest trees of the White Beech are on the banks of the Ohio: They grow there to the height of one hundred feet, and are eleven feet in circumference. The Red Beech is more like the Beech of Europe, and is found in the northern and eastern parts of the United States. The nature and uses of the Beech wood are too well known to require a particular statement.

———

Mr. Locke.—This great philosopher and *rational* Christian, when on his death-bed, said to Lady —— that he had lived long enough, and was thankful for the many blessings God had bestowed on him; and exhorted her to consider this world chiefly as a preparation for another.

THE HINDOO CASTES.

The Hindoos are supposed, by some respectable writers, to be a more ancient people than the Egyptians or the Chaldeans, and to be the immediate descendants of Noah. Their earliest tradition is that they came from the north and west, the part of Asia probably first occupied by that patriarch, soon after the deluge. But what is peculiar to this people is their division into *castes*. There is indeed, some difference of opinion among the learned who have written on the subject. Robertson says, "that the distinction of ranks and separation of professions were completely established among them, from the most remote ages;" and he considers it a proof, that society was considerably advanced at the time; as in the very early stages of social life arts would be few, and so simple, as that every one can supply his own wants. The Hindoos are divided into four castes, or orders. The members of the first or highest caste are deemed sacred. They are the priests, the teachers and philosophers of the nation. They are devoted to the study of religion, and to the performance of its rites and functions. Their influence therefore must be very great. The second order or caste are intrusted with the government and defence of the State: In peace, they are the rulers and magistrates, and in war they compose the military power. The third caste is composed of merchants and husbandmen; and the fourth of artisans, laborers and servants. None can ever quit his own caste, nor be admitted into another. The station of every individual is unalterably fixed; his destiny is irrevocable; and his course of life is marked out, from which he must never deviate. This division, and these castes or orders are required both by the civil authority and by religion. Each order is supposed to have been fixed by the Divinity in the manner it has so long existed, and that to confound them would be impious. But not only are the four castes or classes thus distinctly and entirely separated; the members of each caste adhere invariably to the profession of their forefathers. From generation to generation, the same families have followed, and will always continue to follow, one uniform line of life.

The Hindoos are said to consider this separation or division of society highly useful, and even essential to their welfare and prosperity. And individuals of other countries have pretended that there were advantages in this establishment. It is most probable, however, that the Hindoos are attached to castes from the antiquity of the custom. It must operate as a hindrance to all human improvements; nor can there be a laudable ambition to excel, in such a constitution of society. It is owing, no doubt, to this condition of the Hindoos and the Chinese, that no changes have been made among them for many centuries; none indeed since these people have been known to Europe. As might be expected, this division into castes generates an unfriendly and hostile spirit among the members of each, which has an unhappy influence on the whole population.

Never hire a man to do a piece of work which you can do yourself.

A SONNET.

"The ray which beams for ever."

The sun which now with ceaseless glowing light,
Pours life upon the smiling fields of earth,
With cheerful beams as warm and rays as bright,
As when at first th' Almighty gave it birth,
Must sink at last in an eternal night!

The moon shall vanish from her native sky,
Her sparkling train, the stars, retire in gloom,
When time is swallow'd in eternity—
Though brilliant eyes lie darkened in the tomb.

Though dies the queen of night, and lord of day,
There shines a beam which shall not fade away—
Thy MIND, O man, is that immortal ray.

Mechanics' Magazine and Journal.

PERPETUAL MOTION.—A correspondent of the Boston Courier states that the long sought principle of *perpetual motion* has at length been discovered by ANDREW MORSE, Jun., a young mechanic, in Bloomfield, Maine. The following is the description given of the general principle and construction of this self-moving machine.

"This machine is propelled by *air, acted upon by the changes of temperature of the atmosphere.* It consists of an Air Cistern and Piston—a Reciprocating Rack, with its pinion wheels for giving motion—a Drum, with its Pullies, from which the weight is suspended and guided—Cog-wheels and Catch, for maintaining Power—Wheels and Axles, required for condensing the air—and Levers for changing the direction of the power.

The operation of this machine is produced—as has been already suggested—by means of the contraction and expansion of air, effected by the changes of atmospheric temperature. By this power, a weight is kept constantly wound up, so that it shall perpetually, and uniformly act upon, and keep in motion, any machinery to which it is adapted. In short, *the machine is entirely regulated by its own motion.*"

Mr. Morse intends shortly to embark for England with a view of claiming the twenty thousand pounds offered by the British Government for the construction of a self-moving machine.

The Inquisition was established in Roman Catholic countries, by Pope Innocent III., in the twelfth century. The immediate cause of these tribunals for the support of the papal power was the sect of Albigenses, who refused to submit to the dogmas of the Romish Church, and looked to the Bible for the true doctrines of Christ. The inquisition was under the immediate direction of the Pope; and its design was to seek out such as did not submit to his decisions and orders, and to pronounce its dreadful sentence against their fortunes and their lives, without appeal. This outrageous design was but too faithfully pursued for four centuries. The vile informers were concealed and rewarded. Every intelligent and conscientious man was sure to fall a victim to the malignant spirit of bigoted monks In Spain alone, the victims of the Inquisition amounted to three hundred and forty thousand, in about three centuries.

TO FARMERS.

If ye aspire to wealth and ease,
Stock well your farms with mulberry trees;
The silk-worms will their wealth unfold,
And coin their foliage into gold.
Suppose that you have never known,
And are not curious to be shown
The simple culture of the worm;
Your neighbours may the thing perform.
And then the leaves which you produce,
In skilful hands become of use.
The farmer who would make pretence
To taste, should have a hedge-row fence;
No tree that's known, so quickly grows,
Or looks so uniform in rows.
It springs from cuttings or from seeds,
And overcomes poor soils and weeds;
And in four years will make a fence,
With, of all things, the least expense:
And when instead of walls or rails,
The mulberry hedge around prevails;
The lands produce a mine of wealth,
Employment, happiness and health.
The mulberry grows on every soil,
Requires but little aid or toil,
And the best silk is always found,
Produced from leaves of sandy ground;
While a rich soil will leaves produce,
Abounding in a watery juice,
And on which, if worms be fed,
They make a coarse, and brittle thread.

The cause of Temperance has many friends and advocates in Great Britain. Mr. Buckingham, a Member of Parliament, who has lately spent several weeks in Yorkshire and Lancashire, in efforts to promote the reform, says, that in Preston there were 4,000 members of the Temperance Society, and in Colne 2,000, being a fourth part of the whole population. One of these, five years ago, was one of the most drunken places in the country. He says, he regards the Temperance reformation, as likely to constitute one of the greatest and most interesting eras in the history of England or America.

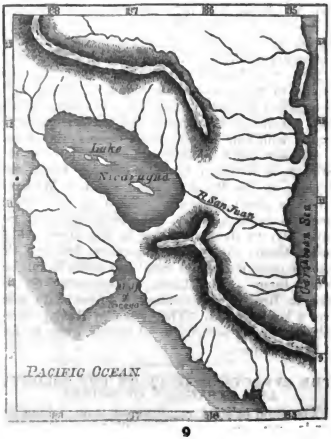
To those who are addicted to strong drink.—*Indulge* your appetite, and expect disease and ruin.—Abstain, and you will secure health and happiness.

ATLANTIC AND PACIFIC CANAL.

The central part of the American continent, presents five points that offer facilities for the execution of this project, which if ever completed may effect a revolution in the commerce of the world. These points are the following:

1. The Isthmus of Tehuantepec (N. lat. 16°—18°) in the Mexican states of Vera Cruz and Oaxaca, between the sources of the Chimalapa, that runs into the Pacific ocean, and those of the Passo, that empties itself into the Huasacualco, a tributary of the Atlantic. It has been estimated that the distance from New York to the mouth of the Oregon, which by the way of Cape Horn is about 16,000 miles, would be less than half that number of miles by this canal, besides the advantage of avoiding the stormy navigation of the Cape. The highest point of the Isthmus has an elevation of only about two thousand feet, and the greatest height of the dividing ridge between the waters of the two oceans is about thirteen hundred.

2. The Isthmus of Nicaragua, (N. lat. 10°—12°) in the Republic of Central America, is the second point that has attracted attention, and presents, perhaps, greater facilities for the construction of a grand oceanic ship-canal than any others. The Lake of Nicaragua, which is navigable for the largest vessels, and communicates with the Atlantic by the broad channel of the River San Juan, is separated from the Pacific by an interval of only about sixteen miles in breadth, and the water-shed is not more than twenty feet in height above the level of the lake.



3. The Isthmus of Panama was particularly described in our Number for August, Vol. I., and seems to be better adapted for a rail-road than a canal.

4. The Isthmus of Darien, (N. lat. 6° 40′—7° 12′) in the Republic of New Grenada, between the river Atrato, and the Cupica, which flows into the Pacific.

5. The Isthmus of Choco (N. lat. 4° 58′—5° 20′,) between the Atrato, and the River San Juan, which empties itself into the Pacific, south of the Cupica. It has often been stated that a canal united these two last named streams, and we even find it laid down on many maps, as the canal of Raspadura; but no such work exists.

Of all these points the most favourable, as we have already observed, is the second, or Isthmus of Nicaragua, which is almost cut through by the River San Juan, and the Lake Nicaragua, whose waters are discharged by that river into the ocean. We shall, therefore, give some details as to this district, without dwelling more fully upon the nature of the other localities above-mentioned.

The navigation of the River San Juan is somewhat impeded by rapids and shoals, but it is navigated by bungoes or river barges of about two tons burden, which go and return between Grenada, on the Lake of Nicaragua, and San Juan on the Gulf of Mexico, in twelve days. And an English schooner of forty tons, was a few years ago commercially employed on the lake, which ascended by the river by merely removing her keel.

The Lake of Nicaragua is about one hundred and twenty miles in length by forty in breadth, and when this region was in the hands of Spain, a marine consisting of a brig of fourteen guns and several armed schooners was kept up upon it, a fact which sufficiently illustrates its capability of navigation by large vessels.

The principal towns on the Lake are Grenada and Nicaragua, both of which are on the western or Pacific side. Grenada contains eight thousand inhabitants; its principal exports are cocoa, indigo, Nicaragua wood, and hides. Nicaragua is rather larger. San Juan del Sul, the nearest port on the Pacific to the town of Nicaragua, is distant eighteen miles; the intervening country is flat, and the port, which is not at present inhabited, is perfectly secure, with four fathoms water close to the shore.

Another point of intercommunication on this Isthmus is between Leon, on Lake Leon, and Realejo, on the Pacific. Lake Leon or Matiares, which is about thirty-five miles long and fifteen broad, is connected with Lake Nicaragua, but not navigably, as there is a fall in the river, which unites them; the ground, however, between the lakes is quite flat, and a canal can easily be cut between them. From Leon, a large town on the lake, to Realejo, the distance is about sixty miles over a level ground. The harbor of Realejo is capable of giving security to all vessels, even to line of battle ships.

THE EFFECTS OF HEAT ON THE SOLIDITY AND EXPANSION OF BODIES.

The fluid or solid condition of some bodies depends on the degree of heat that is in them; or those that are commonly found in nature fluid, may be resolved into solid, by the abstraction of heat, and on the contrary, others that are solid may be made fluid by application of an extra degree of heat. Thus water may be made solid, and iron and other metals liquified. The size also of solid bodies, or the space they fill is enlarged by heat, and diminished by cold. This would in part, perhaps, be effected by the expansion of the air within them, of which all substances contain a portion, penetrating their pores and forming in fact a part of the substance itself. The analysis of all metals and minerals shows them to be thus composed. But in fluid bodies the application of heat causes the air to escape in the form of vapour and thus considerably diminishes the bulk of the matter. In the freezing of water there is a considerable increase in bulk by the new combination of air which is taken up in it, and also by the new form of its particles, those of ice being in crystals, and those of water in globules. And in the resolution of the ice into water it is diminished in bulk by the escape of a portion of its matter in vapour. Steam or vapour condensed forms water, and the water condensed forms ice: the *particles* of which are less in the solid than the liquid, though by the means above-mentioned the bulk of the mass is increased

Water boils at 212° of Fahrenheit, but its expansion between 32° the freezing point and the boiling point, is but 000433.

When steam is first generated from water at 212°, its force is reckoned at one atmosphere, or a pressure of 15 lbs to the square inch, and it increases in a geometrical progression of the temperature.

The wonderful expansion of water when it has become steam is illustrated in this way. A cubic inch of water at 40° fills a space of 1694 inches at 212°.

It is reckoned that a bushel of coals will convert 14 cubic feet of water into steam, occupying 1330 times more space, and being capable of lifting 39 millions of pounds one foot high.

The expansive force of steam may be instantly condensed by the application of cold water. Four ounces will reduce 200 cubic feet, to 40 in a single second of time.

Fly-Boats.—A gentleman who lately took passage in one of these boats on the Clyde, Scotland, says,—"They are made of sheet iron, seventy feet long, five and a half wide, thirty inches deep at the largest part. The hull of the boat weighs seventeen hundred pounds, and including cabin seats and furniture, thirty-three hundred pounds. They are drawn about ten miles an hour, by two horses, and sometimes have one hundred people on board. The boat steers with much ease, owing it is supposed to the keel extending only forty feet. There is not the slightest ripple. When moving slowly, the boat throws the water by the side, near the cutwater; but as the motion increases, the bows appear to lift out of the water. When the velocity is great, the water appears to retire, leaving a cavity along the side one or two inches deep. The agitation of the water against the canal sides or banks is very slight."

WRITERS OF SACRED HISTORY.

Moses lived about 1500 years before our Saviour. Being educated in the king of Egypt's family, he was taught all which the priests and wise men of the country knew; and his attachment to his own nation, the descendants of Abraham, would lead him to study their history. He lived about 800 years after the deluge of Noah, and about 400 later than Abraham. The Hebrews were descendants of Shem, and the Egyptians and Canaanites from Ham. The posterity of the latter soonest settled in cities, and thus became inventors of the arts of life. The posterity of the other were tillers of the earth, or keepers of sheep and cattle, and therefore lived more scattered and insulated. The mode of life of these was more favorable to virtue and religion. The long lives of the early generations of men served to hand down events by tradition with more accuracy. And what other means they had of preserving them, we are not now able to say. The Egyptians used hieroglyphics in Moses' time, no doubt. There is no account of alphabetic writing before Moses, unless an allusion be made to it in Job. But that book was probably written by Moses, during the forty years he was in the land of Midian. Whether alphabetic writing was known by the antedeluvians, and by Noah was communicated to his descendants, can only be a matter of conjecture. Great events might be handed down from Noah to Abraham by only one intervening person, and that was Shem, who lived 500 years after the flood. And from Abraham, or from Jacob, to Moses, two intervening persons might be sufficient. In Midian, the southwest part of Arabia, where Moses passed forty years in retirement, the patriarchal life continued; and the ancient men with whom Moses was there acquainted, no doubt, had a correct knowledge of events in that part of the world from the time of the flood.

Moses then, we perceive, would be able to give a correct account of the deluge, and of the preservation of Noah; of events after that catastrophe; of attempts to build Babel; of the descendants of Noah; of the separate migrations and spread of his posterity; and of the lives of Abraham, Isaac and Jacob. His account of creation, or of the *present* formation and settlement of the earth, he might have received from the ancient men, whom he knew, who had received it by tradition from Noah, as suggested above.

The book of Genesis, and the cosmogony there given, are to be credited to Moses, the great Jewish lawyer, and a prophet of Jehovah, more fully inspired to make known the divine purposes to men, than any other except Jesus of Nazareth, to whom God gave his spirit without measure. In this book, are given the outlines of creation, and a reference to the wicked race of men who lived before the deluge; that overwhelming calamity is also related; and the settlement of the earth afterwards by the posterity of Noah. A beautiful sketch is also given of the patriarchal manners, and all the simplicity of those early ages.

The books of Exodus, of Leviticus, of Numbers, and of Deuteronomy are also to be ascribed to Moses. These are confined to the history of the Jews for forty years after they left Egypt, and a minute account of the rites and ceremonies of their worship, and of the laws given for their social state and personal observation. From the time of Moses, alphabetic writing was more or less in use among the Jews; and from them probably the knowledge of letters spread to other places; to Phœnicia, and thence to Greece. The greater part of the book of Joshua was probably written by himself.

The books of Judges, Ruth, Samuel, were no doubt written, or compiled by the ancient prophet of that name. The two books of Kings, and the Chronicles were perhaps put in their present form by Ezra, who was a learned man, and a collector of Hebrew historical writings and manuscripts. Records kept during the times of the kings, from David to the captivity of the Jews by the Babylonians, were seen no doubt by Ezra, and extracts made and preserved of all that was most important. Some of the unimportant chronicles might not have been copied or preserved. A few books or records referred to, are certainly lost. Ezra was probably also the writer of the book of Esther, as well as of that bearing his name. And by him, after the return from the Babylonian captivity, the older books were collected, arranged and copied for preservation. Nehemiah wrote the book which bears his name; or left materials for it, which were perfected by Simon, a pious and learned Jew of a little later period. Ezra or Nehemiah, probably the former, also collected and arranged the prophetical books, excepting Malachi, who wrote at a subsequent period, whose book of prophecies might have been written by himself, and by Simon before mentioned. These books, it is generally supposed, and there is no reason to doubt it, were received by the Jews and called the *scriptures* in the time of our Saviour. They were "read in the synagogues every sabbath day," and were appealed to as authority in regard to the history of the nation, the rites and forms of their religion, and to the advent, character, and doctrines of the Messiah, or Christ. Nearly three hundred years before Christ, the sacred books were rendered into Greek at Alexandria in Egypt: And this version was known and used in the time of our Lord and his apostles. The Jews being settled in various parts of the extensive Roman empire: the knowledge of the writings of the Old Testament was no doubt acquired by many Gentiles, who thus became acquainted with the Jewish religion.

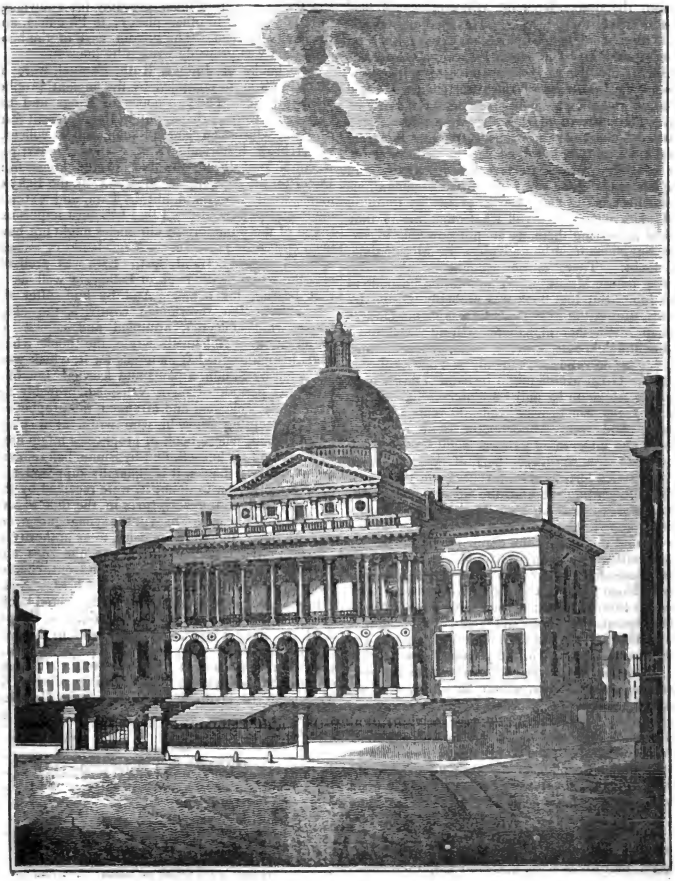
LINES BY BISHOP HEBER.

Our blessed Lord who went to dwell
In lowly shape and cottage cell,
Did not refuse a guest to be
At Canaan's poor festivity:

Oh! when our soul from care is free,
Then, Saviour, may we think on thee,
And seated at the festal board,
In fancy's eye behold the Lord.

So may such joy, chastised and pure,
Beyond the bounds of earth endure;
Nor pleasure, in the wounded mind,
Shall leave a rankling sting behind.

Never run in debt, without a reasonable hope of paying agreeably to promise.



CAPITOL, BOSTON, MASS.

CAPITOL OF MASSACHUSETTS.

This elegant and spacious edifice, situated in Boston, on elevated ground adjoining the Common, and near the centre of this ancient and flourishing city, was erected in 1795. The corner-stone was laid on the fourth of July, by the venerable and patriotic Samuel Adams, then Chief Magistrate of Massachusetts, (assisted by Paul Revere, Master of the Grand Lodge of Masons.) He succeeded Governor Hancock, who died in October, 1793. Governor Adams made a short address on the occasion of laying the corner-stone, and said, "he trusted that within its walls liberty and the rights of man would be forever advocated and supported." The lot was purchased by the town of Boston of the heirs of Governor Hancock, for which the sum of $4,000 was paid. The building was not finished and occupied by the Legislature till January, 1798; when the members of the General Court walked in procession from the Old State House at the head of State Street, and the new edifice for the government was dedicated by solemn prayer to Almighty God. The Old State House, so called from the time of building the other, was long the place in which the General Court of the Province of Massachusetts was holden. It has lately been well repaired, and is the place of the meetings of the city authorities and for public offices.

The corner-stone of the present Capitol was brought to the spot by fifteen white horses, at that time the number of States in the Union. The building is seen at a great distance in all directions, and is the principal object visible when the city is first seen by those who visit it. The form is oblong, being one hundred and seventy-three feet in front, and sixty-one feet deep, or at the end. The height of the building, including the dome, is one hundred and ten feet; and the foundation is about that height above the level of the water of the bay. "It consists externally of a basement story, twenty feet high, and a principal story, thirty feet high. This, in the centre of the front, is covered with an *attic* sixty feet wide, and twenty feet high, which is covered with a pediment. Immediately above arises the *dome*, fifty feet diameter, and thirty in height; the whole terminating with an elegant circular lantern, which supports a pine cone. The basement story is finished in a plain style on the wings, with square windows. The centre is ninety-four feet in length, and formed of arches which project fourteen feet, and make a covered walk below, and support a colonnade of Corinthian columns of the same extent above.

The largest room is in the centre, and in the second story; (the large space below in the basement story is directly under this:) it is the Representatives' Chamber: and will accommodate five hundred members; and sometimes they have been more numerous. The Senate Chamber is also in the second story and at the east end of the building, being sixty feet by fifty. At the west is a large room for the meetings of the Governor and the Executive Council; with a convenient ante-chamber.

The view from the top of the State House is very extensive and variegated; perhaps nothing in the country is superior to it. To the east appears the bay and harbour of Boston, interspersed with beautiful islands; and in the distance beyond, the wide extended ocean. To the north the eye is met by Charlestown, with its interesting and memorable heights, and the Navy Yard of the United States; the towns of Chelsea, Malden and Medford and other villages, and the natural forests mingling in the distant horizon. To the west, is a fine view of the Charles River and a bay, the ancient town of Cambridge, rendered venerable for the University, now almost two hundred years old; of the flourishing villages of Cambridge Port and East Cambridge, in the latter of which is a large glass manufacturing establishment; of the highly cultivated towns of Brighton, Brookline and Newton; and to the south is Roxbury, which seems to be only a continuation of Boston, and which is rapidly increasing: Dorchester, a fine, rich, agricultural town, with Milton and Quincy beyond, and still farther south, the Blue Hills, at the distance of eight or nine miles, which seem to bound the prospect. The Common, stretching and spreading in front of the Capitol, with its numerous walks and flourishing trees, where "the rich and the poor meet together," and the humblest have the proud consciousness that they are free, and in some respects, (if virtuous) on a level with the learned and the opulent—adds greatly to the whole scene. Near the Capitol, on the west, is the mansion house of the eminent patriot, the late John Hancock, now exhibiting quite an ancient appearance; and on the east, about the same distance, is situated the dwelling of the late James Bowdoin, another patriot of the Revolution, a distinguished scholar and philosopher; and who, by his firmness, in the critical period of 1786, contributed most efficiently to the preservation of order and tranquillity in the Commonwealth. Large sums have been expended in repairs on the State House, both within and without, since it was erected, and in improving the grounds and fences about it; and it is now in a condition of great neatness and elegance.

Conveyance of Sound. Among the strangers from the Continent of Europe lately attracted to London, in hope of fame and profit, is Mr. Sudry, who visited England for the purpose of bringing before the public an ingenious system of conveying intelligence by means of the seven primitive musical sounds. In his system, these are employed to represent the twenty-four letters of the alphabet; and, of course, to be combined in words of all kinds. Those who have seen the invention tested are satisfied that in theory it is efficient. Mr. Sudry intends to apply it to telegraphic communications in all cases where vision is interrupted; and the plan seems worthy the careful examination of all who are conscious in such matters.

A pamphlet lately published on the Statistics of the United States, gives the following items, as to longevity, blind, deaf and dumb, viz.—of persons exceeding 100 years of age, 2,584; of which 540 are white, and 2044 are coloured: of blind, 5,444; 3,974 white, and 1,470 coloured: deaf and dumb—5,363 white, 743 coloured; in the whole, 6,106.

MECHANICS' HOURS OF LABOUR.

By *request* we give the following from the last number of the "Boston Mechanic, and Journal of Useful Arts and Sciences, conducted by *practical* men." The article is in favour of the "ten hours' system of labour." We do not feel altogether competent to give a decided opinion as to the wisdom and correctness of the plan; or as to the good policy of the labouring class urging the plan with so much zeal as some have done. But this article is written in a temperate and proper spirit, and not without ability; and we therefore publish it in our Magazine. We hesitate not to say however that the consideration of the mechanic having some time for reading and study, and of ten hours' manual labour in the twenty-four being as much as is consistent with the physical powers of man, (if health and long life are desirable) is entitled to the more mature inquiry and judgment of the friends of the working classes, than seems yet to have been given it.

"Every thing that tends to the intellectual improvement of the popular mind, and especially of the labouring classes, should be hailed as a harbinger of better days. For though, in the absence of those higher principles which enter into the heart, and rule the life, mere intellectual attainments cannot secure to a people true freedom or real happiness, yet no measure of virtuous principle—no degree of religious influence—can rescue a nation or a community from the fetters of ignorance and despotism, or preserve them from their degrading and paralyzing effects. We have reason to hope, that the discussion of the subject of mechanics' working hours, which is now going on, if conducted with proper reference to the rights of all parties interested, may end in the production of permanent good to the labouring community.

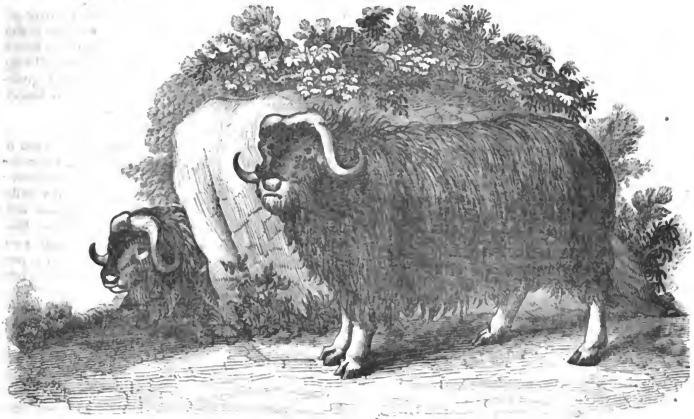
"There seems to be ample reason for limiting the hours of obligated labour among mechanics, to ten. Experience has shown, that labour continued from day to day, for more than ten hours, is prejudicial to health. Those who live to a great age, we believe, have generally been temperate in all things—in food, in drink, in excitements, and in labour. That labour may be called temperate which does not take more from the system, than the succeeding night's sleep will perfectly restore. When more strength is put forth, during the day, than can be restored by our usual sleep, the constitution is injured. And generally, we believe, more than ten hours of hard labour will wear upon the human constitution, and exhibit its effects, if not in disease, at least, in premature old age and debility; although robust persons may, in many cases, endure much more without injury.

"But not only is the body, but the mind itself, injured by excessive bodily labour. For whatever affects the body affects the mind also. Hence, were there no other motive for using the bodily strength moderately, but the preservation of a healthy and vigorous mind, that ought to be sufficient. But there are other motives. Not only the mind must be preserved in a healthy state, but it must be exercised and cultivated, and stored with useful information. Time is needed for intellectual cultivation, which is not easily obtained when the whole available portion of a day is devoted to labour. It is an acknowledged fault, that the labouring classes are not educated as they should be; and we will hazard the remark that those who labour longest and most severely, have generally a less perfect developement of the mental powers than others. The mechanic needs these additional hours, for self-education—for obtaining useful knowledge of all kinds, and particularly in relation to his trade. It is not conceived that every one would avail himself of this opportunity, but it is very certain that many would, if they could obtain it. The education of the young mechanic during his apprenticeship, is full often little attended to, or even quite suspended. He has acquired, at most, the mere rudiments of an education, before entering his apprenticeship. He becomes acquainted with the world, and if he chances to meet with intelligent associates, he may gain considerable off-hand information, during this period of his life. But that he should possess himself of any of that scientific knowledge which a good mechanic, who is master of his trade, ought to have, is very improbable. Generally, to boys, and even to men, Philosophy, Chemistry, &c., have a forbidding aspect; and they frequently imagine, that, as for themselves, it would be impossible to learn them. But were sufficient time allowed them, to pursue these studies, their mistake would be far more likely to be discovered, and the advantages of these branches of knowledge would be more widely extended through the community at large.

"It must be confessed, we dare not expect great results in this generation, except from a few minds already travelling forward, in the path of progressive improvement. Minds already matured cannot be so strongly influenced, even in the prosecution of good ends, as those which are young and tender It is to the young, then, who are to arise in our places, that we look with greater confidence. They, we trust, will have a better understanding of the fact, that their talents are bestowed upon them for improvement, as well as their physical strength; and that it is as much a sin to neglect the one as the other."

Comets and Women.—Some one has said, playfully, but rather severely,—Comets, doubtless, answer some wise and good purpose in the creation; so do women. Comets are incomprehensible, beautiful, eccentric; so are women. Comets shine with peculiar splendour, but at night appear most brilliant; so do women. Comets confound the most learned, when they attempt to ascertain their nature; so do women. Comets equally excite the admiration of the philosopher and of the clown of the valley; so do women. Comets and women, therefore, are closely analogous; but the nature of each being inscrutable, all which remains for us to do, is to view with admiration the one, and to love almost with adoration the other.

A royal order was issued in Spain, in July last, for the suppression of the society of Jesuits. A similar order was issued in 1767, but afterwards repealed. We predict, that the Society will never be again revived, even in Spain.



THE MUSK OX, OR BULL.

This curious animal is an inhabitant of the Polar Regions, and is found in the Barren-lands of North America, in about 60° and 70° N. latitude, near the shores of Hudson's Bay, west of the Rocky Mountains, and Melville Island. Like the caribou, they feed on grass, some part of the year, and lichens at others. Its flesh also resembles that of the caribou, except, at times, being highly flavoured with musk; and hence no doubt the name by which the animal is known. The hair or wool is very similar to the covering of the bison, or wild ox of America. Some Indian tribes hunt these animals, for their flesh and skin. The Musk Ox, or Bull is not so tall as the deer, but is far more bulky. Their legs are short, and the shoulders are high. The hair is long and reaches to the ground. The wool is under, or within the hair, and is quite fine. Stuff manufactured of the wool is almost as soft and delicate as silk. Its horns are close to the head, and bend downwards. It runs fast, and climbs very steep precipices.

CENTRAL AFRICA.

The interior of Africa was scarcely known to the ancients. The Egyptians knew nothing farther than Cyrene and Lybia. The Romans were acquainted only with the parts of Africa bordering on or near the Mediterranean. And the Carthagenians were too much engaged in commercial enterprises, or in war with Rome, to explore the interior. Since the close of the 15th century (1493) the Portuguese, Dutch and English have sailed round this quarter of the world, and examined much of its seacoasts: but still remained unacquainted with the interior. It is only within forty or fifty years, that British travellers have dared to penetrate these unknown regions. And even now much remains to be explored and visited. It is asserted by some writers that it forms one of the finest countries on the globe; but this, in part at least, seems to require more proof. Some late geographers bound Central Africa (though their description must necessarily be quite vague) on the north by the Great Desert; on the east a very large lake separates it from countries almost wholly unknown: its southern boundaries are still less defined; and on the west is an extensive territory which separates it from the Atlantic coasts. The length of this region is estimated at 1200 or 1300 miles, and its breadth at 500 or 600. The range called the Mountains of the Moon traverse Central Africa from west to east, and they serve to render the air comparatively cool and comfortable. The range begins near Sierra Leone, and runs nearly east, a great distance. The source of the Niger, so long unexplored, and a subject of curiosity and mystery, is now known to be about 200 miles east of Sierra Leone. Its course is nearly northeast a great distance, till it reaches the famous Timbuctoo; when it turns to the east and then to the southeast, then south, and then again southwest, when it mingles with the Atlantic, in about the eighth degree of north latitude. It has several names in different parts of the country through which it runs, and receives numerous large tributary rivers. Its whole length is greater than that of the Nile The people in Central Africa are said to have made some progress in industry and civilization; but it is only in comparison with other parts of that benighted country.

JOICE HETH.

A coloured female with this name, said to be of the uncommon age of 161, is now in this city, exhibited, as is generally supposed, less with a view to show what is remarkable and singular, as a fact connected with longevity, than to the pecuniary profits of those who have her in keeping. It is pretended, that at the age of about sixty, she was a slave in the family of Augustine Washington, the father of General Washington, and was the nurse of the latter. We say *pretended*; for notwithstanding the express and positive declarations, that there are documents sufficient to prove to all reasonable persons, that her age is that of 161, the evidence is not satisfactory to this point. And it is very extraordinary, that no account of this person has been given for fifty and sixty years past. There can be no doubt, that she is of an extraordinary age. Her appearance is a strong indication of this. But, that she is 161, or more than 120, or 100, there seems to be no full proof. The certificates are not of a character to remove all doubts and objections on the subject.

In expressing doubts, that this female is of the very great age pretended, we ought perhaps, to say that they are entertained by several judicious persons, who are not remarkably incredulous, but who exercise a sound discretion before giving an opinion. If indeed, there is a record of the church of her admission 116 years ago, and of her age being at that time such as now to make her to be 161, we do not see but that must be conclusive evidence in the case.

ZOOPHYTES.

Zoophytes, in natural history, includes *polypus*, *coral* and *sponge*. They are fixed to a certain spot, and seem to have no motion or travel from it; and they grow like vegetables, yet evidently have some properties of animals. The polypus is the most remarkable of these; and some are found in fresh water and some in salt. It has a capacity or power of re-producing the part destroyed; and if cut into pieces in any direction, every part becomes a perfect polypus. The coral is considered by some naturalists as a plant or vegetable, and by others as an animal. The roots of the coral are covered with bark. Efflorescing like vegetables, the coral is an animal in the form of a plant, with a stony stem jointed, united by spongy or horny junctures, covered by a soft porous cellular flesh or bark, and has mouths beset with oviparous polypes. They are said to consist of carbonate of lime and animal matter in equal proportions. Captain Cooke discovered immense and dangerous rocks or fields of coral in the Southern ocean, when he sailed over it sixty years ago. Many islands in the Pacific are composed wholly of coral. This article has been of some value in Europe and America, for beads and other toys; but we believe is no longer used as medicine. The places for fishing for coral are the Red Sea, Persian Gulf, and the coasts of Africa. Sponge may be described as "fixed, flexible, torpid, elastic, of various forms, composed of fibres, or masses of small spines interwoven together, and clothed with a gelatinous flesh, full of small mouths on its surface, by which it absorbs and emits water It adheres to shells, rocks, &c., under cover of sea-water. The article used in commerce is found in the Mediterranean and in India: but it is found on the seacoasts in other parts of the earth. Diving and fishing for sponge is reckoned one great qualification of youth, in the countries where it is found

BOSTON IN MARCH, 1776.

Soon after the British army evacuated Boston in March 1776, one of its citizens, who had left it in the spring of 1775, describes its appearance as follows:

"I returned to Boston, yesterday, from my exile, and arrived in this once flourishing, but now solitary town. Once more I tread the streets of Boston; and with a sad and mourning feeling, view the havoc of civil war. Were I to give you a particular detail of its situation last winter, and its present state, it would exceed the limits of my time and paper. You will excuse me therefore, if I only give you a hasty view of some occurrences which the little time I have been here has furnished. The face of the town is indeed, very little altered, except that the shops are shut, and many old buildings have been demolished. When we enter the houses there are seen the marks of violence and outrage; scarcely any who have not been robbed and plundered by the merciless *bandit*. Nor have public buildings and houses devoted to the worship of God escaped the outrage. The Old South Meeting-house presents a melancholy spectacle. The pulpit and galleries were taken down, the floor strewed with dirt, and made the receptacle of beasts. The Old North, that venerable building, fell a sacrifice to the importunity of the Tories, and was appropriated to their use, though the officer who ordered it to be taken down, is said to have done it with reluctance. The steeple of the West Meeting-house is taken down and otherwise damaged. They have demolished most of the pictures in the Court-house and Faneuil Hall. The latter place hath undergone a strange metamorphosis; it was changed into a play-house, and is now in a very disordered state. The distresses of the people were very great last winter; being without fuel, and provisions very scarce and dear. The Tories were sanguine that the British troops would beat the rebels, until they failed in their design of driving them from Dorchester Heights. Their countenances then gathered paleness; and in their distress they applied to those whom they had just before affected to despise. Their distractions and distortions could be described only by the pencil of Hogarth. They are charged with being the instigators of all the mischiefs which happened."

The few and scattering remains of the *Senecas* and *Cayugas*, two of the six Indian tribes in the interior of the State of New York, are about removing from their former places of residence to the far West, beyond the Mississippi. The most of the Cayuga tribe had emigrated from New York to the West, before; but they have lately sent a delegation to those of their tribe remaining behind, and to the remnant of the Senecas, to remove and settle in the distant West.

CAPTAIN JOHN SMITH.

John Smith, whose likeness, with the costume of a military man of his day, we give in the present number of the Magazine, may justly be ranked among the early distinguished navigators, on the American coasts, from Virginia to L'Acadie, or Nova Scotia; a bold adventurer, and one of the most efficient characters to whose perseverance a colony was planted and sustained at James' River, the first English settlement on this Continent. Captain Smith was born in 1580, and was early distinguished for bold adventure and daring exploits. At an early age, after some romantic incidents evincing a high spirit for enterprise, however hazardous, he sailed up the Mediterranean, and visited Alexandria in Egypt. Thence he coasted the Levant, and assisted in capturing a richly-laden ship belonging to Venice. He travelled through Italy, and thence into the dominions of the Archduke of Austria. There was then, as often since that period, a war between the Turks and Austrians, and Smith engaged, as a volunteer, in the service of the latter. His conduct for activity was such that he was made commander of a troop of horse, consisting of two hundred. He encountered several Turks, in single combat, on a challenge from each of them, and was victorious in every instance.

On his return to England, he met with Gosnold about the year 1606, who had before visited the coasts of Northern Virginia, (or New England, as afterwards called,) and was persuaded by him to join a company for a settlement on James' River. He was accused, with what justice we know not, of intending to usurp the authority of the proposed colony, and of meditating the murder of the chief men of the company: and he was kept some time in confinement on this accusation. He was afterwards set at liberty, but had no formal trial on the charges made against him; and he rendered himself highly useful to the settlement, by his courage in action, and his policy when in the hands of the natives. Many adventures are narrated, in which Captain Smith was the chief actor, and in which he discovered equal judgment and bravery. In one of his excursions into the country, he was taken prisoner by the Indians, who were lurking in the forests. He was carried before Powhattan the great Sachem of that territory, and was about to be executed, when the Sachem's daughter interceded in his behalf, and procured his liberation. After this and other trials and dangers, Captain Smith was tried on the charge before mentioned, and acquitted. He recovered heavy damages of his accusers, and generously gave the amount to the colony.

There were difficulties and divisions among the early adventurers to Virginia, which proved very disastrous to the interest of the infant colony. Captain Smith had personal enemies, though he rendered the settlement important services on several occasions. He is represented as of a warm temperament, and sometimes might have given occasion for the opposition which was made to him. During the first year of the colony, many of the leading men died of fever. One Ratcliffe was chosen President, but Captain Smith was really the chief support of the company. Sometime after this, Smith returned to England; and in 1614 engaged in another expedition for discovery and trade in North Virginia. He had two vessels at his command, and he examined the coasts and bays from

Penobscot to Cape Cod. Hunt was commander of one of these vessels, and was left on the coast by Captain Smith when he sailed for England. This was the Captain Hunt who forcibly carried off two of the native Indians from Cape Cod, which was the cause of great enmity and trouble from the tribes in that vicinity. Captain Smith prepared a map of the coasts of North Virginia, then so called, and on his return presented it to Prince Charles, (afterwards Charles I.) who gave the country the name of New England; or rather confirmed the name previously suggested by Captain Smith himself. In 1616, he received the title of Admiral of the country which he had visited and explored; and he fitted out another expedition intended for America, when he was taken by the French and treated with great severity, on the pretence that he was a pirate. He travelled through most parts of England and Scotland after these disasters; and about 1620—1, he published an account of his voyages and adventures in distant countries. He also wrote a History of Virginia, relating to the country and to the events which occurred during his connection with the colony. Other volumes or tractates were published by Captain Smith before his death, which occurred in 1631; which detailed his adventures in the East, prior to his first visit to America. Perhaps full justice has not been done to the character of this brave and adventurous navigator and traveller. He was inferior to few of the daring men of that and a former age, who made discoveries in this western continent, at great dangers and perils; and may justly be ranked near to Columbus, the Cabots, Raleigh, Gosnold, Gorges and Hudson.

TEMPERANCE.

The cause of Temperance is still zealously advocated by the pious and benevolent through the United States. At the call of the Massachusetts Society, there was lately a Convention in Boston, composed of delegates from town and county societies in all parts of the State. About four hundred persons attended, and the Assembly was very respectable as to talents and character. Several resolves were passed in favour of measures for checking the evils of intoxication, and for securing and promoting more extensively and fully the numerous benefits of Temperance. The Convention, though urged by some of the members, did not seem prepared to place wine and cider on the same footing as distilled liquors; and while they were ready to recommend an abstinence from all intoxicating drinks, they hesitated as to the expediency of requiring such a pledge, or absolute condition, and of thus, by implication at least, condemning all who use the milder beverage as immoral and unchristian. A long letter was read from Rev. Dr. Miller, of Princeton College, addressed to the Secretary of the Massachusetts Temperance Society, in reply to a note inviting him to attend the Convention; in which he expressed an opinion *against* insisting on the pledge to forego and prohibit wine, in the manner the pledge was applied to ardent spirits. Dr. Miller is fully of opinion that such a rule, or condition of any Temperance Society would operate unfavourably to the cause.

We think the proceedings of the Convention will be favourably received by all benevolent and pious people, and its influence be auspicious to the cause of sobriety and virtue through the community.

THE CRY OF INNOVATION.

When Sir William Blackstone (sixty or seventy years ago) began to deliver his law lectures before the University of Oxford, an attempt was made to cry him down as a dangerous innovator. In one of his lectures (not published) he thus forcibly and eloquently retorted on his bigoted opponents. "In former ages," said Blackstone, "when the inquisitive and original mind of Bacon led him to investigate the laws of nature, the theological *animus* conspired against him, and he was accused of having intercourse with evil spirits. On one occasion, when he was about to exhibit some curious experiments to a few friends, the secret got abroad, and the whole city and the colleges were all in an uproar. Priests and fellows and students were seen running about, and crying out, 'no conjurer, no conjurer.' Galileo also was condemned by men whose names are remembered only as parts of the *rubbish* on which the pedestal of his fame is raised. And in our time there are those who seek to raise the cry of 'no conjurers' again, but I think you will soon find out that these people are at least no conjurers themselves."

First Invention of Glass.—According to Pliny, glass was invented by accident, in Syria, at the mouth of the river Belus. Some merchant adventurers, who were driven there by the fortune of the sea, were obliged to reside there for a time, and dress their victuals as they might. They made a fire on the ground, and some of the plant *kali*, which was found there, was burnt to ashes. The sand or stones accidentally mixed with it; and thus without any design a vitrification (or conversion into glass) took place; whence the first was taken and easily improved. The same writer says, that the first manufacture of glass was in Sidon. At a later period it was made at Rome; and afterwards at Venice, to a great extent and with large profits. England and France have had large establishments for the manufacture of this article nearly a hundred years past; and now it is made in the United States sufficient for the wants of the whole population.

An edifice for the Mechanics' Institution, is now building in Liverpool, England. The corner-stone was laid by Lord Brougham; and it is said it will be the largest and most commodious structure of the kind in the whole kingdom. This Institution was formed about ten years ago, and at present numbers twelve hundred members. Strange as it may seem, there has been a great opposition to this Association, but it has increased and is still increasing.

Mathematics is a *ballast* for the mind to *fix* it: not to stall it, nor to keep out other arts.

LINES.—By T. Power.

WRITTEN ON BOARD A PACKET SHIP, IN DELAWARE BAY, JUNE, 1835,—ON HIS RETURN TO ENGLAND.

Adieu Columbia! I have mark'd thee well,
Nor yet *for ever* do I leave thee now;
And busy thoughts of thee my bosom swell,
And thronging recollections load my brow—
I've pierced from north to south thy eternal woods;
Have dream'd on fair St. Lawrence' sweetest isle;
I've breasted Mississippi's hundred floods,
And won on Alleghany's top Aurora's waking smile.

And now we part—the ship is flying fast—
Her pathway deck'd by wreaths of whirling foam,
And all the swelling sails that bend each mast,
Obey the flag which flutt'ring points to home.
Home! home! That tender word let me retrace,
And bid each letter conjure o'er the sea
Some cherish'd wish, and every well-loved face,
To banish thought of those from whom I flee.

Yet shame I not to bear an o'er full heart,
Nor blush to turn behind my tearful eyes;
'T is from no stranger coast I now depart,
'T is not to strangers left I yield these sighs—
Welcome and home were mine within the land,
Whose sons I leave, whose shores fade fast from me;
And cold must be mine eye, and heart and hand,
When, fair Columbia! they turn cold to thee.

WEYER'S CAVE.

This great natural curiosity is in the State of Virginia, and on the eastern side of the Blue Ridge, about eighteen miles east of the town of Staunton. It is not far distant from Charlottesville College and Monticello, the former residence of the late President Jefferson. This remarkable cave was not particularly described by Mr. Jefferson, though he gave an account of the natural bridge and some other curiosities in his native State. A traveller who lately visited Weyer's cave has given an interesting description of it; which he represents to be the greatest curiosity in a territory abounding with wild and beautiful scenery, and with interesting and sublime views. This cavern is not far from Madison's cave so fully described by Mr. Jefferson, in his notes on Virginia. "It was discovered by a man of the name of Weyer, in 1804, who at first supposed it to be the hole of a hedge-hog, but which on a little examination he found to be the entrance to this spacious cave. Like other caves in that vicinity, it is filled with concretions, formed by the falling or dripping of the lime stone (which abounds here) in a liquid state from the huge masses of rocks. One kind or form of these concretions is made by the dripping of the solvent in a hanging form like an issue, and another kind by the falling of the liquid limestone on the ground, gradually forming an upright column. The cave is filled with these concretions of all shapes, sizes, forms, resemblances and proportions imaginable; and they form a most wonderful sight.

"The entrance is by an ante-room, at first ten feet high, and narrowing down to an enclosed orifice leading to the Dragon's Room and the Devil's Gallery, where are some very large but rough concretions of no great beauty. Next is an immense area of easy access, descending by a flight of stairs thirteen feet perpendicular, and called the Temple of Solomon. It is filled with concretions of most wonderful and beautiful forms: one of them resembles a white marble throne, encrusted with diamonds. The next room is even yet more wonderful. The roof is studded with ten thousand times ten thousand various formed concretions (of the pendent kind) of every conceivable shape and every possible conception of beauty: some coloured like the lip of the rose sea-shell, and others white, like the purest drift of newly fallen snow. There are thirty-four different rooms or apartments; in each of which are numerous individual curiosities. Many of these have already received names from the visitors; as the Pyramids, Pompey's Pillar, the Laocoon, Niobe, Madonna, the Crane, the Parrot, &c. In some places the concretions form a pillar from the top to the bottom of the room, which appears like an artificial column to support the roof. One apartment is called the Music Room, where are two large sheets formed by the dripping solvent, which, if struck by the hand or foot, give a mellow, deep and euphonous sound, something like the beat of a drum. Another is called Washington Hall; a long apartment, near the middle of the cave, two hundred and sixty feet long, twenty broad and thirty feet high. It is a perfect level, regular and straight, and in the centre is a large pile of calcareous matter about nine feet in height, greatly resembling a statue of Washington in classic costume."

ALOE.

The American Aloe *(agave)* is a large plant, in the vocabulary of the naturalist, but may justly be called a tree, as it grows to the height of twenty feet; and sometimes, when transplanted and cultivated, to nearly double that height. The aloe abounds in Mexico, and the southern parts of North America. Such is its beauty that it has been much cultivated in Europe; especially in Italy, Spain and Portugal. Branches issue from every side of the tree, and in such a manner as to give it the form of a pyramid, composed of flowers, which stand erect and in thick clusters at every joint. When it is in full flower, its appearance is very splendid: and a succession of flowers is produced for the space of three months, if the cold does not prevent. Though it is cultivated in Europe, it is very seldom known to blossom in that climate. "The flowers of the Aloe have the tube of the corolla narrowed in the middle; the stamens are longer than the corolla, and the styles longer than the stamens. The stem which bears the blossoms rises from the centre of the leaves. The juice of the leaves is made into cakes and used for washing. The fibres of the leaves may be separated into threads, which are in various ways useful; but they are not very strong or durable."

The Aloe plant is also a native of India and of the south of Africa; but is not so large. It is used for medicinal purposes, and is highly valued by the inhabitants. It was sometimes used by the ancients in embalming dead bodies. Aloes was one of the articles brought by Josephus and Nicodemus to embalm the body of Jesus after he was taken down from the cross.

Melancthon, the friend of Luther, the day before his death, said to his children,—"I wish you to worship sincerely, to be one with Christ in spirit, and to live in love with each other."

ON MENTAL POWERS OF THE TWO SEXES.

The question as to the different intellectual capacities and talents of man and woman, has been frequently agitated; and it seems to be decided, that in most respects there is an equality of mental power; and that, in quickness of apprehension and accuracy of discrimination, women generally excel. Their imagination is not surpassed by the other sex; nor is their judgment less to be depended on, in cases where they have had experience and a full opportunity to compare. For in most cases, judgment is but another name for *taste;* and in taste, as well as in imagination, women have long been allowed the highest meed of praise. But they also make rapid progress in studies, which require something more than taste and imagination. They are equally capable of attention as the other sex; and their memory is also equally retentive. In the study of grammar and in acquiring a knowledge of languages, they succeed altogether as well as men: And their compositions on most subjects, may be justly pronounced equally pure and elegant, when compared with those of the masculine pen.

In metaphysics and mathematics, their trophies have not been so great. But it may be said perhaps that they have not put forth any efforts in these departments. And it may be as well that they should not. For other and indispensable duties seldom allow them the leisure for such severe application. It may be a question, whether their delicate constitutions would be equal to such long and close investigation as those studies require: There is little doubt, that they have mental strength and capacity, sufficient. As in the frame and the duties, so there seems also to be a difference in the studies appropriate to man and to woman. It is proper, no doubt, that the distinction should be kept up in their education, and their literary labors. Most branches of knowledge and most departments of science are common to both; since both have equal capacity for advances in them. But the more abstruse and recondite sciences may well be exclusively for the pursuit of man, while most that are useful, and all that are necessary, pleasant and improving may be profitably cultivated by woman as well as by man. If formerly there were any doubt on this subject, the present age has given many proofs to remove it.

It is proper for young ladies to study the principles of ethics and moral philosophy. For every accountable being should be made to understand the difference between the right and wrong of actions. The conscience or moral sense of every one is in some measure a guide and a judge in this respect. But like other faculties should be cultivated, and may be improved. Our perceptions may be rendered accurate, and less likely to mislead us, by careful observations, and our discrimination more just and useful in settling all questions in morals. In the various relation of society and in the changing circumstances of life, it will be important to decide correctly, to satisfy one's own mind as well as to avoid giving just occasion of offence.

If knowledge without religion were estimable, even Satan would have strong claims to worth.

RELIGIONS OF THE WORLD.

The latest and most accurate census of the whole human family gives nearly eight hundred millions; or, perhaps, seven hundred and seventy-five millions would be more correct. If the religious sects both of Brahmanism and Budhism, (which are essentially the same) and which occupy the most of Asia and its islands, are reckoned together, they make two hundred and seventy millions; and are more numerous than any other. The christian sects form the next highest number, being computed at two hundred and fifty or sixty millions. Of these, the Roman Catholics are the most numerous, being about one hundred and thirty millions; the Greek Church, half that number; and the Protestants nearly the same. The Mahometans are computed at one hundred millions; the Jews, at about four millions, and Pagans at one hundred or one hundred and fifty millions. When will the light of the "glorious gospel" shine on these ignorant nations of the earth? Human efforts alone cannot be expected to accomplish the work in many centuries. And yet the object is worthy of zealous exertions, and it must be the prayer of every sincere Christian, "Thy kingdom come."

RUSSIAN OBSERVATORY.

A magnificent and royal building is to be erected near St. Petersburgh, Russia, to assist in astronomical observations and discoveries. According to the descriptions which we have seen, it will be a second Babel. The edifice is to cover a piece of ground eight hundred feet in length, and nearly of the same extent in width. The height is to be in proportion to the dimensions of the base, and will probably exceed three hundred feet. The expense of the building is supposed to be £2,000,000; and £9,000 annually are appropriated for professors and instruments. An astronomical observatory is wanted in the United States; and one of half the extent and height of that proposed in Russia would be amply sufficient. Can Congress do better with a portion of its great surplus funds and revenue than to apply it to such a noble purpose? Our Republic ought to be distinguished for its patronage of science, as well as for its protection of the rights of man.

Silk Manufacture in America.—It is stated in the *Silk Culturist*, published at Hartford, that there was a *filature*, or an establishment for winding silk from *cocoons* in Philadelphia, in the year 1770; and, in 1771, that two thousand three hundred pounds were carried there to be reeled. The ladies, it is said, gave particular attention to it; and about that time, a lady of Lancaster county made a piece of Mantuan silk of sixty yards from her own cocoons. The queen of England, it is added, gave her patronage to the manufacture, by appearing in a dress of American silk on a court day. Now, all our silks are imported. Grace Fisher, of the Society of Friends, also made silk stuffs (at a somewhat later period) some of which was presented by Governor Dickenson to the celebrated Mrs. M'Cauly. A number of ladies in this country, before the Revolution, wore dresses of silk manufactured here.

FEDERAL CONSTITUTION.

Before the adoption of the Federal Constitution in 1788, the thirteen North American States were independent and sovereign republics, or commonwealths. They were so after the fourth of July 1776, when the assembled delegates from each of these States or governments declared them independent of Great Britain. They were each entirely sovereign in their respective jurisdiction and territory. And they were absolutely separate from and independent of, one another, except in so far as they chose to act unitedly and in concert, for their general or common defence. They had then all one enemy, and were engaged in the same cause; the preservation of civil liberty in opposition to arbitrary power. The Congress under the Confederation during the war and after, could only recommend to, or make requisitions on the separate States, which might comply, or not, as they should deem just and proper.

The defects of this system were early seen and felt; especially, on the call of Congress, soon after peace, upon the several States to make advances to discharge the Continental debt, and the States declining or omitting a compliance. A proposition was made, coming first officially from Governor Bowdoin of Massachusetts, for enlarging the powers of Congress, so as that body might have full power to regulate trade, and raise a revenue to pay off the public debt. The recommendation of Governor Bowdoin probably led the Virginia Legislature to propose a meeting of committees from the several States, in Maryland in 1786, to consult on the subject. That meeting, though not a large one, advised to a convention, which was held in Philadelphia in 1787, and framed the Federal Constitution.

This Constitution was proposed by the authority of separate States, it was formed by delegates of the State governments, and afterwards was adopted by the majorities in the States. And it was a condition for the authority to establish the Federal Government under this Constitution, that two-thirds of the thirteen States should accept it. When then it is said, "that the people adopted the Constitution, and established the Federal Government," it is only so far true, as that a majority in a State assented to and adopted it, acting however as members of their respective States, and as they are the source of political power in a republican government. But, when it is asserted, "that the Constitution was adopted, and the Federal Government was established, by the people, and not by the States," it is not true in a strict and unqualified sense. The people are justly acknowledged the source of all political power, in the United States, and therefore no government is formed except by them or their representatives and deputies. But in adopting the Federal Constitution, and establishing the Federal Government, the people voted and acted by States. *They could do no otherwise.* They were already members of a State or civil government; to which they owed allegiance, and then their sole allegiance. They could not as individuals throw off their allegiance to the State, of which they were members, and which they were bound to obey and support. Nor did the proposition to form a new general government come from the people, but from the government of the separate States. The only regular way in which the people could act in the case, and certainly the way in which they did act, was through and by the governments already established, which were *sovereign and independent.*

When the Constitution was thus prepared and formed, it was indeed submitted to the people of each separate State. But they were to act by States; and unless the majority of a State adopted the proposed frame of Federal Government, the votes given in its favor counted nothing,—they were entirely lost. It was the majority of States, and not of the people, considered separately from the States, which was required in order to the establishment of the Federal Government. If a sufficient number of the people in Massachusetts, New York, Pennsylvania, Virginia and South Carolina, had been in favor of the Constitution in 1787, so as to constitute two-thirds of the whole number in all the thirteen States, still it would not have been accepted, nor the Federal Government established under it. There must be two-thirds of the States, or majorities in two-thirds of the States, to meet and fulfil the condition proposed for adopting it. The voice of a minority in a State could not be heard; it could have no effect. The minority of a sovereign and independent State, in 1788, could not divest themselves of their allegiance to their State, and put themselves under the Federal Government. The attempt would have been rebellion or revolution.

This is not only matter of fact, which cannot be denied; but the view is fully sustained by the general tenor and provisions of the Constitution, which is designed for a *federal* government. So it was *early* considered; and so it ought still to be considered. And if it is a *federal*, then it is not a *consolidated* government, in the strict and full meaning of the term. If it were a complete consolidated government, then it would necessarily be without limits, and without control by, or accountability to the States. But this it surely is not, if the Constitution be taken in its plain and natural meaning; if it is considered that it is a *compact* between several independent States, for certain and *specified* objects, fully set forth and defined; and that all power not given by the several States to Congress, remains with the respective States, or with the people of the States, acting by and through the authority of their States.

For certain purposes, the General Government may perhaps be said to be a national or consolidated one; that is, its power is supreme and uncontrolled, in the cases enumerated in the Constitution, which the States made, and by which they delegated authority, for great national purposes, as therein particularly mentioned.

By the Constitution, Congress is authorized, or *commissioned*, as Mr. King said, to act and to legislate for certain purposes and objects, as set forth in that document. And the authority of the General or Federal Government is complete in those cases. But whenever it oversteps the bounds marked out, and undertakes to make and execute laws, in cases where power is not given to it, it acts

without due authority, and its orders or enactments are not binding on the States, nor on the people of the States. The only security the people have from oppression, or arbitrary and unconstitutional laws, is in the State authority. To this they must look, and to this they have and will look, for redress. And it is the duty of a State government to stand betwen the people and the improper acts of the Federal Government.

The States then, and not the people individually, are the constituents of the federal rulers and government. And they have a right to judge whether their agents exceed their authority or not. Still the acts and wishes of the States will be such as the majority of the people of a State shall direct or express. Let us take a case. In the war of 1812, the President of the United States called for the militia of Massachusetts to turn out, and to be placed under an officer of the United States' army, and to be marched and stationed where he might please. But the Governor and authority of the State declined, saying that the General Government had no right to the militia except in cases expressly pointed out in the Constitution, and that such a case did not then exist. Here the government of the State of Massachusetts undertook to say, you have exceeded the power given in the Constitution: your law, or order, is not just, and we are not bound to comply with it.*

If the authority of the national government is complete as to *all* cases, wherein it may choose and claim to decide, then it is not for the government or people of a State to refuse, or to deliberate. It should obey. But where then would be the security for the rights and liberty of the people? And what if the Executive of the United States had attempted to coerce Massachusetts into a compliance with its commands, at whose door would it be right and just to lay all the violence and misery which might have ensued? And now, if there should be war with France, and the Executive of the United States should order the militia of Massachusetts for the defence of New Orleans, would they probably march, or would they consider the order constitutional? Suppose an anti-commercial administration should pass an embargo act for an indefinite time, and keep it on for two, and three and four years, would it be acquiesced in, as an exercise of constitutional power, or within the meaning and intent of the compact made by the States for general purposes, for the good of the country, or the *protection* of commerce?

Several other provisions of the Constitution go to show, that the government created by it was intended to be of a *federal* character, rather than national or consolidated. Each State, however small, has an equal representation or voice in the Senate; which is a part of the Legislature, and partakes also in some respects of the power of the Executive. The appointments by the President are incomplete till the Senate gives its assent and approbation. The President has his Cabinet, chosen from what State he pleases. But they are no part of the Legislature, nor of the Executive even, as known in the Constitution. The Senate have a voice in appointments to office; and this body represents States and not the people, distinct from the government and sovereignty of the States. Delaware and Rhode Island have as many votes in that body as New York or Pennsylvania. The electors of the President are partly federal and partly national, or according to population, each State having the number of electors equal to its Representatives and Senators. But if no choice be made by the Electors, the election is decided in the House of Representatives; and how? by a vote of every State, great or small. It is also plainly agreeable to the Constitution, that the Legislatures of the several States should appoint them if they see fit, or appoint a different manner for their election.

The States are also divided into Districts, but within their respective territories, for the choice of Representatives to Congress. The Districts are not made through the whole Union, regardless of State lines; nor can a fraction in one State be joined to a fraction in another State, to make a District for the election of a member. In fact, the States are kept distinct, and are recognised as *separate* and independent States by the Constitution; acting as such, and which, for certain objects and purposes common to all, have given power to the General Government; but without intending to form a consolidated or unlimited one.

It is a prevailing opinion, that the National or Federal Executive is claiming too much authority; and that it is necessary to keep him within the limits of the power clearly granted to the President. There is the same reason, in principle, for keeping the Federal Legislature and each branch of it, within the limits of authority given to it by the Constitution. It may be said, that a body of men, like the Senate or House of Representatives, would not probably abuse power, or exceed their just authority. But have we not seen undue excitement, party feeling, and rash decisions in bodies of men, as well as in an individual? The Federal Legislature has a rule and a limit for its action, as well as the President. It cannot, without usurpation, exert authority and power not clearly delegated by those who instituted the General Government. It cannot legislate on subjects and topics not specifically enumerated or allowed. When an instrument like that of the Federal Constitution is prepared, the power specified, and the purposes and objects enumerated, are all about which the public agents can legislate or act. The power not delegated is retained, even if there had been no particular restrictive clause.

* "The early apprehensions of some of the friends of the Constitution, which arose from an imagined imbecility in its structure, have subsided: and the severe trials it has sustained, sufficiently demonstrate its tone and vigor. The proofs of its strength, however, have been intermingled with admonitions of its tendency to accumulate power by refinement and construction. And should the time ever arrive when the sovereignty of the States shall be merged in the General Government, the catastrophe will probably be effected by the extension of constructive prerogatives. Whatever difficulties may occur in drawing the line between those rights which have been surrendered to the General Government and those retained by the several States, it must be remembered, that on any question of doubtful import, touching the distribution of power, a favorable construction is due to the individual States, under a provision, as sacred as it is explicit and decisive, "that all powers not expressly delegated, are reserved to the States," respectively, and to the people."—*Gov. Brooks.*

The provision relating to amendments to the Constitution affords proof also, that a Federal and not a consolidated government was created by it; that the State, and not the people without regard to the States, were considered the framers of and parties to the compact. Amendments are to be added, when *two-thirds of the States*, approve and adopt them, not when two-thirds of the whole population demand or require it. It is the people ultimately, indeed, who must adopt or reject any amendments proposed; but they can only act in their respective States, and through the several authorities thereof. The citizens of one State cannot act with those of another State; nor is the opinion, whether there is a proper majority for an amendment, dependent on the vote of the whole people, but on the number of States, in which majorities are in favor of it.

These remarks, I trust, will not justify the charge of being an advocate for the doctrine of Nullification; especially, to the extent urged lately in South Carolina; but I have no objection to be considered opposed to the doctrine of Consolidation, as stated and contended for by some politicians of the present times. In the former case, there would be no stability in the Union; and in the latter, no just recognition of State rights. But what is the proper remedy or measure, when a State refuses to submit to a law of Congress, or an order of the Federal Executive? Or when Congress passes laws which they are not authorized by the Constitution to enact; or the President gives directions, which is beyond his legitimate constitutional authority? There may be cases of both. It is not probable that a case will often occur, of a State refusing obedience to a constitutional law or command. The danger is chiefly to be apprehended from the exercise or assumption of power in the Federal Government over the States or the people, which has not been delegated to it. Power has a tendency to an increase of its extent and supremacy. The power of the General Government is great, and it is continually grasping and aiming at more, under the plea of expediency or of the public good. In monarchies, the prerogative of the prince is often exercised, without law and beyond law. But if it is not exercised with a sound discretion, and when the good of the subjects require it, there will be uneasiness, and danger of overt acts of disobedience. In our republican governments, very little is left to the discretion of rulers. Judges must decide according to law, and rulers and legislators must be governed and controlled by the Constitution. And the legislative bodies are as much bound by its provisions, as the Executive. His prerogative must be limited by the exigency of the case. Where it is evidently necessary for good, for protection and safety, it may be endured and justified; but if it be oppressive, unjust, or of doubtful tendency, it will not be approved or submitted to by a people jealous of their rights.

It should ever be borne in mind, that rulers, or public agents are amenable to the people, and their power limited by the Constitution. In party times, the majority will care less for it, than for their triumph: no matter what the party is, or what they profess. Nor can the liberties of the people be secure, but by adhering to great primary principles of republicanism. The General Government has power enough delegated to it by the States. The States must take care that encroachments are not made on them. The people in the several States must maintain their reserved rights, and all the authority not clearly delegated, as the only means of preserving equal liberty. When the rights of the States are prostrated, the people will have no security for republican freedom.

The Constitution also may be amended and altered by the Legislatures (that is by the government) of the States. But the people are not to vote in the case.

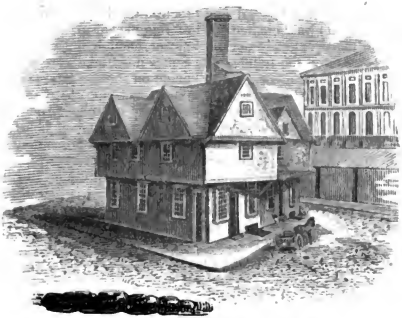
NOTE.—Mr. Adams, in his annual Message to Congress in December, 1828, says,—"The United States of America, and the people of every State of which they are composed, are each of them sovereign powers. The Legislative authority of the whole is exercised by Congress, under authority granted them in the common Constitution. The legislative power of each State is exercised by assemblies deriving their authority from the Constitution of the State. *Each is sovereign within its own province.* The distribution of power between them, presupposes that these authorities will move in harmony with each other. The members of the State and General Governments are all under oath to support both, and allegiance is due to one and to the other. The case of a conflict between these two powers has not been supposed, NOR HAS ANY PROVISION BEEN MADE FOR IT, IN OUR INSTITUTIONS; as a virtuous nation of ancient times existed for more than five centuries without a law for the punishment of *parricide*."

EARLY HOME.

There are few minds so callous as to revisit the scenes of their childhood, without experiencing some emotion. And whether these are in the crowded city, amidst all the coarse and ordinary objects of vulgar life, or in the lonely valley, with its green hills and its gliding streams, the same feelings swell the heart, as the thoughts of the past rush over it: for they speak to us of the careless days of our childhood, of the gay dreams of our youth, of the transient pleasures of our prime, of the faded joys of our old age. They speak to us of parents now sleeping in the dust, of playfellows in a far distant land, of companions altered or alienated, of friends become as strangers, of love changed into indifference. They speak to us also, it may be, of time mispent, of talents misapplied, of warnings neglected, of blessings despised, of peace departed.

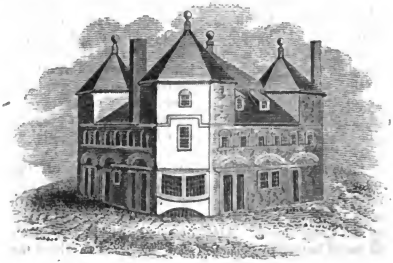
They may speak to us, perhaps, of God's holy law slighted, of his precepts contemned, of himself forsaken; of hearts, alas! not purified and renewed by that grace which they never sought for; but like the wasted volcano, parched and blasted in their own unholy fires. Fairer scenes all may have viewed than those on which their eyes first opened; but in them we behold only the inanimate objects of nature, which, however they may charm the senses, or fill the imagination, yet want that deep and powerful interest, which seems entwined with our existence, and which gives a local habitation and a name so powerful a mastery over us.

The following case recorded in a London periodical, for July 5th, we think not entirely singular; but it is a very extraordinary and uncommon one.—'The wife of a laboring man near Broomsgrove had *four* female children, at one birth, in June last.'



ANCIENT BUILDINGS IN BOSTON.

The building, a view of which is here given, is probably the most ancient now standing in the city of Boston. It is situated in the vicinity of Faneuil Hall, so long and justly celebrated for the meetings of this patriotic town, immediately before the Revolution of 1775; and where the friends of constitutional liberty often raised their voices in remonstrances against the arbitrary power exercised by the British ministry. The building is at the corner of Ann Street and the open square adjoining Faneuil Hall; and is chiefly remarkable for its age and antiquated form. It was erected one hundred and fifty-five years ago; and from its appearance was probably built for a dwellinghouse with a store in front. Many buildings were so designed and appropriated one hundred and fifty, and one hundred years ago. The timber of the house is oak, and where it has been kept dry, is now hard and sound. The outside is covered with plastering, or what is commonly called rough-cast. The building is only thirty-two feet by eighteen, and is two stories high. The tide waters formerly flowed on the south and even on the southwest side of the house; but so much land has been artificially made below it, that now it is seventy rods from the nearest water of the harbour. A law was made just before this house was erected, requiring that all buildings near the market and centre of the town should be of brick, or be plastered on the outside, as this ancient edifice is.



THE TRIANGULAR BUILDING, OR WAREHOUSE.—As we have referred to ancient buildings in Boston, it has been thought proper to speak of the Triangular Warehouse and the Julien House, so called; as affording specimens of the form of edifices a century ago. The triangular building recently taken down, was situated at a short distance from Faneuil Hall, and at the northeast of the vacant space around it. It made a corner of an avenue from Market Square to Ann Street. The land was granted to Governor Bellingham about 1640. The building was forty-eight feet by fifty. It was of brick, and covered with slate. The lower story was arched with several doors and windows. There was a tower in the centre and at each end of the building. The tradition is, that this building was anciently a custom-house; another account is, that it was built by London merchants in 1700, for a place to store the goods sent by them to Boston for the New England market. It was long a place of considerable business, and the public scales were formerly kept there.

The Julien House was one of the ancient buildings in Boston, but has been lately removed. This house was situated at the corner of Congress and Milk Streets. In a great fire in 1759, this building was saved, though all others near it were consumed. Fifty or sixty years ago, several such buildings were standing in the city; but they were very old and have been taken down, and brick or stone buildings erected in their place, in the modern style and form. This house was many years a celebrated place of refreshments kept by a Frenchman; but there was nothing very remarkable about it, except its antique form.

SURVIVORS OF THE REVOLUTION.

It is now more than *sixty* years since the war of the Revolution began, and yet a good number remain of those who took an active part in the contest from the commencement. At the Centennial celebration at Concord, on the 12th of September, there were present twelve persons who were under arms on the 19th of April, 1775, and who belonged to the military companies which repelled the British troops, who marched to Concord on that day to seize upon the stores deposited there by the Provincial Congress. The most of them were above eighty years old, and yet appeared in good health.

The clergyman of Concord, who was a chaplain in the Revolutionary Army, and is eighty-four, is still living and in good health. He led in the public devotions of the day with propriety and ability. We add, here, that a few days after, we met in Boston another Revolutionary personage of about eighty, who possesses great bodily as well as mental activity; and who was an aid to Major General Lincoln, and afterwards, near the close of the war, one of the aids of the Commander in Chief. This is Hon. Judge Baylies, of Bristol County.

THE JEWS.

In a late address of Professor Tholuck before the British Society for the Conversion of the Jews, he asserted, "that more proselytes had been made from among the Jews, during the last twenty years, than in any similar period since the first ages of the Christian Church. Both in Germany and in Poland, there has been surprising success. In the University of Breslau, there are now three professors who were native Jews, and educated in the faith of Judaism. At Halle, there are now five professors, who were formerly Jews." The Professor farther says, that he has perfect confidence in their sincerity. He speaks of other instances, and that of learned Jews, who have recently embraced the christian faith. He has himself been instrumental in bringing some Jews to the "acknowledgement of the truth as it is in Jesus;" and he expresses a belief that proper efforts may lead others of that nation to receive Jesus of Nazareth as the true Messiah.

Isinglass is a preparation, formerly made only from the great sturgeon; but is now obtained from the entrails of most other fishes. When good, it consists almost wholly of pure *gelatine*, or glue, which is nutritious. It is free from taste and smell, and is soluble in warm water. Being nothing more than the membraneous parts of fishes, it can probably be made from the fish on the coasts in this country. The sounds or air-bladders of fresh water fish are generally preserved for this purpose. And it is best made in the warm season. It is sometimes used as a medicine; but boiled in milk it forms a nutritious jelly, and is the substance of *blanc mange* It is also used for refining coffee, and vinous liquors, and cider.

The Morus Alba, or White Italian Mulberry.—"In order to make assurance doubly sure, we would recommend to persons who may have sown the seed of this tree, the present season, *to cover their plant beds* as soon as winter sets in, either with straw or long stable manure, to be confined by a slight covering of small brush wood, which should be permitted to remain on the beds until about the middle of April, when it should be gradually removed, so as not to expose the plants too suddenly to the changes of the weather at that unsettled season of the year. This precaution will not be necessary after the first winter."

THE EXERCISE OF RIDING.

Next to the important subjects of education and temperance, which concern the developement of the intellectual faculties, and the preservation of good morals, the enjoyment of health, by a proper degree and kind of bodily exercise, justly demands attention. A portion of time for the purpose of bodily exercise or labour has been proved by experience to be necessary; and learned physicians are now more decided in pressing its utility, than formerly. The importance of such exercise is most evident in society composed of literary and opulent men. The labouring classes in the community do not need admonitions in favour of exercise. Their daily and constant occupation affords sufficient labour for health, and for the perfection of their bodily faculties. But it is not so with the rich and the studious. They are not compelled to manual labour; and they often suffer from want of exercise to expand and invigorate their physical powers. For these, and for females, who do little else than read and sew, exercise is necessary, and it should be made a specific object to take sufficient, to keep off both disease and ennui, and to prepare for the highest degree of health and enjoyment, of which our nature is susceptible. In men, this exercise may consist in the use of the mechanic's tools, in riding, walking and athletic sports. In woman, walking is a useful and healthy exercise; and we would also mention the *wheel*, did we not fear the charge of being an antiquated and ignorant barbarian. The women it is said walk much more in England than in this country. And no doubt they have better health on this account. But for those who have lost their health, or have become somewhat debilitated from the long neglect of a proper measure of exercise, *riding on horse-back* is probably the best employment which can be resorted to. And, though some ladies have been accustomed to the exercise from youth, a few hints may be useful to the many, not habituated to the practice. For riding is an art; and whoever would do it with ease and elegance must take the trouble or care to learn. Merely to guide the horse and keep one's seat is not enough.

In *mounting*, let the trail of the habit or gown be gathered up, the whip held in the right hand, (Fig. 1.)

1

and the hat or bonnet well fastened, that no effort be required to prevent it blowing off. For the whole attention will be needed to manage the horse, and to sit safely and properly in the saddle. The groom should assist in holding the horse and enabling the lady to mount. She receives the reins from him (Fig. 2.) just on the rise of the horse's shoulder,

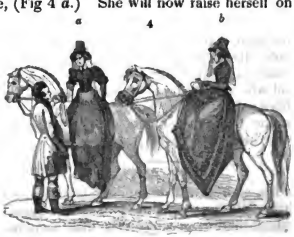
2

with her right hand over the saddle or the off, or right side, placing her fore finger between the reins; and when the groom gives up his hold, she draws back her hand gently, and suffers the reins to pass gently through her fingers, and takes hold of the near crutch of the pommel, still holding the whip and reins, and placing herself close to the near side of the saddle, with her back rather towards it. The reins should be held straight or gently tight till the lady mounts, in which she is assisted by the groom. She places her left foot in his hand, who stoops to receive it; and she lays her left hand on his shoulder, and rises (Fig. 3.) by such help into

3

the saddle. In this manner, the lady is mounted with little difficulty. Before placing her knee over the pommel, which some ladies are apt to do, her left foot should be put in the stirrup, by aid of the groom, and she move her hand to the off crutch of the pommel, still holding the whip and reins as before, (Fig 4 *a*.) She will now raise herself on the

a 4 *b*



stirrup by aid of her right hand, while with her left, she draws forward her habit to its proper place, or the groom may assist in this. Then placing her right knee in the pommel, she is duly seated for a ride. (Fig. 4 *b*.) The bottom of the habit may be fastened by a brooch or pins, if necessary. If the habit needs altering, the lady raises herself very little in the stirrup, and pulls herself gently forward by

her right hand, which has still hold of the off crutch of the pommel, and easily disposes of it with her left hand, without stopping the horse.

Holding the reins, for those not much used to riding, requires attention. The right hand is removed from the pommel, the reins are separated, one held in each, passing between the third and fourth fingers, the ends brought over the right finger, and the thumb closed on them to keep them in their places, and the hands shut, a little distance apart, and on a level, about three inches from the breast. By slightly advancing the hands, or relaxing a little the hold of the reins, the horse (if properly trained) will go forward. The left hand of the lady should be raised, to turn to the near or left side, and the right hand, to turn to the opposite direction. By a slight raising and drawing both hands towards the breast, the horse will stop. When one rein is used or drawn, to turn the horse, the other should be gently slackened. After a little experience, the lady should hold the reins in her left hand—some separate them by the third and fourth fingers, and some, by the fourth and little finger; but most, use the latter only for this object. The reins are held flat on each other in the hand near the middle joint of the fore finger, and the thumb placed on them, that their ends fall down in front of the knuckles. The elbow should not be squeezed close to the side, nor thrust out in an awkward position, but carried easily at a moderate distance from the body. If the lady wishes the horse to advance, she brings her thumb towards her, till the knuckles are uppermost; the reins may be thus slackened, to permit the horse to go forward. When he is in motion, the lady's hand should return to the first position gradually, or slightly advanced, and the thumb turned upwards. To stop a horse, or back him, the knuckles should be reversed, and the wrist rounded as much as possible.

To preserve the balance and maintain the seat, the body must be kept in a proper situation, or position: (Fig. 5.) Ladies, not used to riding, are apt to hang by the crutch, and their bodies are inclined to the left, (Fig. 6 *b*.) and the head leaning to the right by an inelegant bend of the neck, and the right shoulder elevated, instead of being gracefully seated in the centre of the saddle, with the head erect and the shoulders even: (Fig. 6 *a*.) The lady's position should be easy to herself and to her horse, and her movements harmonize with the gait of the animal. She should sit in such a position that the weight of her body may rest on the centre of the saddle, with her shoulders even; she should not bear weight on the stirrup, nor hang by the pommel over the near side. She should not lean forward, but *partially*, backwards. The whip should be held between two fingers and the thumb; with the end downwards, but so as not to irritate the horse.

5

a 6 b

The balance is conducive to ease, elegance and security; and consists in a knowledge what direction any motion of the horse will produce, and a ready adaptation of the whole frame to the proper position, before the horse has completed a change of action or attitude. And this is necessary to prevent an inelegant inclination forward or backward, to the right or to the left, as well as an awkward position when the horse stops, or quickens his pace or turns a corner. In no case, should the rider seek to assist herself in preserving a balance, by pulling at the reins.

Aids in riding, are those motions of the body, the hands, the legs and the whip, which serve to show the rider's wishes; so also are the movements of the rider, which would prevent the horse from disuniting himself, or running into danger. The aids of the hand are the most important; and the rein is similar to the helm of a vessel; most of the rider's movements being designed to assist the bridle-hand. If a horse rear, it is useless merely to give a slack rein; the lady must also lean forward, to prevent falling. (Fig. 9.) When the rider wishes the horse to advance, and slackens the rein, she should also incline the body forward. If she wishes the horse to stop, she should not only pull the reins towards her, but should throw back her body gently.

9

Defences. The first and most important is to avoid vicious horses, and those not sufficiently trained, those which would require much whipping

or such as are headstrong and hard-mouthed. (Fig. 10.) A lady will have enough to do, with a well-

10

disciplined horse, and one without faults. Other defences are similar to *aids*, and require caution, good judgment, together with ones position, movements, holding of reins, &c. When the horse is frightened or inclines to a too rapid speed, he should be gently checked, and *soothed*, or spoken to kindly and with *soft words*, instead of using violent actions of any kind. Indeed a lady should not often, if ever, venture on a horse which was not easily governed; and which needed heavy blows, or constant exercise of great strength to restrain. When in company, most horses are apt to run; and especially, if the speed of part of the company is great, there is danger that all will become animated and restive. This error or danger should be prevented, by carefully avoiding all such unusual velocity. Two or four persons in a party are the safest, and even then, there should be care to avoid a race. As to leaping fences and ditches, we cannot think directions are necessary for women in this country. They will not probably imitate the ladies of Europe, by mixing in the race or in hunting. They will learn to ride chiefly for health. For mere conveyance and travel, the facilities of stage-coaches and rail-roads are so great, that no females will take very long journeys on horseback. As to *dismounting*, there cannot be much art or difficulty in performing that part of horseman(or woman)ship. And we believe our fair country-women are active and intelligent enough to dismount from the saddle without particular instructions: and yet there is a graceful and proper way of doing every thing.

We add, without particular explanation or direction, the following views of other positions and situations in riding. Walking, No. 11.—Trotting, 12.—Cantering, 13.—Stopping, 14.—Leaping, 15 and 16.—Dismounting with assistance, 17.—Dismounting alone, 18.

11

12

13

14

15

16

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18

RUINS OF BALBEC.

[Extracts from Travels in the East, by M. de Lemartine.]

"I had traversed," says M. de Lemartine, "the summits of the Lebanon, covered with eternal snows—I had descended its sides, crowned with a diadem of cedars—and reached the naked and sterile desert of Heliopolis—when suddenly, in the distant horizon before us, and on the last slopes of the black mountains of the Anti-Lebanon, an immense group of yellow ruins, gilded by the setting sun, detached itself from the shadow of the hills, sparkling with all the rays of the evening! Our guides pointed at it with the finger, and cried out Balbec! Balbec! It was, in truth, the wonder of the desert, the fabulous Balbec, coming in radiance out of its unknown sepulchre, to tell of ages lost to the memory of history. We pushed our fatigued horses forward at a quickening pace. Our eyes continued fixed on the gigantic walls, and on the shining and colossal columns, which seemed to expand and dilate as we approached them. A profound silence was preserved by the whole caravan. Each individual seemed to fear that the sound of a voice would destroy the impression of the spectacle before him. The Arabs themselves kept silent. At last we reached the first trunks of columns, the first blocks of marble; which earthquakes have shaken as far as a league from the monuments themselves, like dried leaves tossed and whirled by a hurricane far from the tree that bore them. The large deep quarries which split into profound valleys the black sides of the Anti-Lebanon, already opened their abysses under the feet of our horses. These vast basins of stone, which exhibit the marks of other hills of stone having been drawn from them, retain still some gigantic blocks, half detached from their base, which seem to be waiting for the arms of a race of giants to remove them from their place. One of these blocks is sixty-two feet long, twenty-four broad, and sixteen deep. We pursued our route between the desert on the left, the undulations of the Anti-Lebanon on the right, and across some little fields cultivated by the Arab pastors, and the bed of an immense torrent which winds among the ruins, and is bordered by some beautiful walnut trees. The Acropolis, or artificial hill, which bears all the great monuments of Heliopolis, appeared here and there between the branches or above the heads of the great trees. Finally we got a complete view of it, and the whole caravan stopped as by an electric instinct. No pen, no pencil can describe the impression which this single glance gives to the eye and to the mind. Under our feet—in the bed of the torrent—in the middle of the fields—around the trunks of the trees, were strewed blocks of red and gray granite, of blood coloured porphyry, of white stone as brilliant as the marble of Paris, with fragments of columns, sculptured capitals, architraves, cornices, entablatures and pedestals; the scattered, and it seems palpitating members of statues fallen upon their faces to the earth; and all this confused, hurled together, sundered and disseminated on all sides, as if the wrecks of a great empire had been vomited forth by a volcano. Hardly could we discover a path amidst these sweepings of the arts with which the earth was covered. The hoofs of our horses slipped against and broke at every step the polished cornices of the columns, or trod upon the bosom of snow of some female statue. The water of the river of Balbec alone was distinct among these beds of fragments, and washed with its murmuring spray the broken marbles which impeded its course."

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NOTE.—Baalbec, or Balbec, is situated in Syria, (or Cœle Syria) north of Palestine, about fifty miles east of the Mediterranean. This was its more ancient name, which signifies City of the Sun, (or Baal.) Its name in Greek is Heliopolis, of the same signification as the former, and by which it was known from the time of Alexander. It is nearly equidistant between Jerusalem and Antioch, north of Sidon, and northwest of Damascus, about fifty miles. As mentioned in the paragraph above, it is in the vicinity of Mount Libanus, or Lebanon, and situated in a spacious valley. The ruins of the public buildings, especially of the Temple of Baal, or the Sun, are matter of great curiosity and wonder; and show that the temple was one of the most magnificent edifices of ancient times. It was founded, (or rather enlarged and ornamented,) in 140, by Antoninus Pius, a Roman emperor. The Arabians called Balbec, "the wonder of Syria." Those who visited the place eighty years ago, before the earthquake, which threw down most of the pillars and columns, and when the courts were comparatively unencumbered with ruins, as at present, speak of the columns with more admiration. One court was one hundred and eighty feet square, another three hundred and fifty feet by three hundred and thirty-five. There were then long ranges of pillars and columns almost the whole side of a square; and some of them fluted. Balbec was on the ancient route from Sidon to Palmyra, and thence to the Euphrates and to India; and was therefore a great depot for goods from the east.

It is probable that Baalbec, or Heliopolis, is the place where Solomon built a spacious house, mentioned in sacred history. It is said, "that he built the house of the forest of Lebanon, one hundred cubits in length, fifty cubits in width, and thirty cubits in height, on four rows of cedar pillars." It is further related, "that the number of men employed by Solomon, in getting cedar from Lebanon for the temple at Jerusalem, was seventy thousand which bear burdens, and eighty thousand hewers in the mountains." He was there himself much of the time, and built the house before-mentioned. All this must have gone to decay before the Roman emperor built on the spot; but the site was as attractive to him as to the wise king of Israel.

The Canal from New Haven through Farmington to Northampton, and west of Connecticut river, has just been completed. The first boat passed the Canal in July, and reached Northampton, where it joins that river. It is eighty-five miles in length; thirty-four feet wide, and the water four feet deep. The extent of the canal in Massachusetts is twenty-six miles, and in Connecticut fifty-nine. The expense has been about a million of dollars.

ADVANTAGES OF AFFLICTION.

BY THOMAS MOORE.

O thou, who dry'st the mourner's tear,
How dark this world would be,
If, when deceived and wounded here,
We could not fly to thee!

The friends, who in our sunshine live,
When winter comes, are flown;
And he who has but tears to give,
Must weep those tears alone.

But thou wilt heal that broken heart,
Which, like the plants, that throw
Their fragrance from the wounded part,
Breathes sweetness out of wo.

When joy no longer soothes or cheers,
And e'en the hope, that threw
A moment's sparkle o'er our tears,
Is dimmed and vanquished too—

Oh, who would bear life's stormy doom,
Did not thy wing of love
Come brightly wafting through the gloom
Our peace-branch from above!

Then, sorrow, touched by thee, grows bright,
With more enraptured ray,
As darkness shows us worlds of light
We never saw by day.

THE SABBATH.

Luther, speaking of the moral benefit of the Sabbath, and of keeping it merely for expediency, says, "Keep it holy, for the sake of both the body and the soul: But, if anywhere the day is made holy for the mere day's sake; if any one insists on its observance as the Jews did, then I advise you to work on it, to ride on it, to play on it, and to do any thing which shall reprove this encroachment on the Christian spirit and liberty." "I sincerely wish," says Coleridge, "to preserve a quiet Sunday. I would prevent all compulsory labour, and put down theatres, operas, &c., for this reason, that if the rich be allowed amusements, the poor will be induced to work or play, which would prove highly injurious both to themselves and to society."

The above opinion of Coleridge will be more generally approved by the people of this country, than that of Luther. Luther was contending for Christian liberty, and perhaps run to an extreme, or used some improper expressions, in support of the cause, and in opposition to spiritual tyranny, which in his day had long oppressed and debased the minds of moral and rational and accountable beings. Except in cases of necessity or mercy, we think the seventh day should be devoted to rest from labour, and to purposes of religious instruction and worship. There was formerly perhaps, too much strictness or precision in this country in keeping the Sabbath. It was made for man, and not man for the Sabbath. To the Christian it is the Lord's day, and should be observed in conformity to the spirit of the holy gospel, in religious meditation, worship, and teaching, not excluding the exercise of the *social* as well as benevolent feelings. It should not be spent wholly or chiefly in recreation; but it would be equally averse from the genius of Christianity to make it a day of gloom, and austerity, or so understand it as to render it irksome and disgusting to innocent youth.

KNOWLEDGE.

There can be no objection to learning. Knowledge is a benefit, not an evil; except by a perversion and abuse of it. And it is an evil, when every one who gets a bare smattering of learning, becomes a writer and thinks he need not labour. All canot be teachers, and a man has no right to neglect labour, because he can read and write, and has read a few books besides his spelling-book and Bible. Learning is an evil, when every one who has scarcely the elements, undertakes to be an instructer and writer; and sets himself above labour. This indeed, ought not to be objected to knowledge and learning. For it is owing to the vanity and error of individuals. Knowledge may be the occasion of evil, but it is not necessarily so. It is individual perversion that thus makes it an evil. And why should a little learning lead a man to think he must not work? If by his superior knowledge he has found out some plan of saving labour partially, let him communicate it. But now every young man who can read a little, cannot condescend to work; and pretends, forsooth, that he is called upon to be the instructer of his age.

For the American Magazine.

Mr. Editor,—I perceive your Magazine breathes a moral and religious spirit, but not *sectarian*. I ask an explanation of the following passage of Scripture.—"Drink no longer water only, but use a little wine for thy stomach's sake, and thy often infirmities."

Clement.

As the request has been made, we venture on a reply, not however in a dogmatical or positive manner, as it is our purpose to avoid all questions of strife, and all bitter or censorious remarks. We presume the question has been proposed, with reference to the subject of drinking wine, and whether it should be condemned or allowed by the friends of *Temperance*.

Distilled spirits were not in use among the ancients, and yet there were drunkards; and drunkenness is declared a sin in Scripture, without reference to the particular cause. Now, it is argued, that as drunkenness is produced by wine, (as well as by *distilled* liquors,) and is a sin, no Christian should allow himself the use of the former any more than of the latter: And again, that as there is danger that the use of wine, as a common drink, will lead to intemperate habits, there should be an entire prohibition of it.

To this it has been replied, that the holy Scriptures do not prohibit the use of wine; but rather as they often speak of wine, without condemning it, except in the excess of it, it may be justly concluded, that it is not, in the moderate use of it, a sin, or an immorality. All drunkenness certainly is condemned often and severely. And they who tarry *long* at the wine, and often go to seek *mixed wines*, are ranked among other wicked men. But mark the distinction: They who *tarry long* at the wine; and who seek after *mixed wine;* which was a beverage consisting chiefly of wine, but to which spices were added to render it more palatable and more inebriating. Solomon, who condemns *long* sitting at

the wine, also couples the drunkard and the glutton together. Whence it is concluded, that it was only the intemperate or excessive use of wine which he meant to condemn: and that he is no more to be understood as wholly prohibiting wine than common food. We frequently find that drunkenness is forbidden in the sacred writings, and by the holy prophets and apostles; but the prohibition or condemnation is not against the use of wine entirely. There is a silence as to this point. Yet not entire silence, but rather an approbation of the moderate use of it. The miracle of our Lord at the marriage in Cana, may be justly referred to. If the use of wine was improper, he would not have produced it by a miracle for people to drink on any occasion. And St. Paul, though he is full and explicit in denouncing drunkenness, advised Timothy to drink a little wine for his health. And the reasoning of the apostle, in another place, against those who prohibited the use of meats, and in favour of a grateful partaking of all the good things which God in his providence has provided—this, it is contended, by strong implication sanctions the moderate and temperate use of wine.

In the opinion of physicians, there is a broad distinction between wine and distilled liquors. The latter are never necessary or favourable to the health and strength of man; but they give no such opinion against wine; and some of the most eminent do advise as St. Paul did, that a little old, pure wine is wholesome for some infirmities.

Those who urge the total discontinuance of wine plead, that the example of those who take it even temperately, may induce the poor to drink ardent spirits. But may not the poor as well plead for a mode of living, such as the rich adopt, in justification for extravagance and for living far beyond their ability. If a man takes a glass of wine or cider, it is no just excuse for another to drink ardent spirits, which is always injurious. And yet it seems that something is due to this consideration. If our example is perverted, we should abstain, or show the error of the argument. And as Christians, we are bound to do nothing that will cause our brother to offend.—Editor.

STEAM-BOATS.

Steam-boats on the Ohio, Missouri, and Mississippi, are said now to amount to one hundred and thirty-five. The first steamer which was moved on the waters of either of those rivers was built at Pittsburg in 1811. It was matter of great interest and wonder; and it was predicted that should these boats succeed, as was believed, they would add much to the business and wealth of the western country. The navigation of those waters was greatly retarded and obstructed, especially in attempts to ascend the rivers. When the boat arrived at Louisville in Kentucky, seven hundred miles from Pittsburg, in less than three days, the admiration and joy of the people were universal. There are now between one hundred and thirty and one hundred and forty steamers on the Mississippi and its large tributary streams, and twenty are now building at and near Pittsburg. The advantages of this Steam-boat navigation to the inhabitants of the great western valley are incalculable. The population and wealth of the States lying on the Mississippi and its branches have probably doubled in ten years; and the Steam-boat navigation is one great cause of this rapid increase. Their surplus products can be sent to market by the way of New Orleans; and the farmer realizes fifty per cent. advance or more, on what he has to sell.

HUMILITY

BY MONTGOMERY.

The bird which soars on highest wing,
Builds on the ground her lowly nest;
And she which doth most sweetly sing,
Sings in the shade when all things rest—
In lark and nightingale we see
What honour hath humility.

When Mary chose the better part,
She meekly sat at Jesus' feet;
And Lydia's gently opened heart
Was made for God's own temple meet—
Fairest and best adorned is she
Whose clothing is humility.

The saint who wears heaven's brightest crown,
In deepest adoration bends;
The weight of glory bows him down,
Then most, when most his soul ascends;
Nearest the throne itself must be
The footstool of humility.

Dr. Channing's Discourse on the Wants of the Poor.—The late English Reviews speak in strong terms of eulogy on Dr. Channing's sermon before the Fraternity of Churches in Boston, referring to the morally degraded condition of the ignorant poor, and urging the duty of providing for their moral and religious education. They seem disposed justly to appreciate the performance, and the ability and benevolence of its author. Copious quotations are made from it, and the opinion of Dr. Channing on the subject is approved and urged upon the consideration of the benevolent and pious portion of the community. The only effectual remedy or preventive of pauperism, and the degradation of the poor, is a moral and religious education. How this is to be provided for, is a most important question.

Hyacinth, a precious stone, owes its name probably to its resemblance to a purple flower of the same appellation; but it agrees more nearly, in appearance, with the ancient than with the modern hyacinth. The kind usually called oriental, is brought from Ceylon, and is equally hard as the amethyst. The other kind is found in Portugal and Bohemia. The ancients used it for amulets and talismans. A very small portion of it is the oxide of iron: a larger part of silex; but far the greater portion, about three-fourths, is zinconia, a semi-transparent mineral, found also in Ceylon.

Soda-water is chiefly water strongly charged with carbonic acid, (which is generated from minerals,) and has also a slight portion of carbonate of soda in solution. It is used as a beverage, and is considered anti-acid and lithontripic; and is made in different ways.

FAITH.

There is a flower, a holy one,
That blossoms on my path,
No need of dew or daily sun,
Or falling showers it bath;
It blooms as brightly in the storm,
As on the cloudless day,
And rears unharmed its humble form,
When others fade away.

That plant is Faith; its holy leaves
Reviving odours shed
Upon the lowly place of grief,
Or mansions of the dead.
God is its sun: his living light
In happy hours he lends,
And silently in sorrow's night
Religion's dew descends.

Plant of my soul, be fading things
By other hands carest,
But through life's weary wanderings,
I'll bear thee to my breast;
And when the icy powers shall chill
The fountains of my breath,
Thy loveliness shall cheer me still,
E'en in the hour of death.

Protestantism is prevailing in different parts of France, and proselytes to its faith and forms are increasing. Within a few years past a number of Protestant missionaries have been employed in that vast kingdom, and with a good degree of success. They are now permitted to preach to the people, and are in no danger of persecution. Soon after the glorious Reformation from Papacy, the number of Protestants in France was great, and by the Edict of Nantz, in 1598, they were guaranteed the free exercise of their religion, in dissenting from the authority of the Romish Church: but in 1685 that edict was repealed by Louis XIV. and a dreadful massacre and long persecutions followed, which swept away more than half a million. The spirit of the age does not favour persecutions on account of religious opinions. For the last forty years, the French have manifested much indifference to religion; they have been inclined to skepticism, and their opposition or disgust of Catholicity has been general. There is a prospect that the present or next generation will be more sincerely religious, and that Protestantism will be the creed of the majority.

Liquorice.—The shrub is a native of Syria, and of the southern parts of Europe; and is cultivated in Great Britain. The root is perennial; but the stalks are annual, and rise four or five feet in height. It may be propagated by fibres, which issue from the root, near the surface; and the whole root will bear transplantation. An extract from the root is ordered by the London College of Physicians; but it is not prepared in this country. The common liquorice of the shops is brought from Spain and Italy. And that which is black, shining, brittle and easily dissolved in the mouth, is best esteemed. It is now little used as a medicine; but it is said to be used by brewers, and the *manufacturers* of port wine, in large quantities.

The miser is as much in want of that which he has, as of that which he has not.

The doctrine of Light, which was generally received before Newton's theory, is again advocated by some philosophers in Europe. According to Newton, light is matter, though almost inconceivably attenuated and subtle, emitted from the sun and other luminous bodies. The opinion before Newton, and now again advanced, is that light is caused by the undulatory motion of particles of matter. Some experiments have been made to illustrate this doctrine, but they do not satisfy those in favour of the theory of Newton. The question seems to excite a good deal of interest among men of science.

The British Administration are opposed in their plans of reform by the House of Lords, but the House of Commons give their support to the liberal views of the Ministry. The Lords and Bishops are evidently aiming to put down the present Whig Ministers; who will probably be able to continue in office only by persuading the King to create a batch of new peers.

The friends of liberty in France are much alarmed by the project of Government to muzzle the press. It has the voice of a majority of the Deputies in its favour; but many of the Peers are opposed to it; and the celebrated Talleyrand is striving to prevent its adoption. The plan is almost as great a restriction on the press, as that proposed by Charles X., five years ago, which caused his banishment and that of his ministers.

A great meeting has been lately held in Boston, for constructing a Rail-road from that city to Albany. It was attended by most of the citizens of wealth and intelligence, and a respectable delegation from Albany. A Rail-road between these two cities must be for the interest of both; and judging from the character of those who favour the enterprise, and from the spirit manifested at the meeting, the plan will be prosecuted with zeal and effect.

The Legislature of Massachusetts is now holding an extra session, for revising the Statutes of the Commonwealth. The object is a digest, or codification, which will render the laws at once more comprehensive and simple. A Board of Commissioners was first chosen to prepare a digest. A large Committee of the General Court was then appointed to attend to the subject with the Commissioners, which was in session three months; and now the Legislature is engaged in a final examination, approval and sanction of the whole system.

The opinion is prevailing in England, that of the two routes proposed to India by the Mediterranean in steam-ships; to wit, one by the River Euphrates, and the other by the Red Sea, the latter is far the most eligible; the Red Sea being more easily navigated than the Euphrates.

NOVEMBER.

FULTON AND STEAM ENGINES.

The power of Steam has been long known; and the use of it for practical purposes has also been perceived for many years: Nay, further, it was predicted half a century ago, and at a still remoter period, that it would probably be found more useful than it had ever been then shown to be. But the great improvements in propelling vessels on the water, of which it has lately been made the agent, were reserved for the inventive genius and resolute perseverance of Robert Fulton of New York, who applied it successfully for that purpose, thirty-two years ago. We are aware, that others had conceived the idea of producing the motion of vehicles both on land and water, by the use of steam. Its power could not have escaped the notice of ingenious men in past ages; and there are proofs that some experiments were made, several centuries ago, indicating the astonishing effects of steam, when skilfully directed. But this opinion and these experiments can not justly deprive Mr. Fulton of the praise, which his persevering and successful efforts have called forth in his behalf.

As the mariners' compass was the commencement of very important advances in navigation; and as the art of printing proved of incalculable benefit to the progress of knowledge and learning; so the full discovery of the power of steam and the uses to which Fulton showed it might be applied, and to which he did actually apply it, have formed a new era in navigation, very important to the prosperity of nations and the convenience of individuals. Navigation by steam excels that by sails in two respects, which give to it great superiority over the former mode of passing on the water; one is velocity, and the other a direct course to the destined place, despite of opposing winds. In rivers, bays, and narrow seas, these advantages are very great.

Robert Fulton was a native of Pennsylvania, and was born in 1765. He had only a common education; but at an early age discovered a peculiar fondness for mechanical employments. He also had a taste for drawing with the pencil. From the age of seventeen till twenty-one, he was employed in painting landscapes and portraits. He was afterwards sometime with the celebrated Mr. West, the portrait painter, and made painting his chief employment. He then gave his attention again to the mechanic arts, when he became acquainted with the Duke of Bridgewater, and was engaged in a project for improving inland navigation. As early as 1793, he conceived the idea of propelling vessels by steam: but that he was the first to suggest or form a plan of steam-boats is not correct: and yet, it is possible he had not heard of the plan formed by others. Hon. Nathan Read of Massachusetts, entertained the idea, and actually exhibited a successful experiment of this kind, across a bay near Salem in 1785.* But unfortunately Mr. Read did not meet with due encouragement, and failed to prosecute his plan.

The subject of canals engaged the attention of Mr. Fulton for some years; and he also professed himself a civil engineer. His first experiment of propelling a boat by steam was on the river *Seine* in France, in 1803; it was with one of small size, and succeeded so fully according to his theory and expectations, that he returned to America, soon after, and prosecuted the business with great zeal. A large boat was built under his direction, which began to navigate the Hudson in 1807. Its speed, however, was only five miles an hour. In 1809, he received a patent for his invention.

Steam, as is well known, is produced by the action of heat on water, which is made to expand and to assume a gaseous state. It is attenuated and light, like air; and like it may be compressed by external force, and will also resist the force applied to it for that purpose. If a spoonful of water be put in a large glass globe, holding several gallons, and the air exhausted, and then heat applied to the globe, the water will disappear and the globe appear to be empty; yet it is filled with the water, in a state of vapour or steam. And by increasing the heat, the expansive force of the steam is increased, even to the bursting or shattering of the globe. Water is converted into vapour or steam at all temperatures, even at 32°; but at low temperatures there is but little elasticity, and it increases as the temperature increases, till at 212°, it is equal to that of the atmosphere. In this state it occupies 1689 times the bulk of the water from which it was formed, and its density is 0.625, air being 1. Attempts have been made to represent the increase of the elasticity of steam at increasing temperature; but they are not considered accurate at very high temperatures. At 419° of temperature the elasticity of steam is 1050 greater than air, and exerts a force equal to 14,700 lbs. on every square inch of the vessel in which it is confined, which few vessels can withstand. Now it is obvious that the specific gravity of the vapour of water is proportional to its elasticity: If then we know this specific gravity at a given temperature, we may, with our knowledge, determine the specific gravity at any other. And thus it appears, that at the temperature of 419°, water converted into steam expands only 37 times; but such steam, coming into the air, would expand 35 times. This would greatly increase its specific heat, and therefore lessen its temperature. It is computed that, at a temperature of 500° (or a little more) the steam of water would not much exceed double the bulk of the water from which it was generated: And the elasticity of such steam would be prodigious. When issued into the atmosphere, it would undergo an expansion of 650 times its original bulk. But it is not known at what temperature water would become vapour without an increase of volume.—The conversion of water into steam has been proved to be owing to the same cause as the conversion of solids into liquids; to wit, the combination of a certain amount of caloric with water, without increase of temperature—for water is converted into vapour at all temperatures, even at 32°, or lower—which is thus proved:—when a vessel of water is put over fire, the water becomes hotter till it reaches 212°, but the temperature is not afterwards increased: yet heat must be constantly entering the vessel of water from the fire;—but as the water does not become any hotter, the heat (thus added) must combine with that part which flies off in the form of steam: But the temperature of the steam is only 212°; *ergo*, the added heat does not increase its temperature. The conclusion then seems to be, ***that the change of water into steam is owing to the combination of this heat, since it produces no other change.***

The steam engine is the most useful and powerful employment of steam, invented in modern times. It has been traced to the Marquis of Worcester in England, though he did not interest the public in the invention, nor apply it to any practical purpose. A Captain Savary, in 1696, revived the invention and took out a patent: and in his machine, steam was applied to force water up a pipe. But the quantity of fuel used and the waste of steam was so great, that it was not attempted to apply it, as intended, to drain water out of mines. In 1705, some improvements were made in the machine. Mr. Watt of Glasgow, made further improvements,

* Mr. Read was sometime teacher of Mathematics and Natural Philosophy in Harvard University, and afterwards member of Congress. John Fitch of Philadelphia, in 1786, constructed a boat with paddles, which run on the Delaware, by force of steam: But was not aided in his plan, and died in 1793.

at a later period.—He discovered that water, when confined in a close vessel, and heated beyond the boiling point, would, when the steam was allowed to escape, cool rapidly down to the boiling temperature—and this suggested the idea that the amount of steam issuing from a vessel was simply in proportion to the amount of heat applied, and that the only way to economize in fuel was to economize in steam. In 1763, he provided for condensing steam in a separate vessel, which was a vast improvement, as it saved nearly half the quantity of fuel. Mr. Watt made some other improvements in steam engines, and proposed at one time to apply it to propel vessels on the water, but did not fulfil his purpose. After him, others entertained a similar project, but did not pursue it to the end intended: And it seems to have been reserved for Mr. Fulton to prefer the best and only claim to an available execution of a project often contemplated, and to a practical and fortunate accomplishment of a scheme long cherished, but not perfected.

We have before referred to this subject, and to the machinery for propelling vehicles on rail-roads as well as vessels on water, by steam; and so much has been published on the subject, that we cannot presume to give any thing new, and should feel that an apology were due for attempting it. But this general view of the subject seemed not inappropriate to the character of our publication, which makes it our duty to refer to and to record so splendid and useful an improvement of the present age as the STEAM BOAT, which is connected with the more recent invention of machinery for generating, directing and controlling this powerful natural agent. It is known to every one, who has attended to the subject, that various improvements have been recently made in machinery for propelling vessels on the water, and cars on rail-roads, by the power of steam; and these discoveries have been promptly laid before the public for the benefit of society and the information of mechanists. And the properties of steam are such, that it is believed still further improvements will be made in machines for the use and direction of it, consistent with the safety of those employed in managing them, and of those who prefer these modes of conveyance.

Perhaps there is but one great object now to be attained in the use or employment of steam-engines; and that is a preventive against the bursting of the boiler, which is a part of the machinery. We speak not of unfaithfulness in first making the boiler, nor of the carelessness of agents; though to these causes frequent accidents, no doubt, may be traced. But machinery is wanted, by which to provide a process for keeping the boiler in such a temperature, by a constant, gradual supply of water, as to prevent explosion, so destructive of human life. Such an improvement, we believe, is about being attempted, with a prospect of efficiency and success.

A rich native of Madras, lately deceased, has bequeathed a large sum, to further the education of his countrymen. And the English government there are making preparations to open a school with three teachers.

PUBLIC LIBRARY IN PHILADELPHIA.

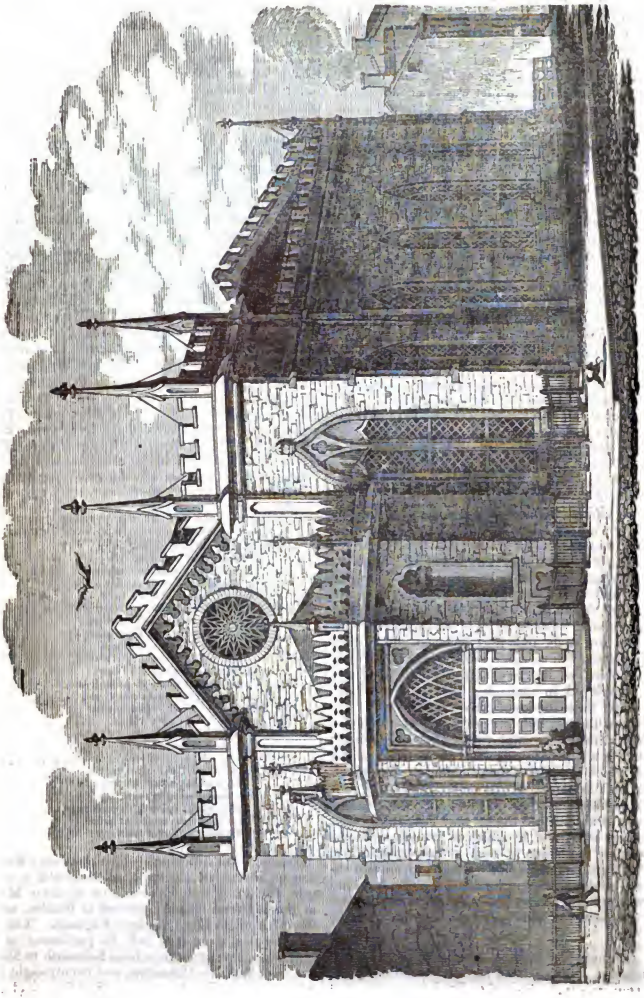
This Library, one of the largest, though not the oldest, in the United States, originated with Dr. Franklin, in 1731. His associates were Thomas Hopkinson, Thomas Cadwallader, Anthony Nicholas, Robert Grace, and others. James Logan, esteemed by the committee, "to be a gentleman of universal learning," was requested to make out a catalogue of suitable books, to be purchased in London; which was done in 1732. Franklin, J. Brientnal and P. Sing, were presented with the freedom of the company; Brientnal for his services as Secretary; Sing, for engraving the seal of the company; and Franklin for *printing the notices*. The books were kept some time in Mr. Grace's chamber, and Franklin was chosen librarian. In 1740, the library was removed to an upper room in the State House, the use of which was granted to the company by the Legislature in 1742, the association was incorporated by the Proprietors of the Colony, then in England. Charles Thompson became a member and Director in 1762; and in 1763, the celebrated John Dickinson was elected one of the board. In 1769, another library company was united with it; in 1771, still another; and the books were removed to a room in the second story in Carpenter's Hall; (the place where the Continental Congress assembled in September, 1774;) and the library was opened daily, from two o'clock till seven. The members of Congress were allowed the use of the books at all times, and without expense. The number of volumes is now 42,000.

STANZAS,

WRITTEN IN A COPY OF THE BIBLE PRESENTED TO MY DAUGHTER.—BY MRS. CORNWALL BARRY WILSON.

When in future distant years
Thou shalt look upon this page,
Through the crystal vale of tears
That dim our eyes in after-age;
Think it was a mother's hand,
Though her smile no more thou'lt see,
Pointing toward that 'better land,'
Gave this sacred gift to thee!
Lightly thou esteem'st it now
For thy heart is young and wild,
And upon thy girlhood's brow,
Nought but sunny Hope hath smiled!
But when disappointments come,
And the world begins to steal
All thy spirit's early bloom,
Then its value thou wilt feel!
Not alone in hours of woe
'Search the Scriptures,' but while joy
Doth life's blissful cup o'erflow,
Be it oft thy sweet employ;
So, remembering in thy *youth*
Him whose spirit lights each page,
Thou shalt have abundant proof
He will not forget thine *age!*

INDIA OVERLAND MAIL.—The first India Mail, by way of Alexandria, (Egypt,) and the Red Sea, which was dispatched from Falmouth on the 3d of March, in the *African* steamer, arrived at Bombay on the 22d of April, in fifty days from England. The passage by this route may now be performed as follows, viz: Seventeen days from Falmouth to Malta; five from Malta to Alexandria, and twenty-eight from Alexandria to Bombay, by the Red Sea, including stoppages. The rout by Aleppo and the Euphrates, presents more formidable difficulties.



[St. Paul's Church, corner of South Ferry and Dallius Streets, Albany, N. Y.]

ST. PAUL'S CHURCH, ALBANY.

This very spacious and elegant edifice, consecrated to the worship of God, and instruction in the doctrines and duties of the gospel, is situated at the corner of South Ferry and Dallius Streets. It was finished and dedicated in August 1829, in fifteen months from the commencement of the work. The services on the occasion were performed by Bishop Hobart. The dimensions of this handsome building are as follows, viz: its length, eighty-four feet; width, sixty-two; height of the walls to the cornice, thirty-two feet: with a semi-octagonal vestibule, projecting sixteen feet, and rising to the front pediment of the main roof. The building is of rough, unwrought stone, (from three and a half to two feet in thickness.) and of the Gothic style, the design being from an ancient temple of that order. The original plan embraces the erection of a stone tower in the rear, of twenty-two feet square, elevated two sections above the belfry; to be surmounted with turrets, to correspond with those on the main building. There are five windows on each side, and two in front, supported by centre ruds, diverging at the head, so as to form three distinct Gothic arches to the casements and frames of each window. The mullions are diagonally disposed, and contain glass of five and a quarter inches square. The angles of the walls, and the partition wall at the landing of the gallery stairs, are supported by buttresses of two feet square; having in each three abatements, capped with cut stone, and surmounted with quadrangular Gothic pinnacles. The nave is finished with a deep Gothic frieze and cornice, and the parapet carried up in the form of battlements.

On the right and left of the entrance way, are niches prepared for statuary. The front door is ten feet wide, on each side of which are columns supporting the arch of a window above the impost of the door. The naves of the vestibule roof are finished with cornice and chainwork, and the angles surmounted with pinnacles.

The interior finish is also Gothic, painted in imitation of oak. Below, there are one hundred and thirty-eight pews, and sixty-six in the gallery. The pulpit, screen and altar were designed and drawn by Mr. George Vernon, and built by Mr. J. Bigelow. The screen is twenty-four feet wide, supported by four octagonal Gothic columns, in panel work, and rising about eighteen feet from the chancel floor. The columns are finished at the top with pinnacles, ornamented and encircled with carved leaves and vines; in the centre of the screen, and immediately over the pulpit, there rises a pediment, supported by clustered columns and an arch; the pediment also surmounted with a richly ornamented pinnacle extending to the ceiling, and standing in relief, in a niche prepared to receive it. The top of the screen and basis of the pinnacles are finished with castellated battlements, and the panel work in quatre foils.

The church is supplied with a large and splendid organ, from the factory of Henry Erbin, in New York. This edifice, which was erected and finished under the superintendence and direction of Mr. W. W. Dougherty, was built for the congregation of which the Rev. Richard Bury was then rector. Mr. Bury was succeeded by W. L. Keyes, and Mr. Keyes by Rev. J. H. Price, formerly of Boston.

THOUGHTS IN A BALCONY AT DAYBREAK.

A BALL WITHIN.

Morn in the east! How coldly fair
It breaks upon my fevered eye!
How *chides* the calm and dewy air!
How *chides* the pure and pearly sky!
The stars melt in a brighter fire,
The dew in sunshine leaves the flowers;
They, from their watch, in *light* retire,
While we in *sadness* pass from ours.

I turn from the rebuking morn,
The cold gray sky and fading star,
And listen to the harp and horn,
And see the waltzers near and far—
The lamps and flowers are bright as yet,
And lips beneath more bright than they;
How can a scene so fair beget
The *mournful* thoughts we bear away!

'Tis something that thou art not here,
Sweet lover of my lightest word!
'Tis something that my *mother's tear*
By these forgetful hours is stirr'd!
But I have long a loiterer been
In haunts where joy is said to be;
But though with peace I enter in,
The nymph comes never forth with me!

N. P. WILLIS.

CALCULATION OF HUMAN LIFE.

The expectation or calculation of human life, according to human probability, and past observation on the age of man, is given in the following table, prepared by one who had attended to the subject.

Age.	Expect.	Age.	Expect.	Age.	Expect.	Age.	Expect.
1	27	21	28	41	19	61	12
2	32	22	27	42	18	62	11
3	34	23	27	43	18	63	11
4	35	24	26	44	18	64	10
5	36	25	26	45	17	65	10
6	36	26	25	46	17	66	10
7	35	27	25	47	17	67	9
8	35	28	24	48	16	68	9
9	35	29	24	49	16	69	9
10	34	30	23	50	16	70	8
11	34	31	23	51	15	71	8
12	33	32	22	52	15	72	8
13	33	33	22	53	14	73	7
14	32	34	21	54	14	74	7
15	31	35	21	55	14	75	7
16	31	36	21	56	13	76	6
17	30	37	20	57	13	77	6
18	30	38	20	58	13	78	6
19	29	39	19	59	12	79	5
20	29	40	19	60	12	80	5

NOTE.—Fractions of years are not noticed. This table was formed from observation on age in Europe. In the United States, the expectation might be stated at a higher number of years generally.

So late as 1630, Dr. Leighton, a learned Scotchman, who was opposed to Episcopacy, published a book, entitled, 'An Appeal to Parliament, or a Plea against Prelacy;' for which, by the influence of Bishop Laud, he was sentenced, in the Star Chamber, to be whipt, be branded in his forehead, his nose slit, and his ears cut off; *all which was duly inflicted on him!*

UNION AMONG CHRISTIANS.

Every sincere believer in the gospel must be desirous of the extension of this divine religion, in the world, and of removing the objections which are made to it. In what way can this be so effectually done, as by union among those who have professed it? A spirit of charity and kindness manifested by different sects, (if different sects cannot be prevented,) toward one another, would do more than any measure or argument without it. It would speak to the heart of the unbeliever; and few, indeed, would be able to resist the appeal. Other arguments might be occasionally used, to remove objections or resolve difficulties, relating to history, philology, or ancient customs, &c. The arguments from history, prophecies and miracles, are not to be disregarded; for, if properly stated, they will produce conviction on the understanding. But they do not reach the heart. And there is no true belief of the gospel but by the heart: this belief only will produce the fruits of righteousness, and purify and regulate the affections. So the doctrines and moral precepts of the gospel recommend themselves to those of unperverted minds, who carefully attend to them. But all these will be in vain, if professing Christians are divided, alienated, hostile and censorious. No argument can be required to show this. We are so formed and constituted, as to our moral nature, that the influence most auspicious to Christianity on unbelievers, is that arising from a conviction of our sincerity, and evidence that the gospel has power over those who profess it: and that they agree in its leading and important purpose; which is to make men better. And who does not know that charity and kindness are the greatest of its purposes? Who does not know, "that he who loveth not his brother, whom he hath seen, cannot love God whom he hath not seen." Where there is strife and division, and bitterness and denunciation, the spirit of Christ is certainly wanting.

But it is difficult to decide what are fundamental or essential doctrines of the gospel. And why is it difficult? Is it owing to the Bible, or to man, who would be wise above what is written? There would, probably, be no difficulty in procuring the assent of all denominations to the Apostles' Creed, commonly so called, though not proved to have been formed by them, yet certainly known and used at an early period of the church. What authority have men to add to that early apostolic creed; especially, what right to pronounce their additions or explanations essential, and of the same force and authority as the apostolic doctrines? A faith in unessential doctrines, must be unessential. Besides, it is abundantly evident that there are humble, pious, benevolent and virtuous persons in all sects. There is still another important consideration; when those of different views and creeds confer together, in the spirit of christian love for the truth, they find the difference not very great between them; that in the spirit and design of the gospel they entirely agree; and that their difference is chiefly, if not wholly, about mysterious and speculative doctrines.

We think, then, there is a powerful obligation on all Christians to endeavour to unite on some common ground, so as to recognize and treat each other as Christians. We are desirous such an object should be attained. And should be happy if any thing we can suggest might tend to it.

This is no new thought. Some of the best men in the church, for a long time, have been of this opinion; and have given expression to their opinion. But they have spoken almost in vain. The christian world is still divided; sadly divided: but divided on speculative rather than on practical doctrines: and are condemning one another, not for unholy lives, or want of zeal, but for not subscribing to a long creed, formed by fallible and often *party* men. The effect of this conduct now is, and ever has been, and ever will be, injurious to the holy cause of the gospel. Why will we not see this, and endeavour to prevent the continuance of such a stumbling-block and rock of offence to the pagan and infidel world?

The Apostles' Creed states that there is one God, and that Jesus of Nazareth was the true Messiah, the Saviour of men; in some sense, the Son of God; sanctified and sent into the world by God to enlighten, reform and save it. It also states the doctrine of the resurrection, of a future judgment, and of eternal life. These, then, are the essential doctrines of Christianity. There are others growing out of these, or connected with them of importance. But any doctrines not connected with and included in them, cannot be necessary to constitute a Christian, nor essential to sincere piety and virtue.

We think this great object, union of spirit and affection would be promoted by frequent meetings of Christians of different opinions. They all meet and act together, as members of Bible Societies, and of Temperance Societies. If they would try as sincerely to agree, (or to agree to differ,) as some few heretofore have strove to divide and to separate, and to magnify differences of opinion, much good we think would come of it. Are we asked what is the true bond of union, or the common ground on which different sects should meet; we reply, that it is this: 'The Bible is the authority, and the only authority in matters of faith, because it is *the word of God.*' All who admit this are Christians, and ought to be received as Christians.

We have been highly gratified to learn, that at the celebration in Geneva, of the completion of three hundred years from the beginning of the Reformation from Papacy by Luther, there was a large meeting of delegates, or members of different churches and denominations. With a few exceptions, those present, and there were Trinitarians and Unitarians, Episcopalians and Congregationalists, Calvinists and Arminians, manifested a truly christian spirit, rejoicing in the light and grace of the gospel, appealing to the holy Bible as the only standard of religious truth, and readily recognising all as Christians, who receive the scriptures as the word of God, or written by holy men under the guidance of divine inspiration. B.

WANTS.—*Wisdom* wants more pupils; *truth*, more real friends; *virtue* more admirers; *honesty*, more practitioners; *religion*, to have less said of its mysteries, and more done of its duties.

HONESTY THE BEST POLICY.

This was the opinion kindly given by a master to his faithful servant John, after labouring for him some time, and about to return to his family; which he had left in great poverty the year before.—On arriving at his cabin, he found his wife and children rejoicing over a purse full of gold, which the eldest boy had picked up on the road that morning. Whilst he was away, they had endured all the miseries which the wretched families of those who go over to seek work in England are exposed to. With precarious food, without a bed to lie down on, or a roof to shelter them, they had wandered through the country, seeking food from door to door of a starving population; and when a single potato was bestowed, showering down blessings and thanks on the giver, not in the set phrases of the mendicant, but in a burst of eloquence too fervid not to gush direct from the heart. Those only who have seen a family of such beggars as I describe, can fancy the joy with which the poor woman welcomed her husband back, and informed him of the purse full of gold.

"And where did Mick, my boy, find it?" inquired John Carson.

"It was the young squire, for certain, who dropped it," said his wife; "for he rode down the road this morning, and was leaping his horse in the very gap where Micky picked it up; but sure, John, he has money enough besides, and never the halfpenny have I to buy my poor *childer* a bit to eat this blessed night."

"Never mind that," said John; "do as I bid you, and take up the purse at once to the big house, and ask for the young squire. I have two cakes which I brought every step of the way with me from England, and they will do for the children's supper. I ought surely to remember, as good right I have, what my master told me for my twelve months' wages, seeing I never, as yet, found what he said to be wrong."

"And what did he say?" inquired his wife.

"That honesty is the best policy," answered John.

"'Tis very well; and 'tis mighty easy for them to say so that have never been sore tempted, by distress and famine, to say otherwise; but your bidding is enough for me, John."

Straightways she went to the big house, and inquired for the young squire; but she was denied the liberty to speak to him.

"You must tell me your business, honest woman," said a servant, with a head all powdered and frizzled like a cauliflower, and who had on a coat covered with gold and silver lace and buttons, and every thing in the world.

"If you knew but all," said she, "I am an honest woman, for I've brought a purse full of gold to the young master, that my little boy picked up by the roadside; for surely it is his, as nobody else could have so much money."

"Let me see it," said the servant. "Ay, its all right—I'll take care of it—you need not trouble yourself any more about the matter;" and so saying, he slammed the door in her face. When she returned, her husband produced the two cakes which his master gave him on parting; and breaking one to divide between his children, how was he astonished at finding six golden guineas in it; and when he took the other and broke it, he found as many more. He then remembered the words of his generous master, who desired him to give one of the cakes to his wife, and not to eat the other himself until that time; and this was the way his master took to conceal his wages, lest he should have been robbed, or have lost the money on the road.

The following day, as John was standing near his cabin-door, and turning over in his own mind what he should do with his money, the young squire came riding down the road. John pulled off his hat, for he had not forgot his manners through the means of his travelling to foreign parts, and then made so bold as to inquire if his honour had got the purse he lost.

"Why, it is true enough, my good fellow," said the squire, "I did lose my purse yesterday, and I hope you were lucky enough to find it; for if that is your cabin, you seem to be very poor, and shall keep it as a reward for your honesty."

"Then the servant up at the big house never gave it to your honour last night, after taking it from Nance—she's my wife, your honour—and telling her it was all right?"

"Oh, I must look into this business," said the squire.

"Did you say your wife, my poor man, gave my purse to a servant—to what servant?"

"I can't tell his name rightly," said John, "because I don't know it; but never trust Nance's eyes again if she can't point him out to your honour, if so your honour is desirous of knowing."

"Then do you and Nance, as you call her, come up to the hall this evening, and I'll inquire into the matter, I promise you." So saying, the squire rode off.

John and his wife went up accordingly in the evening, and he gave a small rap with the big knocker at the great door. The door was opened by a grand servant, who, without hearing what the poor people had to say, exclaimed, "Oh, go!—go—what business can you have here?" and shut the door.

John's wife burst out crying—"There," said she, sobbing as if her heart would break, "I knew that would be the end of it."

But John had not been in merry England merely to get his twelve guineas packed in two cakes. "No," said he, firmly, "right is right, and I'll see the end of it." So he sat himself down on the step of the door, determined not to go until he saw the young squire; and, as it happened, it was not long before he came out.

"I have been expecting you some time, John," said he; "come in and bring your wife in;" and he made them go before him into the house. Immediately he directed all the servants to come up stairs; and such an army of them as there was! It was a real sight to see them.

"Which of you," said the young squire, without making further words, "which of you all did

this honest woman give my purse too?"—but there was no answer. "Well, I suppose she must be mistaken, unless she can tell herself."

John's wife at once pointed her finger towards the head footman; "there he is," said she, "if all the world were to the fore—clergyman, magistrate, judge, jury, and all—there he is, and I'm ready to take my bible-oath to him—there he is who told me it was all right when he took the purse, and slammed the door in my face, without as much as thank ye for it."

The conscious footman turned pale.

"What is this I hear?" said his master. "If this woman gave you my purse, William, why did you not give it to me?"

The servant stammered out a denial; but his master insisted on his being searched, and the purse was found in his pocket.

"John," said the gentleman, turning round, "you shall be no loser by this affair. Here are ten guineas for you; go home now, but I will not forget your wife's honesty."

Within a month, John Carson was settled in a nice new-slated house, which the squire had furnished and made ready for him. What with his wages, and the reward he got from the judge, and the ten guineas for returning the purse, he was well to do in the world, and was soon able to stock a small farm, where he lived respected all his days. On his death-bed, he gave his children the very three advices which his master had given him on parting:—

Never to take a bye-road when they could follow the highway.

Never to lodge in the house where an old man was married to a young woman.

And, above all, to remember that honesty is the best policy.

THE MIDDLE, OR DARK AGES

The period, most commonly distinguished as the *dark ages*, extends from about A. D. 450, to 1450, though it might not be incorrect to continue it fifty years later. At the beginning of the christian era, Rome was in its glory. That was the period of its greatest prosperity. Its character for literature was then also the highest. For several ages, its citizens had been familiar with the learning of Greece, and had drank deep at Hellenistic fountains. But after the Vandal inroads of the barbarous nations from the north, in the 5th and 6th centuries, they became degenerated both in manliness of character and literary attainments. And this lamentable declension was of long duration. Even the pure and rational religion of Christianity, in the hands of an illiterate and debased people, became in a great measure a shelter for superstition, and an apology for immorality. Neither the laity nor the clergy possessed its spirit, nor observed its precepts. Religion degenerated into a merely external and ceremonial worship; and the christian world was distinguished in little more than name from pagans and idolators. Learning felt the withering influence of the times; it was considered unnecessary. The Pope and his priests claimed to be infallible teachers and guides. The people were discouraged from becoming learned; and for the clergy even, it was enough to dictate in all matters of religion, without being at the trouble of explaining their doctrines and commands, or proving them agreeable to the gospel of Christ, or the instructions of his inspired apostles. Instead of making advances in literature and science, the inhabitants of Europe were thus made to retrograde, for a long period of nearly a thousand years. There were nothing like public schools for the lower classes; and very few even of the nobility could write their name, or read a chapter in the sacred volume. This indeed, was a sealed book; the laity were not required, nor even permitted to examine. The husbandmen and the mechanics were ignorant of every thing but what was necessary to enable them to perform the labor of their vocation. And this they did from habit and custom, as the ox trod the furrow or the horse moved round in a mill. The people could work without learning, and they knew little more than the horse or the ass which they drove in the path or the field. And those of nobler birth directed all their energies to learn the art of war, and to prepare themselves to kill and destroy their fellow-men. The clergy had the manuscripts and books of other ages in their possession; but the key to unlock these stores, they neither allowed others to take, nor often used it themselves for the purposes of gaining knowledge to be communicated to others.

These were ages of thick and gross darkness. The light of learning suffered a long and almost total eclipse. No intellectual efforts were put forth to break through the heavy clouds which brooded over the world of mind. Brute force governed society; and animal passions, unrestrained, corrupted the whole body of the people. But at length, the abuses and corruptions were so numerous and so irrational, that in the beginning of the 16th century, Erasmus and Luther asserted the rights of human nature, and opened an avenue for the light of truth to shine once more upon the benighted regions of continental Europe. It was indeed a feeble light at first, but the dawn was soon followed by a brighter day. At a little earlier period, in the 15th century, the art of printing had been discovered, which proved an incalculable advantage to the interests of learning; and the mariner's compass was also invented, which served to extend commercial enterprises, whose influence was alike auspicious to civilization and literature.

In the darkest periods of ignorance and bigotry, there were, however, some "lesser lights" in a part of the hemisphere, which prevented universal darkness and corruption.

SPECTACLES.—Their position on the head is very important. They should be worn so that the *glasses* may come as near to the eyes as possible, without interfering with the eye lashes; and so placed as that the glasses be parallel to the paper, when held in an easy position. To accomplish this, the sides of the spectacles should bear upon the swell of the head, about midway between the top and the ears; the eyes will then look *directly* through the glasses to the paper. When the sides of the spectacles are placed in contact with the ears, there is not so good a view of the object.

[The Desert of Sinai, with the Rock said by the Arabs to be that which Moses struck.]

THE ROCK STRUCK BY MOSES FOR WATER.

The rock which was smitten by Moses, and whence the water afterwards flowed for the relief of the thirsty Israelites under his command, is situated in the desert or wilderness of Sinai. This desert is in the peninsula, made by two branches or bays of the Red Sea, extending into Arabia Petrea. "This is, in truth, a great and *terrible* wilderness, where there is (little or) no water." The rock, which tradition has pointed out as the one whence the water gushed out, when struck by Moses, and gave relief to the people complaining of their privations and sufferings, and comparing the abundance they had enjoyed in Egypt under bondage, is not far from Sinai or Horeb; but is nearest the latter. It has been somewhat differently described by the numerous travellers who have given an account of it. One represents it as six yards square, and another to be fifteen feet long, ten wide, and twelve in height. It appears in a tottering state, and the base is smaller than the body of the rock near the top. It is rough and uneven on the sides, indicating a disrupture from the mountain by some volcanic power or uncommon agitation of the earth.

This event was soon after the publication of the law by Moses from Sinai; and it is represented as miraculous, equally as the passage of the Red Sea, and the supply of quails and manna. There have been attempts by some learned men to show that the extraordinary events connected with the exode of the Hebrews from Egypt, and with their journey of forty years in the wilderness, were not miraculous. We do not see, however, but one may as well deny the miracles of Christ, and indeed all miracles whatever. And yet we are not to multiply miracles unnecessarily. The writer of the Psalms has celebrated the occurrence as a miracle; and Moses, who gave an account of it, speaks of it as such. A great question was to be decided before the nations of the earth, at that period, when almost the whole world was given to idolatry; whether the God of Moses, the God of Abraham, Isaac and Jacob, was the true and only God; and it was therefore a proper occasion for the particular interference of Him who made heaven and earth, and had the control of nature and the elements. The judgments on Pharaoh and his people, and the subsequent protection of the Hebrews, and the giving of the law by Moses, are all the works of Him who created and governs the world, and who (so far as reason or philosophy is able to show) can suspend the laws by which matter is regulated for great moral purposes. Why should it be "thought incredible for God to raise the dead?" He who first made man a living and intellectual being, who formed him with so wonderful a body, and a spiritual property capable of indefinite improvement, "who stamped its lustre on an insect's wing, and wheels his throne upon the rolling worlds;" he surely, can raise the dead to life, he can calm the stormy winds, he can cause the earthquake to engulf the solid land, and the fire of the volcano to overwhelm the fairest cities.

London is first mentioned as a Roman settlement, or garrison, in the reign of Nero, A. D. 61. But before that period, it was a place of residence for traders or merchants from Germany and Gaul.

BOSTON ACADEMY OF MUSIC.

A society or company with this name has been formed in Boston within a few years past, whose object "is to raise music, as a branch of education to the rank which they think it entitled to hold, to diffuse a knowledge of its principles among all classes in society, to show its advantages, to remove the prejudices which prevent attention to it, and to correct the abuses to which it is liable." The efforts of the Society are not *exclusively* devoted to instruction and improvement in *sacred* music, though this will be the great and even the principal design. "From its frequent recurrence, and its practical influence on the devotions of the sanctuary, as well as from the defective manner in which it is often performed, they consider church music the most important department of the art, and in which improvement is very desirable. But vocal music of all kinds which tends to diffuse a chastened cheerfulness in the domestic and social circle comes within the scope of their design." There are occasions, they observe; "when the introduction of music would be both agreeable and improving, but when sacred music would be obviously unsuitable. There are moments when the gaiety of our hearts rises so high as to overflow the bounds of gravity, and we find ourselves involuntarily giving utterance, in singing, to the joy which reigns within. At social meetings, in the season of childhood, under various circumstances of life, feelings of joy and innocence though not positively of a religious character, may be indulged, which are proper to be expressed in music, but which naturally lead to that mode of expression." The object of the Academy is not limited to any single department of the art; but extends to all branches of it, in which any one may wish or need instruction.

The officers and members of the Society are highly respectable—men of letters, of taste, of good morals, and of religious characters. The public meetings are to be held in the old Federal Street Theatre, which has been fitted up in an appropriate style for the purpose. The large room or hall devoted to the Academy, was formerly a place of resort for lectures on religion and the rights of man, as pretended, but really for purposes of irreligion, skepticism, radicalism—and if we were to add, for recommending licentiousness, it might not be far from the truth. We rejoice at the change, and we hope no other place in Boston will be found for the retailers of error and skepticism to deceive, and corrupt the people.

A public address was delivered at the Odeon, (as the Academy's room is now called) in August, by Mr. Eliot, the President; and was very favourably received by a select and discriminating audience. The Academy has the best wishes of the friends of religion and good order, for its permanent success.

HISTORY OF LOWELL.

Lowell in Massachusetts has increased so rapidly within a few years, and is so much celebrated for its extensive manufacturing establishments, that we give the following account of it taken from a late paper published in that town; presuming it will be acceptable to our friends and customers especially at the south and west.

About fifteen years ago the now territory of Lowell, being about four square miles, and bearing upon it about fifteen thousand inhabitants, was owned by a few honest farmers, who obtained subsistence for themselves and families by the cultivation of this comparatively barren spot, and the fish they caught in the Merrimac and Concord Rivers. It comprised the northeasterly part of Chelmsford, and bounded easterly by the Concord River, which separated it from Tewkesbury, and northerly by the Merrimac, that divided it from Dracut; and from the fact of its situation at the confluence of these rivers, was called Chelmsford Neck, and originally by the Indians, *Wamaset*.

Thus for centuries it lay, with the vast resources, which we now see developed, slumbering in its bosom, unsuspected and unknown. But the spirit of enterprise and improvement came, and its touch, like that of the magic wand, has turned this seeming wilderness, not simply into a fruitful field, but into a busy, enterprising and prosperous city.

In 1819, Kirk Boot, Esq. a wealthy merchant of Boston, in the habit of a hunter, explored this place. He discovered its resources, and immediately, in company with several other rich merchants of that city, purchased the land and water privileges. They were incorporated by the name of the "Proprietors of the Locks and Canals on Merrimac River;" and commenced operations by digging a canal from the Merrimac River, near the Pawtucket Falls, easterly about one mile and a half, where it emptied into the Concord River. This canal is sixty feet wide, and carries in depth eight feet of water. This is their grand canal; lateral branches are cut, which carry the water to the several manufacturing mills, and then discharge it into the Merrimac or Concord Rivers. They then erected a large brick machine shop, and commenced building machinery. This company sell out the privileges to manufacturing companies, dig the canals, erect the mills, build the machinery, and put the whole in operation; they do it cheaper than any body else would do it; and these are the only terms on which they sell the privileges. The company has a capital of $600,000, and employs constantly, about two hundred workmen in their machine shop. A part of their lands they have sold out to individuals at an enormous advance on the original price. Land for which they paid $20 or $30 per acre, they have sold for one dollar per square foot. They still have a considerable portion of it on hand and unsold. Mr. Boot is their agent.

Lowell contains (as we have before remarked) about fifteen thousand inhabitants, and was incorporated in 1821 into a town distinct from Chelmsford, and received its name from Francis C. Lowell, Esq., who early introduced manufactures into this country. There are now about twenty-five factories in operation, and there yet remain unoccupied privileges for nearly as many more. When these shall be taken up, as they in all probability will, they will probably afford means of subsistence to another fifteen thousand inhabitants, making in the whole thirty thousand.

A new canal is now being dug, which will furnish sites for about a dozen mills of the size already built. A company has recently been incorporated by the name of Boot Cotton Mills, which have purchased four of these sites, and upon them are immediately to erect four large brick mills. The rail-road from this place to Boston is now complete. It will be, we apprehend, of mutual advantage to both places, and especially to Lowell. It is said to be more permanently built than any other in the country. There are to be two tracks. It will greatly facilitate the immense transportation between these places. A steamboat owned by Messrs. Bradley & Simpson, has commenced running between Lowell and Nashua, a distance of fourteen miles further inland. It is to co-operate with the rail-road. A spacious market house, one hundred and sixty-six feet long, is to be built this season—$40,000 have been appropriated for the purpose. But the town is still deficient in public buildings. A town house, school houses, and poor house, are all we recollect. The streets are not paved, but will be ere long. And on the whole, notwithstanding its present imperfections and deficiencies, which time, we trust, will remedy, it yet presents, as we believe, much to interest the curious traveller.

TELESCOPES.

We referred, in the August Number of our Magazine, to a Telescope constructed by Mr. Widdifield of Boston. We now present an account of two reflecting telescopes, recently made by Amasa Holcomb of Hampden county, Massachusetts, which have been examined by the Committee on the Arts and Sciences, appointed by the Franklin Institute in Philadelphia. They are constructed on the plan of Herschel. The largest has a focal length of nine feet and a half, the diameter of the speculum being eight inches and a half, and having five astronomical eye-pieces, with one terrestrial eye-piece for showing objects erect. The lowest power is fifty-seven, the highest nine hundred. The smallest has a focal length of seven feet and nine inches; the diameter of the speculum is six and a half inches, and has one terrestrial and four astronomical eye-pieces: The lowest power is sixty, the highest six hundred. The result of the examination of these instruments was highly creditable to Mr. Holcomb; and the committee think must be gratifying to all who desire the advancement of astronomical science in our country. The instruments gave satisfactory views of the moon, with a sufficiency of light. They are an improvement on those offered by Mr. Holcomb in 1834. The following remarks relate to the larger telescope above-mentioned, of nearly ten feet focal length, eight inches aperture, with a positive eye-glass giving a power of about nine hundred; the surface of the field of view being twice as large as that of a Gregorian, and a third greater than that of an Achromatic telescope. The view of the moon with its rugged surface, its ridges of mountains, and the endless variety of indentations on its surface, was interesting beyond description, and exceeded any thing, (the Committee say,) which they ever witnessed before, in the use of any other telescope.

Saturn's Ring, though not in a favourable position, was seen manifestly double, for the first time in this country, as far as the information of the Committee extends.

The Companion of Polaris appeared as a star of the fourth or fifth magnitude, to the unassisted eye.

The double stars, Castor, Draconis, 4 and 5 Lyræ, and 44 Bootes, were distinctly separated, and the dark space between them made evident. The last mentioned, consisting of two stars of the fifth magnitude, distance 3″, made a fine appearance; they were soft, and well defined, and there were no scattering rays of light, as was the case with Castor, in both instruments.

A class of closer double stars, of which 6 Coronæ, distant 1″ .2., and Bootes, distant 1″ .4., may serve as examples, was acknowledged by the artist, last year to be too difficult for his telescope. This has furnished a stimulus for his exertions, and the complete division of the latter, as witnessed by the Committee on the present occasion, has been the reward of his disinterested labours. The discs of the two stars in Bootes appeared to be tangent to each other. The Committee have no evidence that the same has been effected by any other telescope in the country.

For the purpose of finding the limit to the power of Mr. Holcomb's telescope, the Committee called his attention to a class of still closer stars; among them were mentioned, Cancri, 2 Bootes, Coronæ, 36 Andromedæ, and Arietis, the last of which is only divisible by two telescopes now in use, viz., the Dorpat telescope, and the twenty foot reflector of Sir John Herschel. These stars, distant from 0″ .6, to 1″ .0., are made to appear with their discs tangent to each other in those celebrated instruments, as appears by their notes appended to the observations contained in their printed catalogues. It is almost needless to add, that Mr. Holcomb acknowledged these stars to be too difficult for any telescopes he has yet made.

It may seem presumptuous to compare the small instrument of Holcomb with the chefs d'œuvre of British and German genius; but, thanks to the admirable labours of the Herschels, of Struve, and of South, observers are enabled, through their printed catalogues, to compare together the optical capacities of their telescopes in distant regions. Accordingly, it appears from an examination of these catalogues, and of Holcomb's instruments, that what the best telescopes in Europe can do upon stars distant 0″ .6., can be done upon stars distant 1″ .4. by instruments which are the work of an unassisted, and almost neglected American optician.

Judging from the progress made in his art by Mr. Holcomb during the past year, the Committee look forward, with confident expectation, to the not far distant period, when, should his health be spared, the country will be in possession of a twenty foot reflector, of native workmanship, rivalling the best European instruments, and that, too, without the patronage of any corporate institution, should all of them be willing to waive the opportunity of sharing with him the merit of such an enterprise.

The Committee have been led to enlarge upon this subject, from a knowledge that one of our national institutions has, within a few years, imported

into the country, at an expense of $2,500, a telescope which, though excellent in its kind, is inferior to that exhibited by Mr. Holcomb, which was made and mounted to order for an individual in Georgia, at less than the eighth part of the above-mentioned sum. It is not probable that a twenty foot instrument from Mr. Holcomb would cost eight times as much as one of the length of ten feet.

The mode of mounting this instrument appears to be original, and nothing can exceed it in simplicity, or steadiness. Indeed, with a power of 900, no inconvenience was perceived from resting with one hand on the frame, and another on the tube, although the same could not be done with the mounting used by Mr. Holcomb last year, or with that of common achromatics with a power of 200, without serious inconvenience.

In conclusion, the Committee beg leave to recommend Mr. Holcomb to the Board of Managers of the Franklin Institute, as a candidate for a premium and medal from the Scott's legacy fund, for his new mode of mounting reflecting telescopes.

THE COMET'S INFLUENCE.

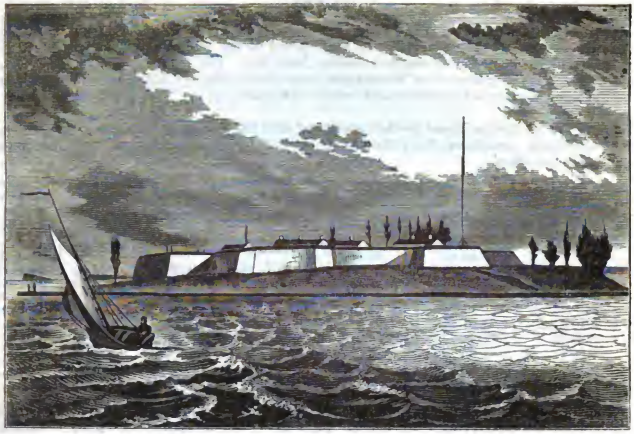
A correspondent asks, how we are to account for the unusual quantity of rain the present season; and inquires "if the comet is near enough to our earth, to raise more vapours than common, and thus produce greater abundance of rain." He says, "as the moon is allowed to have an influence in raising the waters of the ocean by its attractive power, it is not unreasonable to conclude, that the comet, though far more distant than the moon, yet on account of its very superior magnitude, may have an influence on our atmosphere." We shall not presume to decide in such a case as this; nor do we feel prepared to hazard even an opinion without hesitation. We doubt however, whether the comet, at the immense distance it has been from our earth, through the summer, would exert any influence in raising vapours and producing a wet season. It is to be considered also, that the nature and *materiel* of comets are not yet sufficiently known, to enable any one to pronounce positively, that the body is like the earth or moon, and has the power of attraction on this globe which the moon is admitted to have. When the comet is in that point of its orbit nearest the earth or the sun, that it should exert some influence on our atmosphere is not improbable. But to what extent, or how near it must approach to produce such influence, are questions which we pretend not to answer.

Spider Silk.—A Frenchman, of the name of Bon, has given an account of procuring and preparing silk of the webs of spiders. He says the spider makes a silk as beautiful and strong as the silkworm. He says that by collecting a quantity of their bags, a silk may be made which will take all kinds of dyes, and may be made into all kinds of stuffs. Mr. Bon has had socks and gloves made of it. But it has been found impossible to rear spiders, as they destroy each other, when they have not flies for prey.

THE SLING, OR FUNDITOR BALEARIS.

One of the athletic exercises of the ancients was slinging stones; which was done with great skill and force. We present a figure of one in the attitude, and in the ancient costume of such as performed feats of this sort. Pliny speaks of them in his Natural History. Other writers on the gymnastic arts and exercises refer to them also. After long practice they were able to sling a stone with great directness and effect. And the sling was used in war as well as for exercise. This practice was known also among the Jews in the time of David and even before his day. The people of the tribe of Benjamin, it is recorded, could throw a stone with a sling as true as the expert sportsman can with his gun. These exercises consisted also in throwing the discus, or quoit; in running, riding, wrestling and swimming. In the latter, the young men were very ambitious to excel, and spent much time in becoming expert in the art. It was a great reproach of one to say, "he can neither swim nor write." Pliny attributes the origin of the sling to the Phœnicians. It was also much in use in very early times among the rude inhabitants of Majorca, an island in the Mediterranean, near the coasts of Spain. Hence the name Balearis. The sling was used chiefly in war, but the young men were trained to it long before they were called to fight against a foreign enemy. Mothers placed a piece of bread on a distant height; and the boy was to have no supper, and no food, till he struck the bread with a stone from his sling.

A late writer says, "A Greek would have formed a god to be placed under the arch of Niagara Falls; an American is satisfied with erecting a paper mill above it."



FORT INDEPENDENCE.

Fort Independence is on a small low island in the harbour of Boston, nearly three miles east southeast from the city, and about one mile from Dorchester Point, (formerly so called, but now in South Boston.) It is about the same distance from Fort Warren, on Governor's Island, which lies to the northeast. The main channel from the sea to the city is between Fort Independence and Fort Warren. The latter is of modern date, and belongs to the Federal Government. The former also belongs to the United States, having been ceded by Massachusetts soon after the General Government was established. It was formerly called Castle Island, or Castle William; as the fortress was so named in honour of King William III., near the close of the 17th century. In the various wars between England and France, about the middle of the last century, when Boston was in danger of a visit from French fleets, Castle Island was fortified and manned for the protection of the metropolis. After it was ceded to the Federal Government, great expenses were bestowed on it, to render it a sufficient defence against an approaching enemy. It was many years in a good state for preventing any vessels passing up to the city; the cannon were large and numerous, and the ships must necessarily pass near it. But it was always considered too low for great effect: Fort Warren, nearly opposite to it, is on much higher ground. It has lately been dismantled and the troops removed, in order for a thorough repair. Congress has already appropriated $25,000 for the purpose, which is probably only one-third the amount necessary to complete the works.

As early as 1634, "the Governor, Assistants, and several of the clergy, and some other citizens met at the island, and agreed to have a fortification there to secure the town; and to give five pounds each for that purpose. The deputy Governor, Mr. Ludlow, was chosen overseer of the work. At the next General Court, it was agreed to fortify the island at the public expense. In 1644, six of the nearest towns took it upon them to repair it at their own cost and charges." In 1673, it was burnt, and a new one built with stone, under the direction of an able engineer. When the British troops were at Boston a few years before the war of the Revolution, Governor Hutchinson delivered the key and the sole uncontrolled command of the fortress to the British officer then on the station; which caused great alarm and indignation to the Boston patriots, who always contended, that the military should be subject to the civil authority.

THE SILVER HAIR.

[From the Zodiac.]

Grief has not furrowed o'er my cheek,
Nor yet the lines of care
Nor age, the fatal signet set—
Then why this silver hair?

To me not all the valued lore,
The son of science blesses,
Can boast the thrilling eloquence
This single hair possesses.

'Tis wisdom's early monitor,
That youth's gay hours have flown;
One glance will tell the stream is pass'd;
Our folly's Rubicon.

The first newspaper issued in England, was in the days of Queen Elizabeth, 1558, on the alarm of the invasion by the Spanish Armada: And the object was the early and rapid circulation of intelligence for the prosecution and progress of that formidable expedition.

TIDES.

We have before referred to a late order of the British Admiralty to notice the exact time of high water in several ports in England; and of a similar order from the Navy Department at Washington, to have the same done at Charlestown, and some other ports in the United States. The time proposed for the observation was from 8th to 29th of June last. The following is the result of the observations made at Charlestown, by the professor of mathematics in the Navy Yard at that place.

Time of full sea in Boston, inner harbor, compared with the time of the Moon's Transits over the upper and lower meridians, from the 8th to the 29th of June, 1835. L. M. *lower meridian,* U. M. *upper meridian.*

June.	Moon's Transits.	Full Sea.	Difference.	Moon's Transits.	Full Sea.	Difference.	Moon's Age.
1835	A. M.	A. M.		P. M.	P. M.		M.
	h ′ d	h ′ ″	h ′ d	h ′ d	h ′ ″	h ′ d	d h ′
9	10.40.40 L. M.	10.00.32	39.87	11.11.45 U. M.	10.13.00	58.45	13.3.12
10	11.41.20 "	10.53.07	47.08	none "			14.3.12
11	0.14.00 U. M.	11.12.50 p.m.10th.	1.01.17	0.44.60 L. M.	11.46.09 a.m.11th.	58.45	15.3.12
12	1.17.85 "	0.00.34	1.17.28	1.48.10 "	0.43.28	1.04.22	16.3.12
13	2.20.42 "	1.07.41	1.12.74	2.49.10 "	1.41.57	1.07.15	17.3.12
14	3.19.22 "	1.55.21	1.25.87	3.45.60 "	2.29.01	1.16.58	18.3.12
15	4.18.12 "	2.34.17	1.38.84	4.37.30 "	3.27.12	1.10.10	19.3.12
16	5.02.24 "	3.46.42	1.15.54	5.24.40 "	4.26.02	58.37	20.3.12
17	5.47.87 "	4.36.22	1.11.01	6.08.10 "	5.18.05	50.02	21.3.12
18	6.29.65 "	5.34.54	54.75	6.49.50 "	6.12.52	36.97	22.3.12
19	7.10.45 "	6.30.45	39.70	7.30.10 "	7.02.36	27.50	23.3.12
20	7.50.90 "	7.25.56	25.30	8.10.70 "	7.53.27	17.25	24.3.12
21	8.31.76 "	8.20.53	10.88	8.52.40 "	8.40.50	11.57	25.3.12
22	9.14.46 "	9.10.07	4.34	9.36.10 "	9.24.00	12.10	26.3.12
23	9.59.44 "	10.01.22	+ 1.93	10.22.20 "	10.05.32	16.67	27.3.12
24	10.47.05 "	10.38.15	8.80	11.11.10 "	10.47.52	23.23	28.8.12
25	11.37.24 "	11.21.25	15.82	none "			29.3.12
26	0.02.40 L. M.	11.23.34 p.m.25th.	38.83	0.29.42 U. M.	11 59.29 a.m.26th.	29.94	0.12.23
27	0.55.00 "	0.10.85	44.42	1.22.40 "	0.32.10	50.23	1.12.23
28	1.47.98 "	0.44.12	1.03.78	2.14.93 "	1.21.59	52.95	2.12.23

THE GREEK CHURCH.

For several centuries after the death of Christ, the numerous churches by which his name was professed, notwithstanding various controversies as to ceremonies and articles of faith, were nominally united in fellowship through the great extent of country where they were established. There were, indeed, small sects and schisms, and disputes on speculative points of faith; but no very great division and separation took place, till near the close of the fifth century, when the Bishop or Pontiff of Rome anathematized the Patriarchs of Constantinople and of Alexandria, for their not submitting entirely to his arbitrary edicts, and his claims of superiority. The Eastern, or Greek churches were opposed to images in their temples, which the Bishop of Rome allowed and approved. Nor was the Bishop of Constantinople willing to admit the pretensions of the Pope to be the head of the Christian Church, which he then put forth. The Greek Church, thus cut off from religious fellowship with the Western or Romish Church, included those of Constantinople, Alexandria, Jerusalem and Antioch. This separation might also have been hastened by the division between the Eastern and Western Empire, and the removal of the Court from Rome to Constantinople.

The Bishop or Patriarch of the latter claimed to be on an equality with the former, in his ecclesiastical authority. But this the haughty Pontiff of Rome would not allow. Some of the charges against the Bishop and Church of Rome by the Eastern Churches were, "that the former had added an unscriptural creed respecting the Holy Spirit, and had altered many of the ancient usages of the Church, by ordering fasts on Saturdays, and forbidding the priests to marry." The greatest complaint was, that the Pope assumed authority over all other churches, and undertook of his own pleasure, to decide what was to be believed and practised by the christian professors. In the seventh century, the separation seems to have been complete. Some efforts were made by the Emperors of Constantinople afterwards for a reconciliation; but without any lasting success. The Patriarchs exercised great power over the churches of the East, but never to the extravagant extent of the Popes of Rome. The extensive empire of Russia now belongs to the Greek Church, as to the rites and ceremonies of religion, and in opposition to the high claims of the Roman Pontiff.

THE BIBLE.

The Bible is the foundation of the faith of the Christian world. The theological doctrines received by Christians, and the hopes they cherish of a future life, are drawn from this source. And it is matter of surprise with many, that there should be such various systems and creeds among them. This fact is even made an objection to revelation by skeptical and superficial writers. While we admit,

that it is somewhat surprising the differences should be so great as they are between some sects of professing Christians, we cannot allow, that it furnishes a just, or at least, a strong objection, to our holy religion. A little reflection, indeed, will satisfy us, that differences of opinion would arise, where men are left free to examine, and interpret, and to judge for themselves. There are several considerations which contribute to these various and differing creeds. Men are of different capacities, and are differently educated. They have different degrees of information, and their views on other subjects will have an influence on the opinions which they imbibe respecting religion. The young will put a somewhat different construction on passages of scripture from the aged; and the illiterate from the learned philosopher. The books composing the Bible were written by different men, and at distant ages of the world, when the style of writing, the state of knowledge, customs and manners were different. There is much that is figurative and much that is historical; there is much that is local, and much that is general and universal. It would then, be matter of surprise if there were not different interpretations and views, rather than that there were but one. It would be unnatural, if it were not so. And yet it must be conceded that the differences are greater than might at first have been supposed. But it may be proper to observe, that this difference was not so great among the Christians of the first and second centuries, as afterwards. When inspiration ceased in the Church, which was at the death of the apostles of Christ and their contemporaries, a diversity of opinion prevailed. There were no oracles to decide except the written documents of the first teachers. These would be sufficient, if men appealed to them, and consulted them without prejudices. But that would be to expect more than we have a right to expect from human nature. Men listened to their imaginations and formed theories of their own, and then went to the Bible for a confirmation of them. They seldom read the sacred volume to search for truth, or to attain its true meaning, with a resolution to follow and obey. Had they done so, there would be far less of differences of opinions than there now are among Christians.

But while there are differences among the various sects of Christians, on minor points of faith, or the ceremonies of religion, it is a fact that most of them substantially agree on all important subjects. If there are some sects, which substitute forms and rites for vital piety and personal religion, and some which deny all future retribution, it must be acknowledged, "that they teach for doctrines the commandments of men," or "preach another gospel" entirely. But most sects agree in the fundamental and essential doctrines of Christianity; while they profess faith in Christ, as their divine "master and Lord," they believe in the moral government and providence of God, that repentance and holiness are necessary; and that there is a judgment to come, when all will be treated according to their conduct and character in this life. Differences on many subjects are to be expected; nor are they very important. They are not the silver and gold of the building, but the hay and stubble; and the latter may be burnt up, while the former shall abide. To the law and the testimony, then, let us apply; and the study will do us no injury. We shall find a fitness, and a power, which will influence and convince the heart, and overcome all the subtle objections of ingenious skeptics. We shall then be not only almost, but altogether Christians. And charity for others will be the prominent sentiment of our minds.

MANUAL LABOR SCHOOLS.

We introduced this subject in a former number, and referred to institutions of this kind in the United States. We have lately read the report of a board of visitors after an examination of a manual labor school, which is established at Macon in Georgia, under the patronage of a Methodist Conference. In this report, it is stated, as the unanimous opinion of the board, three of whom had been several years engaged in the instruction of youth, "that the advancements of the pupils in their literary studies had been *fully as great*, as in those seminaries where no manual labor was required." The connection of manual labor with the literary and scientific exercises of the student, is a principle lying at the foundation of the institution. And the visitors express the opinion, that its organization affords the best means of preserving the health and invigorating the character of youth, both physically and mentally, as well as being the cheapest mode of education. The only motive, however, in entering such a school should not be economy; but the conviction, that it is the surest way to health, sobriety, and usefulness, should have a strong influence. We believe seminaries of a similar kind will soon multiply in this great republic. For they are peculiarly republican in their character and tendency. The superintendent sustains the character of *pastor;* and there is perfect order and sobriety in the school. The pupils appear cheerful and happy, their health is good, and their labor is deemed a pleasant recreation.

CAUSES OF SOCIAL EVILS.

The population, the knowledge and the wealth of the United States have increased in a very great and astonishing degree within the last half century. And compared to the state of the country before the Revolution, the difference will appear still greater. But it is an important question, whether we are much more virtuous, orderly and happy than at the former periods. And, if the people are not improved, as might have been expected, nor in proportion to their privileges, it is an interesting inquiry, what are the causes of failure, what are the hindrances to public and private virtue. Disorders and crimes might, perhaps, have been expected to be more frequent or more numerous, with a population of fourteen millions, than with three, if no means were used to prevent them. But with mild laws, a full measure of freedom, and liberal means for disseminating useful knowledge, it was predicted, that we should continue a sober, peaceable and virtuous

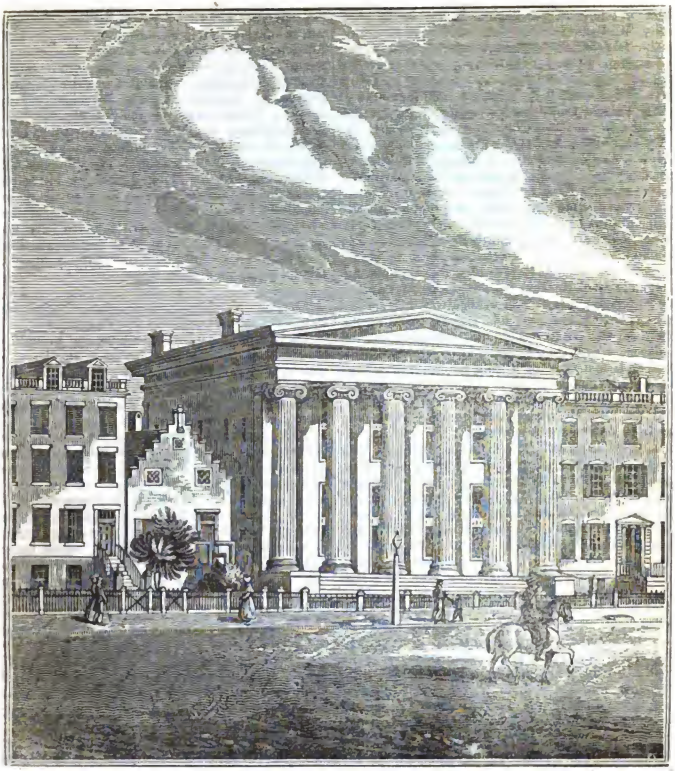
people, notwithstanding the great increase of numbers. History, however, does not fully confirm the favorable predictions. Nor do we see reason to assign, as the only cause of the failure of former pleasant anticipations, the emigrations into the country, from foreign nations. No doubt this is one cause, or may justly be referred to, as accounting in part, for our disappointment of the propitious social results expected. But we fear there is some error or defect in the education of the young. We speak not of the literary part of education, but of moral; and it seems as if there was a great defect, as to parental instruction, government and example, as to teaching social and relative duties, and as to the necessity of subordination, and reverence for laws duly and deliberately enacted.

Family discipline and instruction, we fear, are now far less regarded by parents than formerly. But here the education must begin. Here must be government, submission, order and good feelings, or we shall expect them in vain in society. The young must obey, and listen to, and be restrained by, their parents; and they must learn that the middle aged and the still more advanced in life, have experience and *practical* knowledge, which entitle them to advise, to control, and to direct. But now young men or women of twenty know more and better than their parents, and undertake to be the dictators and instructers of those older and much wiser than themselves. This is a great error; and should be corrected. Nor is it uncommon to find quite young men who assume to know more of the nature and design of civil government, of the social duties, and of the great principles of constitutional liberty than men of fifty and sixty, who know fully from observation the bearing and tendency, as well as the direct effect of the laws; the measure of liberty the people will bear, and the necessity of a fair and impartial administration of government, founded by the majority after a cool and deliberate examination. There is no *short* and *safe* road to justice, other than that pointed out by the constitution and the laws. Summary proceedings, by a party, or a mob, and setting aside the usual forms of law, are always dangerous, and usually unjust and cruel. Suspicion is the informer, and prejudice and passion are the judges and jurors. The innocent are liable to suffer. The first violators of law and peace, may soon become the victims of lawless violence. And often (it would seem, we speak with reverence) the retributions of heaven are speedily awarded to the authors of violence and of reckless vengeance towards others.

With every good citizen and true patriot it is time for deep reflection, as to a remedy, or a preventive of such evils.

STEPHEN GIRARD.

Mr. Girard, who died at Philadelphia in 1831, was a singular character, and celebrated chiefly for his great estate and the appropriation of it, at his death for the purposes of education and charity. He was a native of France, and his parents were in humble life. He was born in 1750. He was an illiterate but a very shrewd man. He never acquired a sufficient knowledge of the English language to speak it with correctness and ease; but his good sense and sagacity were a substitute, so far at least as the acquisition of property was concerned. His conduct was very exemplary even in his youth, and he was noted for industry and fidelity. He went to the West Indies as a cabin boy, at the age of eleven or twelve; and afterwards sailed from New York in the same capacity. The captain and owner of the vessel in which he early sailed was pleased with his deportment, and soon gave him command of a small vessel. By economy and prudence he accumulated property to enable him to purchase part of a vessel, before he was twenty years old. He then settled in Philadelphia, where he resided, and followed the trade of a grocer for several years. But about 1780, he engaged in trade to the West Indies, and soon acquired considerable property. And afterwards he was concerned in commercial enterprises to India. Having thus acquired a capital, he gave his attention to the banking business, which occupied him till his death, at the age of eighty. He is represented as being rather morose in disposition and rough in deportment; and yet he was attentive to the sick and destitute. He is said to have made an unfavorable impression on strangers. His appearance was that of an illiterate and vulgar man; and he most resembled a common sailor. A defect in one of his eyes and his homely dress, served to render him almost an object of contempt: it certainly gave him no claims to admiration or the usual respect paid from one citizen to another. He had little conversation except on business, and then was quite laconic. His passions were strong, and he often indulged in paroxysms of anger; and yet occasionally discovered kind feelings towards his neighbors and domestics. He was an early riser, and had regular hours for business, which were not a few. The amount of property he left at his decease was estimated at eleven or twelve millions; the largest probably of any individual in the country. It was devised in the following manner: to the Pennsylvania Hospital, an annuity of $30,000; to the institution for the deaf and dumb in that state, $20,000; to the orphan asylum of Philadelphia, $10,000; to the controllers of the public schools of that city, $10,000; the interest of $10,000 for fuel for the poor; to the society of ship-masters, for the relief of distressed masters, their widows and children, $10,000; to the grand lodge of Pennsylvania, $20,000; to a school for poor white children in Passayunk, where his farm was situated, $6,000; legacies to individuals, $120,000; to the city of New Orleans, several large tracts of land in Louisiana; 207,000 acres of wild land to that city and Philadelphia, valued at $500,000; to the city of Philadelphia also, stock in the Schuylkill Navigation Company, of the value of $110,000; for building and endowing a college, for poor white male orphans, $2,000,000, besides an additional amount from the residuary fund; $500,000 for improvements in the city, the interest only to be annually expended; $300,000 to the State of Pennsylvania for internal improvements; and the residue, being $8,000,000, in aid of the college, if needed, improvements in the city, and the relief of taxes.



THE NEW FEMALE ACADEMY IN ALBANY

It is one of our most pleasant editorial duties to refer to "the signs of the times," as to places and means of education. Professing to love our country, and to take an interest in the cause of human improvement, we rejoice to hear of, and to notice any new associations for promoting knowledge among the youth of our country. It is matter of joy too, that so much attention is now given to female education; thus providing for the elevation of the female character, and the increase of female influence in society. The character of woman in America, in the next generation, will be of a higher order, as to intellectual power; and therefore probably higher in a moral aspect. As mothers give the direction to the youthful mind, morals and manners, we may justly expect the next generation will be better directed, better informed and better disciplined, than the last or the present. Human learning alone is not, indeed, all-sufficient; but its tendency is favourable to self-respect and self-government; to decent and honourable conduct: And now that attention is given in our public schools and academies, to the morals of the pupils, we may justly hope for the most beneficial results. Not only is the moral conduct noticed in academies, but a religious education is given; or rather some religious instruction is given, so as to lay an early foundation for the individual to form a religious character. And all besides is defective; we had almost said, is farcical. Every individual must have something to do, the chief to do, in forming a religious character. Otherwise, he can hardly be said to have a religious

character; nor will it, such as it may be in prosperity, or in profession, much avail him in adversity, in the trials and cares and troubles of the world. We are not in favour of teaching the particular tenets, or ceremonies of this or that sect; but it is quite another thing to inculcate on the minds of youth, the great and essential truths of the gospel, in which all classes of Christians agree.

By the address delivered at the opening of the "New Female Academy in Albany," it appears, that the "School was founded in 1814, and that it had so much increased in 1833, it was determined to erect a large building for the purpose, which was finished in the early part of last year." It is situated on the west side of North Pearl Street. The Baptist Church, lately erected on the same street, and near the Academy, is also an elegant building, and adds much to the appearance of that part of this flourishing city. The Academy is a beautiful and classical edifice, and reflects great credit on the taste, as well as liberality and enterprise of the Trustees. The central and elevated situation is favourable to a view of it from the opposite side of the river. The building is seventy-seven feet by sixty-five, including the portico; and the height, fifty-five feet, containing four stories. These stories have sixteen spacious rooms, with spacious entries and stair-cases. The front is ornamented with a beautiful *Hexastyle* portico, of the Ionic order, which, for taste in arrangement and fine effect, is said not to be surpassed by any in this country. The temple of *Illissus*, one of the finest examples of the Ionic, among the remains of antiquity, furnished the proportions of the columns, capitals, bases, and entablature. The columns are forty feet, the bold and lofty entablature, and the elevation of the colonnade, which is supported by a flight of six steps of marble—all give a majesty and effect to the front of the building, which can hardly be duly appreciated, except by careful examination. The front windows are so arranged, dividing the front into two stories instead of four, as to excite particular notice. A bold well-constructed staircase, ascending to the fourth story, is presented immediately on entering the lower hall; and though destitute of all fantastic ornament, will be admired on account of its convenience and strength, and the durable quality of the materials of which it is constructed.

The studies pursued at the Academy, are similar to those acquired in most other high schools, for the education of young ladies. We observe, that "a gold medal is to be awarded to the best scholar in mathematics." We doubt, whether this branch of science should be pressed upon females, or whether any particular inducement should be held out to them to excel in it. Other studies are more congenial to their character, and better calculated to render them useful as well as ornamental, to society.

The institution is divided into six departments, exclusive of the classes composed of those scholars, from each of the higher departments, who are pursuing the study of the French and Spanish languages, natural history, chemistry and botany. There is a boarding house in the vicinity of the Academy, under the immediate direction of the principal; and the expense incurred by a young lady, for board and tuition, including all the studies taught at the Academy, does not exceed $200. Music may be attended to, as well as other ornamental branches of female education. There is an extra charge for French, or Spanish, and also, for chemistry and botany. Judge *Kent* was one of the founders of this Academy, and several years president of the board of trustees. The studies required, appear very appropriate for females: The principal, Mr. *Crittenton*, has had long experience in teaching young ladies, and is recommended as every way qualified for the important trust he has undertaken. The proficiency of the pupils, hitherto have been such as to satisfy the trustees and their parents, that the teacher is very able, and happily fitted for the duties imposed upon him.

The Rev. Mr. Heckewelder relates the following fact of the influence of rum upon an Indian:

"An Indian who had been born and brought up at Minisink, near the Delaware Water Gap, told me, near fifty years ago, that he had once, under the influence of strong liquor, killed the best Indian friend he had, fancying him to be his worst avowed enemy.

"He said that the deception was complete, and that while intoxicated, the face of his friend presented to his eyes all the features of the man with whom he was in a state of hostility.

"It is impossible to express the horror with which he was struck, when he awoke from that delusion; he was so shocked that he resolved never more to taste of the maddening poison, of which he was convinced the devil was the inventor; for it could only be the evil spirit who made him see his enemy when his friend was before him, and produced so strong a delusion on his bewildered senses.

"From that time until his death, which happened thirty years afterwards, he never drank a drop of ardent spirit, which he always called "The Devil's Blood," and was firmly persuaded that the devil, or some of the infernal spirits, had a hand in preparing it."

The celebrated John Milton sold his Paradise Lost in 1667, to a printer for five pounds in hand, with a promise of five pounds at the end of the sale of each edition, which was not to exceed 1300 copies. This is the first recorded or authenticated instance of the sale of a copy-right, by previous agreement, of an original work. What is remarkable also, as to this celebrated poem, the first edition was not all sold during seven years, from its publication. The second five pounds was received by the author himself; and this was all the family realized for the work, except eight pounds received by his widow in 1680, for relinquishing all right to the work for herself and children. So unjust is the popular opinion, so precarious public taste!

Cardinal Bellamine, who was esteemed a very learned man, who lived in the sixteenth century, and wrote largely in defence of the Roman Catholic faith, exhibited proof of the influence of superstition, in ***bequeathing half his soul to Christ, and half to the Virgin Mary.***

THE DAILY AND WEEKLY PRESS.

The benefit of well-conducted newspapers are fully seen and acknowledged. They are circulated through all grades and classes of people in the community, and give useful and important information on various subjects. In a free government, like ours, where the people are the source of political power, and give a tone to public measures, and appoint or elect all who are in authority, it is indispensible to a wise choice, to just and equal laws, and to an impartial administration of public affairs, that the citizens be kept advised of events and measures which concern the common weal. The newspapers, commonly so called, are also read by the young, whose minds and habits are just forming, and who have a great curiosity to learn facts which occur, and opinions which are entertained in the world, and especially in their own country.

The press by these means, possesses and exercises an immense power, "for good or for evil." Like the lever of Archimedes, it can move the world: the world of mind. Its past influence has undoubtedly been for good, for great and extensive good: and yet not for *unmixed* good. In the hands of the visionary, the enthusiastic, the reckless leveller or radical, the licentious, the irreligious and the skeptical, the press has done much mischief, and spread error and corruption far and wide. Still, it is not to be condemned for this, which is its abuse and perversion. By proper efforts and honest designs, truth and knowledge have also been extended. If error has abounded, by this means, truth has much more abounded. The progress of society has been onward, wherever there has been a free press maintained and encouraged. It has chased away much darkness from the civilized parts of the world, and spread light and knowledge in our path. Let no tyrant's, no fanatic's hand, then, be raised against the press.

But the press must be well conducted; it must be *regulated*; it must be the distributer of truth, not of error; it must aim to enlighten, to calm and to moderate, and not to mislead, to excite and to inflame the mind of the people. What is the fact, on this highly important point? Are there not some young men, who conduct public journals, and who are not so deeply sensible of their responsibility as they should be? Are they sufficiently careful to give only the truth, to avoid all mistatements and misrepresentations, all party excitements, and all personal abuse? Do they endeavor to obtain fully, and to state clearly and fairly, the opinions of those from whom they differ? Do they understand the principles of their patriotic ancestors, who were not only the zealous advocates of civil liberty, but the firm supporters of law and order? Our fathers were equally the friends of law and of freedom; and the former they always contended, could not be preserved without the latter. And when a government was formed and laws made by the people, and the agents of the people, as in this country, that they must be supported; and that it was a political and social crime of the greatest enormity and most dangerous tendency, to oppose such government and violate such laws by force and violence. Is there now a proper spirit abroad in the community, on this subject? We fear not. Few indeed, can be found to advocate violent and forcible opposition to government; but is there not in some a readiness to palliate excesses in certain cases; or a disregard of consequences, almost as dangerous as direct opposition? Those editors of newspapers, who expect to give the tone to public sentiment and feeling, or wish to be respected and have an influence with the sober and well informed in the community, must be alike intelligent and discreet, impartial and judicious. And some of them might do well to look a little deeper into the writings of the patriots of the Revolution, and of the framers and early advocates of the Federal Constitution. There will, indeed, be parties among us, and most men will arrange themselves under this or that great leader. But let them regard constitutional principles, even in political disputes and contests; and exercise candor and courtesy toward party opponents. This may be said to be a hard duty, but it is an important duty; and if faithfully discharged, great good will come of it, to the people and to the Republic. It will serve to prevent violence among the former, and to stay the overthrow of the latter. Every editor wishes to strengthen and advance his own cause; but this will not be effected by hard words and abusive epithets and mistatements of his opponents. Every one is desirous of communicating intelligence; but to record mere reports, which affect an individual or a party, and afterwards when they are found to be false, declining to retract or apologise; or to deal out all the slander, and all the licentious stories in circulation, when the good of society does not demand it; all this is improper, is morally wrong, is mischeivous.

THE FUTURE HOPES OF OUR COUNTRY.

Amidst the gloomy forebodings of the timid, and the temporary alarms of panic-makers, there is good cause for cheerful anticipations and joyful hopes, as to the future destiny of our beloved country. There is still an avowed, and we trust a sincere reverence for the Constitution: there is a strong attachment to equal rights and civil liberty; though party feelings may sometimes misconstrue the former, and disregard the latter. There is an increasing respect for religion and for religious institutions, though a few skeptics and infidels occasionally appear. And there is everywhere a strong conviction of the importance of early instruction and education for all classes. Academies and schools are multiplying in all the new settlements, and in most if not all the States the law requires that the young be taught at the public expense. This indeed, does not actually insure virtue and order through the country; but it will be favorable, highly favorable to such an auspicious result. A good education has been proved to be a great preventive of crime, and encouragement to decency and pure morals. Much will still depend on the conduct and example of the middle aged; and more on the inculcation of the plain and practical doctrines of religion, in which all sects of Christians agree, and without which professions of faith and mysterious dogmas will be comparatively inefficient.

There is no other way to chasten ambition and to restrain vice and crime, to render men peaceable and good citizens, submissive to the laws, and correct in private life: while at the same time, the christian doctrines are evidently favorable to an equality of men in society, and lead to all that is just, true, pure, kind, honorable, and truly virtuous. Why then are there not good causes of hope for the continued prosperity of the Republic? The interested alarmists, and the morbidly discontented, should be rather frowned upon than encouraged. They do an injury to the cause of social order, and increase the complaints of the people without any corresponding benefit. But *apathy* may be equally dangerous. This is the opposite *extreme*, and certainly not to be commended in a free government. Watchfulness of rulers is the price we must always pay for political liberty. The Republic cannot be preserved without it. Power is grasping and corrupting. So our fathers thought, and so they taught, and therefore formed rules and restraints on those in office. Let their opinions and advice, the fruits of wisdom and experience, influence us, and our posterity; and then true liberty will have a resting place in our land.

TIDES.

We have already published several articles on the tides of the ocean; but the subject just now excites more than common attention in Europe; and we therefore publish these remarks, furnished by one of our obliging correspondents.

The ebbing and flowing of the sea is ascribed by philosophers to two causes, producing a union of forces, operating in different and transverse directions. These are the motion of the earth which combined with and controlled by its attraction and gravitation, produces one force; and the power of the sun and moon by their like attraction, which furnishes another force, acting in a direction transverse to the direction of the other forces.

If the earth remained at rest, and no external force was in action on its surface, to disturb the waters covering it, the water would be held still in its place by the attraction of gravitation. The motion of the earth on its axis would leave the water behind, being held back by the attraction toward the centre, as is well known to all in the familiar example of the forward motion of a horse or carriage which, unless it is anticipated by a person in the carriage, or on the horse, will throw him back, in relation to the moving body, while in relation to actual position he remains in his place. This diurnal revolution, and the disturbance thereby of the water, is not supposed to be one of the direct forces producing the tides. But it is considered that the action thereby communicated is that of undulation. If it were the cause of any removal of the water from place to place, the motion of the earth being always in one direction, the change of the water would be, in relation to the earth always in another direction, and its motion would be constant, like the running of a river, not alternate, like the actual flow of the sea. This alternate motion is referred more directly to the attraction of the sun and moon; or more correctly, to the inequalities of this attraction. Of these forces the principal is that proceeding from the moon, her distance from the earth being much less than that of the sun. The attraction of the moon is therefore, (as her force is greater in producing the tides than all the others,) the one to which the ebbing and flowing of the sea is generally ascribed. The consequence of the action of these several forces, is to collect the water into the form of a spheroid, having two elevations at opposite sides of the space, and two depressions at right angles to those elevations, or two high and two low tides on the surface of the earth. The line passing through the elevations, or the line of direction of high water, will not be directly under the moon, as it would if the earth were at rest, but will be directed to a point about 30° east of the moon. This is supposed to be in consequence of the inertia of the body of water by which, (when put in motion,) the motion is continued after the impulse given to it has ceased. There will be therefore on the surface of the globe a meridian, about 30° eastward of the moon, where it is always high water, and another opposite meridian where it is also high. On the west of the meridian, or following the motion of the moon, the tide is flowing, on the east is ebbing. On the two meridians, at right angles to these, and opposite to each other, it will be low water. Thus, if we suppose the sun and moon to be in the equator, and an observer to be situated on the surface of the water under the equator, when the moon has risen 30° above his horizon, the state of tide to him will be low water, it being high in the horizon. As the moon advances toward the point of the zenith to the spectator, the tide flows, and when she has reached a point 30° west of his zenith, it is then high water to him. As the moon nears the western horizon, the point of high water being still 30° eastward of her, the tide is ebbing to the spectator, and when she has descended 30° below the horizon it is low to him, being high at the horizon. And the same process being repeated as the moon passes around on the other side of the earth, there will be two tides of flood and ebb in one of her revolution, or in 24 h. 50 m.

At new and full moon, the action of the sun and moon is combined, and the tide will rise higher than usual, and consequently, will also sink lower at the ebb, or at right angles to the high water. When the moon is in her quarter, the sun and moon counteract each other in their influence on the water, and the effect on the tides will be the reverse of that at new and full moon, the flood tides not rising so high, and the ebb not sinking so low. The first are called *spring* tides, the last *reap*. These will not be the first tides after the conjunction and opposition, for the same cause that the high tide will not be when the moon is on that meridian where the tide happens; that is, the inertia of the body of water; but will be at about the third tide after. The effect of the action of the sun and moon on the tides will also be modified by the approach and recession of those bodies, in their orbits, to the earth. And these motions of the tides will be found to be also somewhat modified by the latitude of observation, and to be subject to eccentri-

cities produced by the obstruction of islands and continents, by the debouching of rivers, by the currents of the ocean, and by the winds.

The tides, in narrow seas and on shores at a distance from the main body of the ocean, are supposed not to be produced in those places by the causes above-mentioned, but to be propagated from the undulation of the mass of the ocean in its tides. These secondary or derived tides, or undulations will therefore not be found to conform to the general theory of the tide, but will vary according to the place in which they are, the effect of the impulse communicated to them by the general mass of waters, being more or less, as they are removed from it, or as they are pent up in narrow channels.

The inequalities in the bottom of the ocean may affect the velocity as well as height of tides, by causing the water to rush to a certain place, where being suddenly checked, it is accumulated in an extraordinary degree. This is the case in the Bay of Fundy. The Atlantic setting in obliquely on the coast of North America, seems to range along it in a channel, gradually narrowing till it is stopped in the Bay of Fundy, and becomes accumulated, as it approaches, with prodigious noise, in one vast wave seen at a distance of thirty miles, and the waters rising upwards of a *hundred feet* in the harbor of Annapolis, with such rapidity as to overtake animals feeding on the shore. W.

SABBATH SONNET.

COMPOSED BY MRS. HEMANS A FEW DAYS BEFORE HER DEATH, AND ADDRESSED TO A BROTHER.

How many blessed groups this hour are bending
Thro' England's primrose meadow paths their way
T'wards spire and tower, 'midst shadowy elms ascending
Whence the sweet chimes proclaim their hallow'd day.
The halls, from old heroic ages gray,
Pour their fair children forth; and hamlets low,
With whose thick orchard-blooms the soft winds play,
Send out their inmates in a happy flow,
Like a free vernal stream—I may not tread
With them these pathways; to the feverish bed
Of sickness bound; yet, O my God, I bless
Thy mercy, who with sabbath peace hath filled
My chastened heart, and all its throbbing still'd
To one deep calm of lowliest thankfulness.

BOOK MAKING.

There is a great disposition with the young men of the present age, for book-making. Some good probably, has resulted from this ambitious feeling; but it may become an evil, or a misfortune, unless, in some degree regulated or restrained. A great portion of the works which are now issued from the press, are of little value, except to satisfy a curiosity for small things. They give no new views, no new events of importance; and advance no principles not fully stated and understood before. The histories of towns, and biographies of ordinary men, which dwell on minute occurrences, and narrate circumstances of no interest except to a few individuals or a small village, are of this class; and they serve neither to elevate our views, to develope better principles, nor to add to the fund of useful information. The town records may be consulted by the inhabitants who are interested in them; and may be valuable to a family as it settles the question of the age of our grandfather or aunts, or cousins. The history of Lynn or of Hingham are well enough in their place; but it is not very creditable to our taste or intellect to speak of them as important as Marshall's History of the United States, or Spark's Life of Washington. Then there is the life of Black Hawk an Indian warrior, and of Richard M. Johnson the *reputed* victor of Tecumseh, extolled in certain papers, as among the greatest heroes of the age, and worthy of *all eulogy* for the most common traits of character. We shall probably soon be favored with the life of Mrs. Royall and Mr. T. Hewes; to tell us where they were born, and how old they were when they first went to school: who taught them to write, and what gave them so much importance. What others may think I know not, but in my opinion, the life of Edmund Kean or the Journal of Mrs. F. B. Pierce are not a whit better, for the perusal of the young, whose time should be given to the study of solid works, or to other reading, which would tend rather to improve than to corrupt their manners; and would chasten rather than vitiate their taste. C. D.

THE STATE OF OHIO.

The increase of the population, and the extent of the new settlements in the territory of the United States during the last fifty years have been often mentioned as great beyond any former example in history. The eight years' war of the Revolution operated as a check on the natural growth of the country; and the heavy debt arising from that war, and the distress and despondence which succeeded for several years, served to prevent that enterprise for new settlements, which would have been natural to expect under other circumstances. But in 1787 and 1788, that spirit, which peopled the vacant territory of the west, was manifested in various parts of the thirteen original States: and the enterprising people of the New England section were early and actively engaged in the design. The settlement of Ohio was began at this period, (April, 1788) and the first adventurers were chiefly from Massachusetts, New Hampshire and Connecticut, under the auspices of General Rufus Putnam, then of Rutland, in the former State. They were soon joined by some families from New Jersey and Virginia. He projected a settlement in the western country, as early as June 1783, before the Continental army was disbanded on the return of peace: several other officers of the Massachusetts line joined with him in the project. They requested Gen. Washington to intercede with Congress on the subject, at that time; and he urged the matter on the consideration of that Body; but, the north western territory had not then been ceded to the United States by the several States, which laid claim to parts of it, and nothing could be safely and prudently done by Congress. But before the year 1788, the cession had been made, and Congress undertook to exercise authority over the territory. Ohio was included within it; and in April of that year, General Rufus Putnam and others, the pioneers of that State, began the settlement of Marietta, near the confluence of the rivers Ohio and Musk-

inghum. It was soon perceived, however, that the site of Cincinnati, lower down the river by nearly two hundred miles, possessed far superior advantages for business; that place was soon after settled, and has increased with a rapidity scarcely imagined by the most enthusiastic admirer of the West.

Ohio became a separate State and was admitted into the Union in 1802; and it now contains a population of more than a million: nearly equal to Massachusetts and Maine. Cincinnati contains thirty thousand inhabitants, and is rapidly increasing; while Marietta has been almost stationary for twenty years past. Besides the Muskinghum, the Ohio River is aided (within the State) by the Scioto and the Miami. The Muskinghum, which rises in the northeast part of the State, is connected by a canal with Lake Erie, which bounds the northern part. The means of education are extensive, and are designed for the benefit of all classes; and there are, besides common schools, and several academies, *seven* collegiate institutions, or seminaries which rank with colleges. Where there are so many, it is presumed several of them must be quite limited in their funds and teachers.

Ohio was formerly the habitation of several large tribes of the red men; Logan and Tecumseh were natives or residents of that territory. And, since its settlement by the Anglo-Americans, it can justly boast of some eminent statesmen; of whom General William H. Harrison and Judge M'Lean, are the most distinguished. General Harrison was some time Governor of the North West Territory; afterwards, commander of the military forces of the United States in that section of the country; and then several years a Senator in Congress, where he had credit for talents, candor and patriotism. Though he has been a "military chieftain," he has eminent qualities for civil office. If he is brave, and ready to go forth in defence of his country, when the government called on him, unlike most other military men, he never lost the character of citizen in that of a soldier. He has always recognised that sound and fundamental maxim of the stern republican and patriot, Samuel Adams, "that the military should always be subject to the civil." General Harrison is said to be the idol of all parties in the West, and they have even proposed him for the office of President of the United States. Though, as an individual citizen, there is no wish to disguise an honest opinion, and no fear to express it, on proper occasions, it may not be decorous or useful to give it here. And yet having long known his character and noticed his political course, there is no hesitation in avowing the belief, that if General Harrison should be elected to that high office, he would administer the Federal Government with all the prudence and impartiality of Mr. Monroe, we had almost said of General Washington; and that the interests of the Republic would be safe in his hands: but, at the same time, we are equally ready to declare, that there are some other names before the people, who are not less able and patriotic; and that the bright STAR *in the east* cannot be obscured by the splendour of any other in the hemisphere.

THE DUTY OF A GOOD CITIZEN.

A sense of the obligations due to our fathers, for their efforts, sacrifices and sufferings, in the great struggle for civil liberty sixty years ago, and of the duty resting upon us to transmit our social privileges to posterity, should be strongly impressed on the mind of every American citizen. A reference to the former will serve to prove the value of our blessings, by showing the price at which they were purchased; and will also strengthen the conviction of our duty to perpetuate so great a benefit. The trust is solemn, the responsibility is great.

Political liberty was highly valued by our fathers; or they never would have made such exertions and sacrifices as they cheerfully did. The extent of their struggles can hardly be estimated. They taxed themselves to the utmost; they contributed a great portion of their income and their estate, in support of the glorious cause. They gave up articles of comfort for the relief of the suffering and destitute soldier; "nor did they count their lives dear to them," whenever called to expose themselves personally in defence of their country. Let us cherish a recollection of their sufferings, to excite our gratitude for their invaluable services, and to deepen our sense of the blessings which they secured for us. The effect of such recollection will not fail to invigorate our resolution of aiding in the preservation of these privileges. We cannot, surely, reflect on their struggles and sacrifices, without perceiving the magnitude of the prize contended for, and striving to follow out their generous purposes of preserving the liberties of America. Our fathers acted well and faithfully their part. We cannot justly charge them with inactivity or want of ardour in the noble cause. If liberty is lost, the fault will be ours, or our children's.

But how is our duty to be discharged? How are the blessings of civil liberty to be preserved and perpetuated? By maintaining the institutions and cherishing the principles of our fathers; by disseminating useful knowledge, and extending the means of education; by regarding the provisions of the Constitution; and by setting an example of public and private virtue. To our republican institutions, which recognise and support equal rights among the people, we are indebted for the enjoyment of civil freedom, in times past; and we can enjoy it, for the future, only in so far as we maintain them in their purity. Elections must be frequent; and every attempt to control them, by menaces on the one hand, or promise of office on the other, must be severely censured and reprobated. The people should be well informed; and appeals be made to their reason rather than to their passions. Those who conduct public journals, whether daily, weekly or monthly, should be impartial, patriotic and well informed. If the press does not become more faithful, more decent, more independent, and more impartial, it will before long be a question, whether its freedom is a blessing or a curse. And political partisans, whether writers or speakers, must learn to respect the opinions of others, to believe men may be honest who differ from them, and to wield the weapons of fair argument and unexaggerated

statements, rather than misrepresentation, slander and falsehood. A good cause never loses any thing by candor towards an opponent, or by the moderation of its friends, in contending for its support. An erroneous system may be advocated in a mild spirit; and a correct one, by a bad spirit; and more is the pity, that truth should suffer by the imprudence of its followers. On a fair statement, made with a candid temper, the honest part of the community will always confidently rest their opinion, and their suffrages will follow of course. Equally important is it, in preserving our civil and political privileges, that the Constitution, prepared by wise and disinterested patriots and zealous advocates for liberty, be strictly and honestly regarded. If this charter of our rights may be violated, or its provisions set at nought, then we have no security for the continuance of social and political freedom, and no sure preventive against despotism and tyranny. If the power of rulers is not limited, if they are not as much bound by the Constitution, as the people are by the laws, then is our boasted republican liberty without guards sufficient for its safety, and without pillars strong enough to uphold it. The Constitution, then, should be the watchword with the people, and the whole people. A sacred regard for the Constitution, in rulers as well as in the common citizens. It should be an indispensable qualification in every candidate for office, and especially for a seat in the legislature, that he understands, and reveres, and will support the Constitution. We must often recur to it, and study it, and inquire into the opinions and views of those who framed it; and maintain it at every sacrifice and every hazard; we must endeavour to preserve it in its purity, without reference to party measures, sectional views, or to men in power, whether our political friends or opponents. If this is not done, we shall fail in gratitude to our fathers, and in our duty to posterity. B.

MOUNT ARARAT, AND THE EARLY ABODE OF NOAH AND HIS DESCENDANTS.

In the opinion of the most learned among the moderns, Mount Ararat, where the ark of Noah rested, after the deluge, was in Armenia, or Thibet, and between 90° and 100° E. long. and between 30° and 35° north lat. north of Hindostan and Persia, west of the river Indus and of central Asia, and east of Mesopotamia and of the Caspian Sea. This is a temperate clime, and favorable to health and long life, as well as to the pursuits of the shepherd and the agriculturist. The Ararat, the Caucacus, and the Taurus are connected, and form almost one group or range, extending a great distance from what is usually called Asia Minor, to India.

The Indian and Hindoo traditions of the earliest times point to Noah and the Deluge; and they claim to be the descendants of that patriarch. Noah and his sons would not long remain on the mountain where the ark rested, on the subsiding of the waters. They advanced no doubt, to the south, to a milder climate and a more champaign country. In the fourth generation, or one hundred and fifty years from the deluge, they removed westward, to the plains of Shinar, where they began to construct a building, which should reach to heaven. Dispersed from this place about one hundred and fifty or one hundred and sixty years after the deluge, they went forth, in different companies, east, west, north and south; but most to the south and to the east, as both the face of the country and the climate would invite. Noah lived two hundred years after this event, and probably journeyed east, where traditions relating to the flood, and the safety of a few from that catastrophe have much prevailed. From Noah and his sons would be communicated to their posterity whatever was known by them of antedeluvian discoveries and inventions in the arts of life. These could not have been very small during seventeen hundred years, the duration of the old world, according to the common computation; but at this distance of time, and in the want of early records, no very accurate opinion can be formed as to how great, or what those inventions were. But we may safely conclude, that they were not very great; otherwise the early generations after the deluge would have been more civilized than there is now evidence or reason to believe.

FLY-BOATS.

Boats made of iron with the above name, have been used on canals in Great Britain, since the year 1830. And the experiments have proved very successful. Their speed, or velocity, is from ten to twelve miles an hour; nearly three times greater than that of the travel, as heretofore performed. These boats are constructed of sheet iron; and are from seventy to ninety feet in length, and from seven to nine in width. Those of the above dimensions carry seventy-five or eighty people, and their baggage: And they are drawn by two horses. The form of the boat is that of a *racing-gig*, sharp fore and aft, and intended to pass through the water so as to cause or meet the least resistance. The importance of employing these kind of boats on canals, where the margin will allow of a path, and this is very generally the case, especially in a country nearly level, must be evident. As the canal boats now move, the conveyance in them is avoided by all who wish to travel with speed. For bulky articles, the present mode of conveyance is a less evil.

Several English publications have recommended the more extensive use of Fly-boats, on canals; and some of our public journals have referred to the subject, with the expression of an opinion, that they would be found of great advantage in the United States. Where they have been introduced in Scotland, they have served to add much to the market value of the stock. The first trial, for testing the superiority of these boats over others (especially for passengers,) was on the Androssen and Paisley Canal. The experiments were made with a boat (of the form and kind above-mentioned,) thirty feet in length, with ten men on board, and drawn by one horse two miles in a little less than ten minutes; and little or no surge was raised on the water. Afterward, an experiment was made on the Union Canal, which runs from the Clyde to the Forth, with like good success. The rate of travel or sailing was eleven miles an hour. On one occasion two boats (called twin-boats) were fixed

together; the object of which was to ascertain the effect in giving steadiness to the boats, which it was supposed would be difficult to preserve in one, so long and narrow as they are. By all these experiments, the result was that the *quicker* the boats were propelled through the water, the *less* appearance was there of a surge or wave on the sides of the canal.* There is indeed some little wave; (it is not before but behind the boat;) but it is so slight as not to produce any injury to the banks of the canal.

* This phenomenon was not then first noticed. It may be seen referred to in our last number, page 48.

EXTRACT.

[From the Journal of a late English Traveller in the United States.]

Several persons with whom I conversed, complimented me on the correctness of my language, and seemed to be astonished that an Englishman should speak his mother tongue with propriety: that he should leave the letter h in its right place, and suffer v and w to speak for themselves. One man observed to me, that the grammatical accuracy with which Charles Kemble spoke struck the people on his first arrival at New York as something unusual in one from "the old countrie." We may guess from this what sort of gentry are used to honor the United States with their presence. Many who go there on business, and are distinguished at home for nothing but vulgarity and ignorance, set up for gentlemen, though they have no pretension, or rather are all pretension, and complain that outward appearance is not treated with due respect; as if insolence would be taken for full payment for personal merit any where.

I had but few acquaintances among what may be called the refined classes of society in New York. From the little I saw, however, I was led to conclude that the manners which prevailed in those circles differed no further from those in the corresponding rank among ourselves, than what might be explained by a reference to habits which give a different value in the eyes of each to the connexion between externals and essentials. There is a *natural* good-breeding about an American gentleman that places you at once in a position most congenial to your feelings, and points out to you the exact limits between social freedom and vulgar familiarity. He has, in general, too much respect for himself to treat you with hauteur, to mortify you by an assumption of superiority, or to embarrass a stranger by a display of those conventional forms, which mediocrity has imposed on the spirit of exclusiveness, to shelter its insignificance and protect its privileges.

BATTLE OF TRENTON.

The most critical period in the war of the Revolution, and there were many very critical and alarming, was perhaps in December 1776, when the British army was far more numerous than the American; and when the greater part had served out the term of enlistment and were returning to their homes. The finances of the country were in a low state, and the efforts to raise recruits were without success. The British troops had been augmented in the summer and fall of that year; and amounted to more than twenty thousand. They had command of New Jersey, and there appeared no sufficient obstacle to their taking possession of Philadelphia, or of any place they might chose. General Washington was in the vicinity, with scarcely three thousand men, and the term of service of a part even of these, would expire in a few weeks. The citizens of Philadelphia were in daily expectation of a visit from the British, and they had no adequate force to oppose them. Congress was then in session in that city. They concluded to remove to Annapolis in Maryland. The little American army under Washington could make no defence; it would be desperate to think of it. Yet Washington did think of resistance, and even resolved to act on the offensive. A part of the British troops were at Trenton, and the Americans were on the west side of the Delaware; not presuming as was believed, to attempt an attack, but ready to retreat and hide themselves in the interior whenever pursued. The plan, however, was laid by the Commander in Chief to fall on that division of the enemy at Trenton, which he thought it possible to surprise and perhaps defeat, while the other part of the British army was at a distance; and thus cause them some annoyance and injury, and convince them also that he was not to be discouraged from action by the most untoward events. He saw too, that unless something was then attempted, even without all the success which he hoped, the people would wholly despond, and the enemy become triumphant. It was near the end of December, and the weather was severe. The Delaware must be passed, in order to attack the British; and the ice made the passage extremely difficult. Two detachments indeed, of the Americans were prevented crossing the river on this account. But the troops under the immediate command of Washington effected a passage and marched on directly to attack the enemy at Trenton. Even there, some of the officers failed in their duty, or mistook their orders; but Washington was present in person, to correct errors, and to hasten on the troops to the assault. The daring attempt succeeded, but owing chiefly to his personal efforts on the spot, as well as to his previous regulations. The enemy were checked by this bold attack; and the hearts of the American people, which had been so depressed by gloom, were revived, and animated to new efforts in the cause of liberty. General Washington soon followed up this most seasonable victory, and in a few days marched to the vicinity of the main body of the British, then at Princeton and Brunswick; and there gained other advantages, though he did not venture on a general battle. The enemy thought it best to go into winter quarters; and the Americans had time to collect stores and raise recruits for the opening campaign of 1777.

A Mr. Stone, of the State of Rhode Island, has lately made an important improvement in the *Power-Loom;* and has gone to Manchester, England, with a prospect of obtaining a generous reward for the invention.

THE SECRETARY BIRD.—[Gypogeranus Serpentairus.]

The singular conformation and habits of this (almost anomalous) bird, has rendered it difficult for ornithologists to decide what is its proper genus or class. It is generally considered, however, as being of the vulture family, and it seems to agree in all essential particulars of its organization and features with that tribe. And yet, perhaps it may be said to be of that mixed form, which assimilates in many respects with birds of different genus.

"The Secretary bird has a short, thick and curved beak: the feathers on the back of the head are unequal, but chiefly very long, and are elevated or depressed at the will of the bird; the eye is surrounded by a naked skin; the feet are of uncommon length, but the toes or talons are short: It is upwards of three feet in length. Its general and prevailing colour is a bluish gray, with a shade of reddish brown on the wings. The throat and breast are nearly white, and the rest of the under surface of the body is a mixture of black, red and white. It is indebted for its name to the resemblance of its feathers on the back of the head to the pens frequently stuck behind the ears of clerks and secretaries. Each wing is armed with three rounded long projections, with which, as well as with its feet, the bird attacks and destroys his prey."

We have said that the Secretary most resembles the vulture tribe in many respects; it has also some resemblance to the Eagle: and yet it differs from both, in the kind of prey it seizes, and in the mode of attacking it. It seems to prefer live flesh to carrion, as the Eagle does; and its chief food is snakes and other reptiles, for the destruction of which he is well fitted by nature. His long legs enables him to pursue them over sandy deserts with great speed. When he falls on a snake, he first attacks it with the long prominences of his wings. He seizes it by the tail and mounts to a great height in the air with it, and then drops it to the earth; and this is repeated, till the animal is killed or wearied out. The Secretary bird build on the loftiest trees; and they are usually found in pairs. It is a native of South Africa, and are sometimes very numerous in the vicinity of the Cape of Good Hope. The inhabitants of that region domesticate them: and they are found serviceable in destroying snakes, rats, &c., and it is also reported that they exercise authority in favour of peace, when the domestic birds are engaged in contests with one another.

A work lately published in England, by C. T. Beke, entitled *Origines Biblicæ*, or Researches in Primeval History, is said to contain much important information, as to the early peopling of the earth, and the origin and filiation of the different races of mankind. The attempt is to determine, from the testimony of the sacred Scriptures, the positions of the countries therein mentioned, and the languages spoken by them. To biblical students and lovers of ancient geography, the work must be particularly interesting.

Sir James McIntosh said of Lafayette, "He is modest, pure, undaunted, inflexible, and incorruptible. Experience has not sufficiently enlightened his understanding; but, on the other hand, great calamities have not corrupted nor subdued his character."

JERUSALEM AND ROME.

Jerusalem and Rome are the *two* most ancient cities, of any great extent or population, which have survived the changes and overthrow of nations, to the present time. They are neither of them, indeed, great and magnificent, as they once were. But while other cities, once powerful and populous, have fallen entirely or almost into total decay, and most of them altogether uninhabited, and in ruins, these two places, which are of very ancient origin, still remain with some considerable population, though greatly diminished, both in numbers and wealth, from their former splendour. There were large cities in Chaldea and in Egypt, three thousand years ago, which are now wholly depopulated, or mere shelters for poor vagrants. Jerusalem was a populous city more than three thousand years ago, in the early days of the Jewish Commonwealth. And it still survives the wreck of ages, though in far less extent and wealth than it could boast twenty centuries past.

Rome was founded about seven hundred and fifty years before the christian era; a period which synchronises with the reign of Pekah and Jotham, kings of Israel and Judah, which makes its age more than two thousand five hundred. It soon became a large and populous city; and for three centuries before our era to four centuries after, was queen among the cities and nations of the earth; and its proud writers assumed for it the name of "*the eternal city.*" It still remains a place of great wealth and population; and nothing indicates a failure of the memorable prediction. And yet one may perceive the workings of a secret spirit in society, which will probably lead to changes and revolutions among some of the nations of the old continent, which may result in the overthrow and desolation of places long the seat of wealth and power.

Rome retains more of its former splendour than Jerusalem, and can boast of a far greater population; but the measure of degradation and wretchedness is perhaps no less. The Pope, Cardinals, and other high dignitaries of the church are surrounded with abundance; and they live in luxury, and in every indulgence, which pride and lust can dictate; while the greater portion of the people exhibit all the marks of squalid poverty, moral degradation and extreme suffering.

WINDS.

Within the limits of about 30° on each side of the equator, the motions of the atmosphere are comparatively regular; but beyond these limits, the winds are extremely variable and uncertain, and no theory has been adopted which affords a satisfactory explanation. It appears, however, that beyond the region of the trade-winds, the most frequent movements of the atmosphere are from the southwest, in the north temperate zone, and from the northwest, in the south temperate zone. These southwest and northwest winds of the temperate zones, are probably occasioned in the following manner. In the torrid zone there is a continual ascent of air, which, after rising, must spread itself to the north and south in an opposite direction to the trade-winds below. These upper currents being cooled above, at last descend and mix themselves with the lower air: part of them perhaps, fall again into the trade-winds, and the remainder, pursuing its course toward the poles, occasion the northwest and southwest winds of which mention has been made above. It has also been conjectured that these winds may frequently be caused by a decomposition of the atmosphere toward the poles, from part of the air being at times converted into water.

Hurricanes have been supposed to be of electric origin. A large vacuum is suddenly created in the atmosphere, into which vacuum the surrounding air rushes with immense rapidity, sometimes from opposite points of the compass, spreading the most frightful devastation along its tract, rooting up trees, and levelling houses with the ground. They are not often experienced beyond the tropics, nor nearer the equator than about the tenth degree of latitude: And they rage with the greatest fury, near the tropics, and in the vicinity of islands, while far out in the ocean they very rarely occur. They are most common among the West India Islands, near the coast of Madagascar, the Islands of Mauritius and Bourbon, in the Bay of Bengal, at the changing of the Monsoons, (or trade-winds,) and on the coasts of China.

Whirlwinds often arise from winds blowing among lofty and precipitous mountains, the form of which influences their direction, and occasions gusts to descend with a spiral or whirling motion. They are also frequently caused by two winds meeting each other at an angle, and then turning upon a centre. When two winds thus encounter one another, any cloud, which happens to be between them, is of course condensed and turned rapidly round; and all substances sufficiently light are carried up into the air by the whirling motion which ensues. The action of a whirlwind at sea occasions the curious phenomenon of the water-spout.

The Cow Tree, or a shrub producing a liquid like milk, is found in South America, within the torrid zone. When incisions are made in the trunk or body of the tree, it exudes a glutinous and nourishing milk. Humboldt gives the following account of one. "On the barren flank of a rock grows a tree with coriaceous and dry leaves: but the large roots can scarcely penetrate into the stone or ledge. Not a single shower moistens it for several months of the year. The branches appear dead and dried; but when the trunk is pierced, there flows from it a sweet and nourishing *milk*. It is at the rising of the sun that this vegetable fountain is most abundant. The natives and the blacks are then seen hastening from all quarters, furnished with large bowls to receive the milk, which soon grows yellow and thickens at the surface."

King John of England, who was induced by the threats of the barons to agree to Magna Charta, in the 13th century, gave to one of his subjects several tracts of land in Kent, to be possessed on the tenure that the subject should attend the king whenever he crossed the sea, *and hold up his majesty's head if he was sea-sick.*

DANIEL BOON, THE PIONEER OF KENTUCKY.

The adventures of this remarkable man, as narrated by himself, are very interesting, and display uncommon resolution and courage. We give some of the prominent events and occurrences related by him, which we believe will prove *entertaining* to most of our readers. In May 1769, Colonel Boon, with five others, John Finley, John Stuart, Joseph Holden, James Mooney and William Cool, went from North Carolina, through the wilderness, (entirely such, it then was) in quest of the territory of Kentucky, so called by the Indians, far in the west. They reached Red River in thirty-seven days, after wandering over a *mountainous* wilderness; Finley had been to the place before to trade with the Indians; for the fur trade was then profitable as well as hazardous. From one of the high mountains which they passed over, they had the pleasure to descry the beautiful and extensive level of Kentucky to the west. The party prepared a hut for shelter, and began to hunt and to reconnoitre the territory, in which they found abundance of wild beasts. The buffaloes were more numerous than cattle on the settlements they had left behind; sometimes a hundred in a drove; and about the Salt Springs the numbers were very great. They continued hunting till December with great success. On the 22d of that month, Boon and Stuart wandered from the others to a great distance, and passed a rich variety of trees and flowers; but near the close of the day, as they were ascending a hill, some Indians rushed from a thicket and made them prisoners. They were plundered, and confined seven days, when, taking advantage of the repose of their keepers, during the night, they escaped, and soon found their way back to the camp or hut they had left. But that also was plundered, and their companions dispersed. Shortly after, a brother of Colonel Boon, who had come into the country for hunting and trade, arrived at the camp. The Indians, who were lurking in the neighbourhood, a few weeks subsequently, met Stuart and murdered him. The two brothers remained, however, in this dangerous situation, surrounded by wild beasts and savages. They hunted daily, improved the state of their hut, and thought of their families and their homes, and thus passed away the winter without attack from the natives. On the first of May 1770, the brother returned home, and left Daniel alone, without bread, sugar, salt, a dog or a horse. The object of the brother was to get a recruit of horses and ammunition, and return to the western wilderness. Nature exerted its influence on the solitary adventurer, and he was depressed at the thought of being so distant from a beloved wife and family. "But he wandered through the woods, and the freshness and variety and beauty he beheld, dissipated his gloom. At the close of the day, when the winds were hushed, and all nature seemed preparing for repose, he gained a commanding ridge, and looked around with astonishment and delight, (as he says) on the extensive plains and beauteous tracts below, and in the boundless distance. On one hand, he beheld the famous Ohio, rolling in silent dignity and marking the western boundary of Kentucky with inexpressible grandeur. At a vast distance, he beheld the mountains lift their venerable brows and penetrate the clouds. All things were now still; I kindled a fire near a fountain of sweet water, and feasted on the loin of a buck, which I had killed but a few hours before. The shades of night soon overspread the hemisphere, and the earth seemed to *gasp* after the hovering moisture. My excursion had fatigued my body and amused my mind. I laid me down to sleep, and awoke not till the sun had chased away the darkness of night. I continued this tour; and in a few days explored a considerable part of the country; each succeeding day equally pleased as the first; after which I returned to my camp, which I found undisturbed during my absence. I did not confine my lodging to it, but frequently reposed in thick cane-brakes to avoid the savages, who I believe often visited my camp, but fortunately for me in my absence. No populous city, with all its varieties of commerce and stately structures, could afford so much pleasure to my mind, as the beauties of nature which I found in this wilderness."

The brother joined him near the close of July, when they left the spot where their camp or hut was, and proceeded to Cumberland River, examining the country as they passed, and giving names to some of the larger rivers. Our adventurer returned to his family in March 1771, determined at every hazard to transport them immediately to Kentucky, as he esteemed it a *second Paradise*. September 25th, 1773, having disposed of his farm and other property, except such as was deemed necessary, and could be conveniently transported, Mr. Boon and family bade adieu to their neighbours and friends, and proceeded to the favoured land of Kentucky, with five other families in the company. He was joined also by forty men at Powell's Valley. But trials and sufferings awaited him. On the 10th of October, the rear of the company was attacked by the Indians, and several of them were killed: the oldest son of Colonel Boon was one of the number. This was near Cumberland Mountain, and after they had passed over Powell's and Walden's: and the party was obliged to retreat about forty miles. These high lands are in the wilderness, in the way from the old settlements in Virginia to Kentucky. The party remained near Clench River, to which they had retreated, till July, 1774; when Boon and one Michael Stoner, by request of Governor Dunmore of Virginia, conducted some surveyors to Ohio River, a distance of nearly eight hundred miles, which took upwards of sixty-two days. On his return, Governor Dunmore gave Boon command of three small garrisons, during a campaign against the Shawnese Indians. After this, he undertook to mark out a road from the old settlements through the wilderness to Kentucky. He was attended by several enterprising men, well armed; but was attacked by the Indians near the present site of Boonsborough, and two of the party were killed. This was in March 1775. They were attacked a second time, soon after, when two more were slain. They then proceeded to Kentucky River without opposition. In April, a fort was erected by a salt-lick, and near the river on the south side: In June, Boon returned to his family

at Clench River; and soon removed them to the fort; and he says his wife and daughter were the first white women who had stood on the banks of Kentucky. The company were often menaced by the Indians, and one of the men was killed during the summer. July 1776, one of his daughters and two other young women of the party were captured by the Indians near the fort; he pursued and overtook them on the third day; killed two of the Indians, and recovered the girls. For a year and more, subsequently, the fort was often attacked by the Indians; but in July 1777, twenty-five men joined Boon's company at the fort, and in August one hundred more from Virginia. The fort was now ably defended, and the Indians were less bold and troublesome. They feared the *long-knife*, as they called the Virginians. In February 1778, Colonel Boon, when out hunting, was taken by a large party of Indians who were going to attack the fort. He purchased peace, and the Indians, he says, treated them generously, according to the conditions stipulated. But they carried Boon and other prisoners to Chilicothe, a principal Indian town on the Little Miami; and they suffered severely on the journey, especially by the cold. In March, he with ten others, was carried to Detroit; where, he says, the British Governor Hamilton treated them with great humanity. The Indians became much attached to Colonel Boon, and refused £100 to leave him with the British Governor, who wished to allow his parole. They then conducted him to Chilicothe again. Here he was long detained; and spent his time chiefly in hunting. The Chief of the Shawanese treated him with kindness and favour. He was then taken to the Salt Springs at Sciota. On his return to Chilicothe, he found a large party of Indians ready to march against the fort and settlement of Boonsborough. He became alarmed and was resolved to escape, if possible. This he effected in June, and in four days reached Boonsborough, a distance of one hundred and sixty miles, having only one meal. He found the fort in a bad state; but had it repaired immediately. The Indians kept aloof for some time, but in August the fort was attacked by a party of four hundred and fifty of them, and summoned to surrender. Boon and company resolved to defend themselves, a treaty was made, but the Indians proved treacherous; and again attacked the fortress, but after a few days they desisted and retired: But during the siege, the company suffered very much, and several were wounded by the assailants. The situation of Colonel Boon and his family was extremely hazardous for some years after, and they endured various severe privations. He lost one brother and two sons by the Indians, besides much property, horses, cattle, &c. He thus concludes his narrative,—"Many dark and sleepless nights have I spent, separated from the cheerful society of men, scorched by the summer's sun, and pinched by the winter's cold, an instrument ordained to settle the wilderness."

A General History of English Literature is prepared for publication in England, by D'Israeli, who has already written several volumes respecting authors, their characters, works, &c.

THE LIBERTY OF THE PRESS.

[From Judge Story's Commentaries on the Constitution.]

The next clause of the amendment respects the Liberty of the Press. "Congress shall make no law abridging the freedom of speech, or of the press." That this amendment was intended to secure to every citizen an absolute right to speak, or write, or print, whatever he may please, without any responsibility, public or private, therefore, is a supposition too wild to be indulged in by any rational man. This would be to allow to every citizen a right to destroy, at his pleasure, the reputation, the peace, the property, and even the personal safety of every other citizen. A man might out of mere malice and revenge, accuse another of the most infamous crimes; might excite against him the indignation of all his fellow-citizens by the most atrocious calumnies; might disturb, nay, overturn all his domestic peace, and embitter his parental affections; might inflict the most distressing punishments upon the weak, the timid, and the innocent; might prejudice all a man's civil, and political, and private rights; and might stir up sedition, rebellion, and treason, even against the government itself, in the wantonness of his passions, or the corruption of his heart. Civil society could not go on under such circumstances. Men would then be obliged to resort to private vengeance, to make up for the deficiencies of the law, and assassinations, and savage cruelties, would be perpetrated with all the frequency belonging to barbarous and brutal communities. It is plain, then, that the language of this amendment imports no more, than that every man shall have a right to speak, write and print his opinions upon any subject whatsoever, without any prior restraint, so always, that he does not injure any other person in his rights, person, property or reputation; and so always, that he does not thereby disturb the public peace, or attempt to subvert the government.—It is neither more nor less, than an expansion of the great doctrine, recently brought into operation in the law of libel, that every man shall be at liberty to publish what is true, with good motives and for justifiable ends. And with this reasonable limitation it is not only right in itself, but it is an inestimable privilege in a free government. Without such a limitation, it might become the scourge of the republic, first denouncing the principles of liberty, and then, by rendering the most virtuous patriots odious through the terrors of the press, introducing despotism in its worst form.

A little attention to the history of other countries in other ages will teach us the vast importance of this right. It is notorious, that, even to this day, in some foreign countries it is a crime to speak on any subject, religious, philosophical, or political, what is contrary to the received opinions of the government, or the institutions of the country, however laudable may be the design, and however virtuous may be the motive. Even to animadvert upon the conduct of public men, of rulers, or representatives, in terms of the strictest truth and courtesy, has been, and is deemed, a scandal upon the supposed sanctity of their stations and characters, subjecting the party to grievous punishment. In some countries no works can be printed at all, whether of science, or literature, or philosophy, without the previous approba-

tion of the government; and the press has been shackled, and compelled to speak only in the timid language, which the cringing courtier, or the capricious inquisitor, should license for publication. The Bible itself, the common inheritance not only of Christendom but of the world, has been put exclusively under the controul of government, and not allowed to be seen, or heard, except in a language unknown to the common inhabitants of the country. To publish a translation in the vernacular tongue, has been in former times a flagrant offence. The history of the jurisprudence of England, (the most free and enlightened of all monarchies,) on this subject, will abundantly justify this statement. The art of printing, soon after its introduction, (we are told) was looked upon, as well in England, as in other countries, as merely a matter of state, and subject to the coercion of the crown. It was therefore regulated in England by the King's proclamations, prohibitions, charters of privilege and licenses, and finally by the decrees of the Court of Star Chamber; which limited the number of printers, and of presses, which each should employ, and prohibited new publications, unless previously approved by proper licenses. On the demolition of this odious jurisdiction, in 1651, the Long Parliament of Charles the First, after their rupture with that prince, assumed the same powers, which the Star Chamber exercised, with respect to licensing books; and during the Commonwealth, (such is human frailty and the love of power even in republics!) they issued their ordinances for that purpose, founded principally upon a Star Chamber decree in 1637. After the restoration of Charles the Second, a statute on the same subject was passed, copied, with some few alterations, from the Parliamentary ordinances. The act expired in 1679, and was revived and continued for a few years after the Revolution of 1688. Many attempts were made by the Government to keep it in force; but it was so strongly resisted by Parliament, that it expired in 1694, and has never since been revived. To this very hour the liberty of the press in England stands upon this negative foundation. The power to restrain it is dormant, not dead. It has never constituted an article of any of her numerous bills of rights; and that of the Revolution of 1688, after securing other civil and political privileges, left this without notice, as unworthy of care, or fit for restraint. This short review exhibits, in a striking light, the gradual progress of opinion in favour of the liberty of publishing and printing opinions in England, and the frail and uncertain tenure by which it has been held.

There is a good deal of loose reasoning on the subject of the liberty of the press, as if its inviolability were constitutionally such, that, like the King of England, it could do no wrong, and was free from every inquiry and afforded a perfect sanctuary for every abuse; that, in short, it implied a despotic sovereignty to do every sort of wrong, without the slightest accountability to private or public justice. Such a notion is too extravagant to be held by any sound constitutional lawyer, with regard to the rights and duties belonging to governments generally, or to the state governments in particular. If it were admitted to be correct it might be justly affirmed, that the liberty of the press was incompatible with the permanent existence of any free government. Mr. Justice Blackstone has remarked, that the liberty of the press, properly understood, is essential to the nature of a free state, but that this consists in laying no *previous* restraints upon publications, and not in freedom from censure for criminal matter, when published. Every freeman has an undoubted right to lay what sentiments he pleases before the public; to forbid this is to destroy the freedom of the press. But, if he publishes what is improper, mischievous, or illegal, he must take the consequences of his own temerity. To subject the press to the restrictive power of a licenser, as was formerly done before, and since the Revolution (of 1688,) is to subject all freedom of sentiment to the prejudices of one man, and make him the arbitrary and infallible judge of all controverted points in learning, religion, and government. But to punish any dangerous or offensive writings, which when published, shall on a fair and impartial trial, be adjudged of a pernicious tendency, is necessary for the preservation of peace and good order, of government and religion, the only solid foundations of civil liberty. Thus, the will of individuals is still left free; the abuse only of that free will is the object of legal punishment. Neither is any restraint hereby laid upon freedom of thought or inquiry; liberty of private sentiment is still left; the disseminating or making public of bad sentiments, destructive of the ends of society, is the crime which society corrects. A man may be allowed to keep poisons in his closet; but not publicly to vend them as cordials.—And after some additional reflections, he concludes with this memorable sentence, "So true will it be found, that to censure the licentiousness, is to maintain the liberty of the press."

The true mode of considering the subject is, to examine the case with reference to a State Government, whose Constitution, like that, for instance, of Massachusetts, declares that "the liberty of the press is essential to the security of freedom in a State; it ought not, therefore, to be restrained in this commonwealth." What is the true interpretation of this clause? Does it prohibit the Legislature from passing any laws, which shall controul the licentiousness of the press, or afford adequate protection to individuals, whose private comfort or good reputations are assailed and violated by the press? Does it stop the Legislature from passing any laws to punish libels and inflammatory publications, the object of which is to excite sedition against the Government, to stir up resistance to its laws, to urge on conspiracies to destroy it, to create odium and indignation against virtuous citizens, to compel them to yield up their rights, or to make them the objects of popular vengeance? Would such a declaration in Virginia, (for she has, on more than one occasion, boldly proclaimed that the liberty of the press ought not to be restrained,) prohibit the Legislature from passing laws to punish a man, who should publish and circulate writings, the design of which avowedly is to excite the slaves to general insurrection against their master, or to inculcate upon them the policy of secretly poisoning or murdering them? In short,

is it contended that the liberty of the press is so much more valuable than all other rights in society, that the public safety, nay, the existence of the Government itself, is to yield to it? Is private redress for libels and calumny more important or more valuable than the maintenance of the good order, peace, and safety of society? It would be difficult to answer these questions in favour of the liberty of the press, without at the same time declaring that such a licentiousness belonged and could belong, only to a despotism, and was utterly incompatible with the principles of a free government.

[From the last number of the Scientific Tracts.]

PISCATORY ARCHITECTURE.—In a small pond at the Lower Falls in the town of Milton, Mass., the proprietor of a paper mill, in passing to and from his works, the last season, observed two fishes, called in this part of the country suckers, (*cyprinus teres.*) unremittingly employed in gathering stones from the borders, and at a considerable distance too, which they brought to a particular part, in a quiet, clear spot in the water in front of his garden, where they were regularly piled into a pyramid. They were seen by others beside himself in the act of conveying the stones, some weighing more than a pound. They applied their long, flexible lips to the surface of the stone selected for removal, exhausted the air by suction, and then swam with it to the spot on which the edifice was erecting.

At the close of summer the work had progressed astonishingly, considering their means, but no definite object was discoverable to the spectators, unless, as some of them conjectured, spawn had been deposited at the bottom, and the stones were for their protection against the depredations of belligerent neighbours. However, the work was interrupted, as curiosity made such promptings, that the gentleman alluded to, from whom the circumstance was learned, took them all out of the water —three wheelbarrow loads—but discovered nothing he had anticipated.

No other fishes were engaged in the labour, nor were any other suckers believed to be in the pond. The object, therefore, is still a mystery; but if they had not been disturbed, it is altogether probable that the design would ultimately have become apparent.

PRESBYTERIAN MINISTER.

Go to the study of a Cumberland Presbyterian minister, and you will find there, Henry counteracting the wild speculations of Clark, or Benson rectifying Scott, Fletcher checking Calvin; Wesley and Toplady forming a "*neutral*," Doddridge, Hall, Edwards, Dwight, Watson and a host of worthies, all harmoniously arranged in the same library. The Cumberland minister consults these diverse authors without the least fear of imbibing the ultra views either of Calvinists or Arminians. His motto is, prove all things, and hold fast to that which is good. He finds much that is instructive and edifying in each, and as his discriminating faculty is kept in exercise, he has but little difficulty in separating the dross from the pure gold. He has his own standard, which he honestly believes harmonizes with the word of God, common sense, and the philosophy of mind: and he is delighted to find so much in the advocates of other systems, which he can heartily adopt: and when they do diverge, it is on either side of him, so that he still finds himself much nearer each of his diverging authors than they are to each other. Hence, if he has misinterpreted the Scriptures on some points—if either the Calvinist or Arminian holds the truth and nothing but the truth, still it is some consolation to him that he is not so far wrong as one of his two neighbours, the Calvinist or Arminian. But if they are both wrong, then the truth lies between them, and consequently, he cannot be far from right.—*Cumberland Presbyterian.*

By some writers the earth is divided into a number of zoological regions, with regard to wild animals, in each of which is found a distinct genus of quadrupeds. The *arctic* region, extends from the north pole to the *arctic* circle, and contains the white bear, the rein-deer, the arctic fox, and some others, which are common to both continents. Their being common to both continents is accounted for by the communication which, during winter, is established between the shores of Asia and America, by means of the ice, over which a passage from one to the other becomes practicable to such animals as are fitted to endure the intense cold of the circumpolar regions. The northern temperate zone is divided by the ocean, into two great districts. The same tribes are found to be spread from the western to the eastern parts of the old continent; but the quadrupeds which inhabit the temperate climate of this continent are peculiar races. The equatorial region contains three extensive tracts widely separated from each other by the sea. These are the intertropical parts of Africa, of America, and of continental India. Each of these tracts has a distinct tribe or family of quadrupeds.

It is not generally known, we believe, that WASHINGTON visited Boston in 1756. His object was to consult Governor Shirley of Massachusetts, then Commander in Chief of the British forces in North America, as to the approaching campaign against the French and Indians. Governor Shirley was a man of military talents, and on the death of General Braddock was appointed to the chief command. Troops were sent to the west, as well as to the northwest, to check the enemy. Colonel Washington wished to have a personal interview with Shirley relating to the place for the next campaign; and he was desirous also of the decision of General Shirley as to his taking rank above another officer, who had hesitated to serve under Washington. He remained ten days in Boston, at that time; and was introduced to many of the citizens, and often attended the General Court then in session, preparing measures to forward the military operations for the ensuing year.

Who is a true gentleman?—Whoever is frank, sincere, honest, generous, courteous, truly honourable, and candid; such an one is a true gentleman, whether learned, or rich, or a labourer.

PATRICK HENRY.

Patrick Henry of Virginia, may justly be ranked among the greatest men who have shed a lustre on the American character. He was endowed with a very powerful mind, and was a most zealous and devoted patriot. Few of the celebrated men, who took an active part in the defence of civil liberty, in 1775, were equal to him in decision, zeal and power; none perhaps, were superiour to him. Patrick Henry was born in Hanover county, Virginia, in 1736. His early education was not very liberal; yet by the care of his parents, he was instructed in the common rudiments of learning. In his youth he was more fond of the sports of the field than of books; and he was early placed in a country store, where he did not succeed. He married at the age of eighteen, and settled on a small farm, with little prospect of becoming rich or great. For some time, he laboured in the field with two or three slaves, given him by his parents. He soon grew sick of this employment; and again engaged in merchandize, though not under very favourable prospects. He was indolent and inattentive to business for a few years, when he engaged in the study of geography, and reading history, especially the history of Greece and Rome, and of England and America. He was still oppressed by poverty; and as a last effort, made without any particular encouragement, he resolved to make trial of the law, for a profession. His friends had little hope of his success; but, at the age of twenty-five, after a few months study, he engaged in the practice. But his unfitness for the profession must be most manifest, with only a few months study of law, and with so limited an acquaintance with its forms. His family condition was such as to require most of his attention to preserve them from utter want and distress. His genius first burst forth on occasion of the controversy in Virginia between the Episcopal clergy and the people, as to the stipend demanded by the former. He made a great display on the occasion; and at once became eminent for his forensic talents and eloquence. Soon after, he distinguished himself in the management of a contested election, in which he pleaded for the rights of suffrage, a popular subject, and one in which the people then took a peculiar interest. The effect produced on the audience was heightened by the plain appearance of the speaker, and the little which had been known of him, except in the *parsons'* cause. At the time of the Stamp Act, when the spirit of liberty was fresh and strong, and the question of Colonial Rights was agitated with intense interest, he was chosen a member of the House of Assembly; being then only in his thirtieth year. No Colonial Assembly had then (May, 1765) adopted any decided resolves against the power assumed by the British ministry to tax America, except that of Massachusetts, which, in November 1764, had declared against the right of Parliament to tax the colonies; and referring to the proposed Stamp Act, and to the act then just passed imposing a high duty on molasses, for the benefit of the parent government. Just before the close of the session, as no other member brought forward the subject, Mr. Henry, though a new member and a young man, offered resolutions, going explicitly to a denial of the British government to lay taxes on the people in the Colonies, or to legislate for them in any way. The resolutions were strongly opposed, but were finally adopted by a small majority: And they served to arouse the spirit of opposition to British taxation through the country. After ten years of controversy, the war of the Revolution commenced, which gave independence to America. "But whether this will prove a blessing or a curse," to use his own words, "will depend on the use the people make of their privileges, which a gracious God has bestowed on us. If they are wise and virtuous, they will be great and happy. If they are of a contrary character, they will be miserable. Righteousness only exalteth a nation. Let every citizen remember this; and practise virtue himself, and encourage it in others."

Mr. Henry was one of the delegates from Virginia to the first Continental Congress, which was held in September 1774, at Philadelphia. He was some time a member of Congress; and afterwards Governor of Virginia. When the Federal Constitution was formed in 1787, he opposed its adoption in the Convention of his State: but on its being approved by the majority, he withdrew his opposition to it, and often supported the measures of the Federal Government, when censured by the democratic party. He was a man of great honesty of purpose, and very independent in the avowal of his opinions. It might be thought improper to compare him to John Randolph; he had his independence with more common sense, or greater regard for the opinions of others.

Patrick Henry was the James Otis of Virginia. He was eloquent in speech, and powerful in his appeals both to the reason and the feelings of the people. And he was eloquent and powerful because he was an advocate for justice and liberty; and because his feelings were on the side of the rights of man. There is a man of similar character now living, whose eloquent appeals have more than once kindled anew the love of liberty in the hearts of Americans, and who has made a powerful stand in favour of the federal Constitution, the charter of equal rights, and of political freedom. B.

AUTUMN.

It was an eve of Autumn's holiest mood,
The cornfields, bathed in Cynthia's silver light,
Stood ready for the reaper's gathering hand;
And all the winds slept soundly. Nature appear'd
In silent contemplation, to adore
Its Maker. Now and anon, the aged leaf
Fell from its fellows, rustling to the ground;
And, as it fell, bade near think on his end.
On vale and lake, on wood and mountain high
With pensive wing outspread, sat heavenly Thought,
Conversing with itself. Vesper looked forth,
From out her western hermitage, and smiled;
And up the east, unclouded, rode the moon
With all her altars, gazing on earth intense,
As if she saw some wonder walking there.

Pollock's Course of Time.

The Indians of the interior of the United States, according to Mr. McKenney, who has travelled much among them, are more mild and courteous than those were who resided near the Atlantic coasts two hundred years ago. Some writers account for this, by the severe treatment which they received from the early English settlers. The French were always better received by the Indians than the English. The former perhaps, knew better how to conciliate them. The French priests and missionaries threw themselves on their friendship, instead of attempting to subdue them by force; and their religious tenets were also far more acceptable to the savage. The rites and ceremonies of the Catholics were more captivating to the senses, if they did not serve to purify the heart. The Chippeways, a tribe near Lake Superior, exhibit many specimens of persons who are well-informed, courteous in manners, and of mild and friendly dispositions. But they had amalgamated with the English or French. There are several such families in the Chippeway tribe; and the children are well-educated and of as polished manners as those among the civilized white people. They are not deficient in native talent, or a capacity to learn; and their affections are as susceptible of the kindly sympathies as those of a lighter skin and of European origin.

GENERAL OFFICERS IN THE WAR OF THE REVOLUTION.

An aged correspondent, who remembers "the times which tried men's souls," and who devotes a portion of his hours in antiquarian researches, has suggested that it would probably be acceptable to most of our readers to see a list of the general officers of the revolutionary army. We should have been obliged to him, if he had furnished such a list himself, or the materials for one; as he has not, we have taken some labour for the purpose, and present the following. It is quite possible that some names are omitted, especially of those who were in the militia, or who served only part of the war.

When the militia assembled at Cambridge, Roxbury and vicinity, soon after the affair at Concord, which was the 19th of April, 1775, General Artemas Ward was the Commander in Chief in some sense, though the organization of the troops was not complete, and those from New Hampshire, Connecticut, and Rhode Island, were under the command of officers from those Colonies. General John Thomas had the command of several regiments stationed at Roxbury; and Seth Pomeroy and Asa Whitcomb also had commissions from the Provincial Congress as Brigadier Generals; and Israel Putnam of Connecticut, Nathaniel Greene of Rhode Island, and John Stark of New Hampshire, commanded the militia from those Colonies respectively at first with the title of Colonel. Putnam received a commission soon after from Connecticut as a General; and when Washington was appointed Commander in Chief of the whole American Army, in June, Putnam was commissioned as a Major General; and Ward had a similar appointment. The other Major Generals, appointed by the General Congress, at that time, were Philip Schuyler, and Charles Lee; the Brigadiers were Generals John Thomas, Seth Pomeroy, and William Heath. The Major Generals, (in course of the war) were:

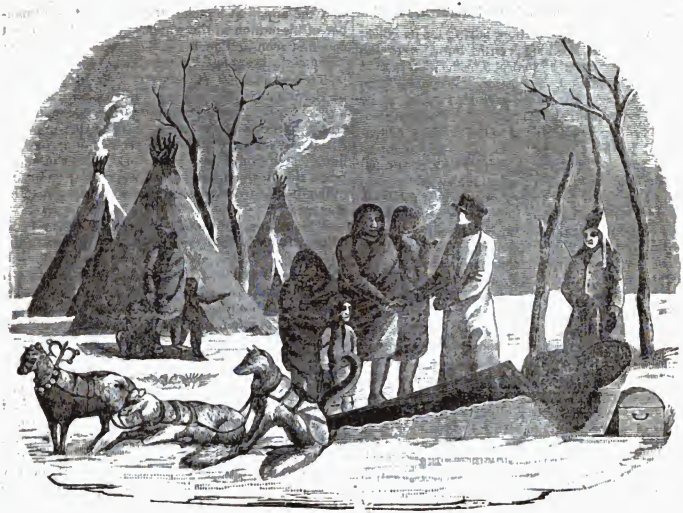
Charles Lee,	Du Portail
Israel Putnam,	Henry Knox,
Artemas Ward,	Marquis La Fayette
Philip Schuyler,	Benedict Arnold,
Benjamin Lincoln,	Alexander M'Dougal,
Horatio Gates,	Robert Howe,
Nathaniel Greene,	Lord Stirling,
William Heath,	William Moultrie
John Sullivan,	Adam Stevens,
—— Smallwood,	Arthur Conway,
Baron Steuben,	Arthur St. Clair,
Baron De Kalb,	Sam. H. Parsons,

The Brigadier Generals were:

Seth Pomeroy,	John Nixon,
John Thomas,	John Patterson,
Richard Montgomery,	Arthur St. Clair,
David Wooster,	John Glover,
Joseph Spencer,	Ebenezer Learned,
John Stark,	Anthony Wayne,
Asa Whitcomb,	Jedediah Huntington,
Hugh Mercer,	James Clinton,
Francis Nash,	George Clinton,
John Armstrong,	Enoch Poor,
William Thompson,	J. Cadwallader,
Andrew Lewis,	P. Muhlenburg,
James Moore,	W. Woodford,
Thomas Mifflin,	J. P. De Haas
Joseph Reed,	Geo. Weeden.
James M. Varnum,	

Chemical Discoveries.—A new method has been found, by a learned German, of preparing *white lead* in far less time, and with less labour than hitherto have been consumed. The advantage is said to be forty per cent. The method is to be tested by experiments; but the process has not been stated, and the secret is with the discoverer. The same person proposes to obtain vinegar from *wood*, as good as that made from wine: he states that he can make ink for printing much cheaper and purer than that now in use; and *yeast* at half the cost of that obtained from beer or malt.

It is possible that a wise and good man may be persuaded to engage in play; but it is impossible that a professed or habitual gambler should be a wise and good man.



VISIT OF A MISSIONARY TO THE NORTHERN AMERICAN INDIANS.

It is well known that efforts have been made for nearly a century, to christianize the Indians within the British possessions in America, in the high northern latitudes, and chiefly by the *Moravians*. They have visited the coast of Labrador, for this purpose; and they have formed several settlements among the Esquimaux tribes, where many hundreds of the ignorant natives have been instructed, by the devoted, indefatigable men who engaged in this most praiseworthy design. These natives are in a very degraded state; and their position is so far north, that they are exposed to great privations most of the year, and seem to have no views further than to provide for their immediate animal wants. The Moravian brethren who have sent some of their number to Iceland and other regions for a long period, have also had Missionaries in the high northern parts of America, far north and west of Canada. They have advanced as far as Red River, near Lake Winnipeg, where the British Fur Company have a settlement. The natives are somewhat like the Gipsies in Europe, in their manners and roving habits. But they readily listen to the Moravian Missionaries, and send their children to them for instruction. There have been several instances of hopeful conversions to the faith of the gospel. The Missionaries, in going from one tribe to another, generally travel in sledges several hundred miles, drawn by dogs over the ice and snow, at the rate of fifty and sixty miles a day. The United Moravian Brethren are persevering in their holy efforts for spreading the light of the gospel in these dark regions of the earth, where the foot of civilized man never trod till within the last century. They say, the natives generally are docile and attentive, and usually collect together to hear the word of salvation from the pious Missionary. We know some men doubt the good effects to arise from these efforts to christianize such ignorant and degraded people. Men perhaps, must first be civilized and instructed in the arts and sciences to a certain extent, before they can be brought to understand and embrace the gospel. And yet some contend, on the other hand, that if savages can be led to receive the great doctrines of Christianity, they would become social, agricultural and civilized. The tendency of the gospel is to humanize, reform, restrain and sanctify mankind; and if it is preached by wise and prudent and holy men, it seems impossible that it should not produce beneficial results, as to their manners and lives. Every good person, therefore, must bid the pious christian Missionary God-speed, and pray for success on their labours, to bring the heathen to the knowledge of our holy religion.

The Greeks had a *Butterfly* engraved on their sepulchral monuments. It was not altogether unlike the inscription on one of their altars. "To the unknown God." The device was an obscure intimation of immortality, or of a resurrection. The worm died, or was transformed, (after it was in a state of suspended animation,) into a more beautiful form of life, which could rise and soar far beyond the track and the scene of its former existence.

AMERICAN INSTITUTE OF INSTRUCTION.

This very useful Association, having for its object improvements in teaching youth, both as to the mode and the matter of instruction, has lately held its anniversary meeting in Boston. We understand that it was well attended; and that some of its members came from a great distance. Such an association promises great benefit to the cause of education, and to the country. We refer to the topics treated during the meeting, which was continued daily for five days. The introductory lecture, on the spirit of the true teacher: on the best mode of inspiring a correct taste in English literature: what modes of punishment in schools are suited to produce the best moral effects: on the political influence of teachers: on the state and prospects of education among the German population of this country: on the physical evils most important to be guarded against in education: on religious education: on the Prussian system of schools, and its applicability (in part) to our schools: on the remedy for evils arising from numerous text-books in the same school district: on the ends which a teacher should have in view, in the moral and intellectual discipline of youth: of the importance to the instructer of an acquaintance with the philosophy of mind: on the means of forming the habit of attention in children—on the study of the classics: on the probable benefit to the interests of education from the pursuit of one branch of study at a time: on the meaning and objects of education: on the management of a common school: on the moral relations of natural history: the importance of giving a right moral direction in the early stages of education: on the means of cultivating the social affections among pupils: on the best motives to be presented to pupils, as encouragements to moral and intellectual efforts: on schools of art: the proper education for an agricultural people: on the study of mythology: on the importance and means of forming a taste in English composition: and on the adaptation of the present course of country schools to the wants of the children.

THE SEA SERPENT.—[Serpens Marinus Magnus.]

We give a description of the Sea Serpent, which has been seen, in and near Massachusetts Bay, and on the coasts of Maine including Penobscot Bay, and described by a number of very intelligent and respectable individuals, within fifty years, and chiefly within the last twenty or thirty years. By most of those who have seen this aquatic monster, and been so near him as to make accurate observations and give a just account and description of him, his length is nearly one hundred feet, (the accounts, however, vary from seventy-five to one hundred and twenty feet, and this difference is accounted for by the different distances and positions, at or in which the animal was seen;) and its thickness about that of a barrel, or of a cask twice the size of a barrel. The greater portion of those who have seen the Serpent, describe him as having protuberances on the back, nearly the whole length from the neck to the tail: not unlike the humps on the camel's back: but some have expressed an opinion that the apparent bunches were owing to the manner of his motion in the water. When the Serpent was first seen in Penobscot Bay, about thirty-six or thirty-eight years ago, (the earliest of his recent appearances, but not strictly so of his appearances on the coasts of Maine,) the bunches were particularly noticed; which led the *doubting*, who concluded the narrator was alarmed and deceived, to ask if it was not a school of *porpoises* swimming by in a line. This supposition was afterwards abandoned, when the Serpent was seen by several persons, at different times, and most of them too near it to be deceived.

A large animal, formed like a serpent, was repeatedly seen on the coasts of Norway long before the appearance of the monster in the waters near Massachusetts and Maine. Bishop Pontoppidan gave an account of the animal as he received it from those who saw it. They represented it as several hundred feet long; in which no doubt they were mistaken. They also describe it with bunches, and a drawing was given, very like the serpent seen on our coasts, except as to the supposed length of the former.

The most correct statements of the appearance of the Sea Serpent on the coasts of America, and those entitled to the fullest credit, (with some abatement for opinions as to its size or length, some of the persons being at a considerable distance,) were given by those who saw it thirty or fifty years ago in or near Penobscot bay; if perhaps we except the account of such as have had a view of one near Cape Ann and Nahant, within fifteen or eighteen years last. Reference has already been made to one who saw the Serpent in Penobscot Bay. He was a respectable clergyman well known to the writer of this article; and at whose request he gave a written account, and afterwards a more particular description. Several persons were with him at the time, and had a full view of the monster for some minutes. They saw him at rest on the water; and afterwards saw him dart out to sea with great velocity. Capt. George Little, commander of an armed vessel on the coasts of Maine in 1779—80, and in 1799—1800, of the United States Frigate Boston, saw the Sea Serpent in Broad Bay, (which is east of Sequin, and west of Penobscot Bay,) at the former period; and supposed it was fifty feet or more in length; but he was not so near as to judge accurately as to its length. A Capt. Kent, before that time, who was commander of a coasting sloop, saw a sea snake, near the same bay, which he believed was at least fifty feet long. Capt. Crabtree, who lived some time on an Island in Penobscot Bay, a very intelligent and reputable man, deposed that he had heard the people there, speak of having seen a large Sea Serpent at different times; and that in 1778, he saw it himself. He saw it lying at rest for some time, on the surface of the water, and within five hundred feet of the land; and he judged it was one hundred feet long, and three feet diameter. In 1793, the same person or one of his family had a view of the animal, near the same place. The clergyman above referred to, also related to the writer of this account, that in the war of the Revolution, some of the British troops at Castine had a view of a similar animal. He also stated, that one

person, whom he well knew, saw *two* of them together, in that vicinity, some twenty years before. Many years ago, when there were few families on Mount Desert, which is east of Penobscot Bay, the skeleton of an animal was found near the shore, in an unfrequented part of the Island, which was said to be seventy feet long.

In common cases, this is evidence enough to satisfy reasonable men, that a large serpent of seventy or eighty or one hundred feet long, has been often seen in the bays and on the coast of Maine, within fifty or sixty years. But it is proper to notice the more recent accounts given of a similar animal on our coasts. In 1815, the Sea Serpent was seen near Plymouth, outside of the harbor, but near the land, and within a quarter of a mile of those who saw him. One of these was a very intelligent sea captain, who viewed him with the naked eye, and through a glass. When he saw the animal it was moving directly from him, and appeared about thirty or forty feet; but on changing its course, and exhibiting fairly its whole length, he judged it to be at least one hundred feet. The Serpent again approached the shore and remained at rest for about five minutes. The bunches were as large as a barrel, and about thirty in number. It was of a deep brown color. The sky was clear and it was almost calm. The head and neck appeared six or eight feet long.

In 1817, the Serpent was seen in the harbor of Gloucester, or Cape Ann. The master of an eastern coaster, lying at anchor in the harbor, in August, saw it at rest on the surface of the water, very near his vessel, with its head near the cable, (in front of the vessel,) and its tail extending beyond the stern. The vessel was at least sixty feet, according to her tonnage; and the animal not less than seventy-five or eighty. Soon after, one of the citizens of Gloucester, who resided at the point of land running out into the Atlantic, saw the Serpent and gave an account of it; but neither his testimony nor that of the captain of the coaster was received with full credence. "Some doubted." The last witness saw the animal for more than an hour; during which it was in motion backwards and forwards, and nearer, or more distant. He saw fifty feet of its length, but did not speak of any bunches. He described its color as others had done. During the same month, the Serpent was seen in that vicinity, by several others, and sometimes within fifty feet. Some noticed the bunches, and some did not. The crew of a vessel belonging to Newburyport, of another belonging to Beverly, and of a vessel from New York to Salem, all saw what they called a large Sea Serpent. So also did the fishermen of several Chebacco boats then employed in cod or mackerel-catching in the vicinity. And all doubt seemed to be removed of the existence of a Sea Serpent, of about eighty or one hundred feet in length, and of the size of a large barrel or cask. At a later period, the animal was seen near Nahant and Phillips Beach, between Nahant and Marblehead. But their statements need not be detailed. One fact however, it is important to add, connected with the account of a Sea Serpent near our coasts. In September of the year, when the animal was so often seen in Gloucester Bay and near Cape Ann, where is a cove making up into the land, beyond the general course about one hundred and fifty yards; near which a snake was taken, aiming towards the bay. When moving slowly on the ground, the motion was vertical; and it moved by contracting and then extending itself. One of the men pursued and detained it by his pitch-fork. The efforts it made were said to be different from those of other snakes. It had the power of expansion and contraction in a remarkable degree. When contracted, there appeared bunches on the back, but when it was at rest and lying horizontally, they were hardly perceivable. When contracted, it was scarcely two feet long, but when not contracted, it was three feet. The people who killed it, did not consider it of the common kind of snakes. It was taken to Boston, and carefully examined by some members of the Linnæan Society. Its length was found to be two feet eleven inches and a half; and from a comparison of the young of large land snakes and serpents, with those of common age and growth, the parent of this, (if but a few weeks old,) might be from one hundred to one hundred and eight feet. The place where the young was found; and the peculiar formation with bunches made by self-contraction; and the spine adapted to this singular shape, excepting near the neck and tail, (where no bunches were discovered in the large monster,) where it was straight as in other serpents; all seem to render it probable that this animal was the offspring of the great sea monster. Twenty-four distinct bunches were noticed between the head and the vent. The color was a deep brown; the belly a little lighter. "The interior structure of the animal taken, differed from that of other serpents. The different vertebræ varied, and were accommodated by their shape and size to the configuration of the back."

The Sea Serpent has been often seen near our coasts since 1815 and 1817, and the accounts given by those who saw it, go to confirm the former statements in all important parts.

Density of Bodies at Different Depths.—It has been found that air, when compressed within a space which is but the fiftieth part of its common or natural volume, has its elasticity increased in that proportion or degree. If then the air continue to be contracted in that ratio, it would, from its own weight, have the *density of water*, at thirty-four miles depth in the earth. Water, it is known, has its density *doubled*, at ninety-three miles; and at 362 miles would acquire the density of quicksilver; and in descending 4000 miles or nearly so, towards the earth's centre, the density of airy substance or matter would be great, almost beyond expression or conception. Some have supposed that even steel would be compressed into one-fourth, and stone into one-eighth of its bulk, at the centre of the earth. We are yet ignorant to what extent bodies may be compressed, though experiments show that the compression may be greater, than has ever been actually exhibited.

THE CAVE OF FINGAL.

[From Brooks's Letters.]

July 30th, at 3 o'clock in the morning, we left Tobermory, from whence I wrote you last, in our steamboat Highlander, to make a visit to the celebrated islands of Staffa and Iona, both of the Hebrides, or Western Isles. We went up the sound of Mull, and around the island, and by seven or eight o'clock, we were within sight of Iona, which we passed in order to make our first landing at Staffa. Our object in visiting Staffa was to see the celebrated cave of Fingal, or Fingal's Cave, which as a geological curiosity is one of the greatest, if not the greatest in the world. It is the British Niagara —not that it is a cataract, for as such it would be a failure—but it is a natural curiosity, exciting as much wonder, if not terror, as the far famed cataract of our own land.

As we approached the coast of the island, which by the way, is small, not over two miles in circumference, I could easily distinguish some of the peculiarities of its formation. With some difficulty, we made a landing, for there was not a little sea there,—not from the steamboat directly, but from that, into a large boat, which some of the neighbouring islanders who understand the art of dodging the surf, keep for the purpose of taking visitors ashore, many of whom resort here from all parts of the world. The moment we landed, before ascending even the first elevation, we found ourselves treading upon the tops, or capitals of huge basaltic pillars, that seemed composedly piled together, not as if by nature, nor by the hand of man, but by some convulsion of the elements. As we clambered farther up, we found these columns or pillars covered with earth, on which the grass was growing; but wherever the sea could reach them, and lay them bare, the same pillars were to be seen strown about in regular confusion, if I may adopt such a phrase. Now the pillars slanted much, now a little, now almost horizontal, anon they were perpendicular, which, as they were worn away, formed staircases, as it were, that you could ascend or descend with ease. But all these wonders were nothing when compared with the last object we visited on the southeastern promontory; Fingal's Cave. No description can give the faintest idea of it. The very best I ever read, left but a sorry impression when compared with the great reality. It seems as if some fearful powers had been shaping rocky columns, in very sport, to show what they could do in imitation of man, and when they had done laughing at their play, had hurled them altogether to form some mis-shapen place of worship, arched over, and propped up with threatening pillars. The sea that comes roaring in, might have been their chant. Imagine if you can, some rocky island of precipitous sides, thus hollowed out for three hundred feet, with arches and pillars, Cathedral-like, all of columns of basalt rocks, some sixty feet in height, and where the sea comes booming in at every rush of the tide. I crept along over the tops of some of the basalt columns as far as it was safe to go,—and when I stopt, and tried the voice, the sound was that of many screams as the voice was broken by the unequal surface. The sea-gods might have had a temple here. If the Romans had known this place, they would have made it the throne of Neptune, and installed his trident here. Laborious and difficult enough indeed it is to reach this place, and often rough and stormy is the way, but when once the traveller is here, he never will regret that he has come; for a picture will be on his mind to last his life.

Tradition has connected this stupendous cave with the name of Fingal; but there is no reason to believe it associated with his memory. Strange to say, this great curiosity was almost unknown to the middle of the last century, when Sir Joseph Banks was induced to visit it by a native of Ireland, whose descriptions made it known to the world, and thus stimulated inquiries. It is of the same formation as the Giant's Causeway, in the same longitude, and not many miles off, and the same violent effort of nature that produced the one, probably also produced the other. The average diameter of the basaltic columns is about two feet, but they often extend to four. The number of their sides vary from three to nine, but the pentagon and hexagon are the prevalent forms. Fingal's Cave, however, is not all that is to be seen here, though the most remarkable of all the curiosities. There are, besides, the Cormorant's Cave, the Boat Cave, and the Clamshell Cave, all wonders, if the studendous wonder of Fingal's Cave did not overwhelm them all.

At last, nor wearied nor satiated, we left this solitary island, solitary I say, for if not companionless among the other islands, yet not a soul ventures to live upon it, so terrific are the winters and the storms; and embarked again on board our 'Highlander.' Iona was the next object of curiosity; Iona, or Icolmkill, as it is often called; which Dr. Johnson visited in his famous Highland tour, and which he has described as 'the illustrious island which was once the luminary of the Caledonian regions, whence savage clans and roving barbarians derived the benefits of knowledge and the blessings of religion.' Oh, what a reverse of the picture now, and what a contrast with what it was once! This little island, that was indeed in its better days a luminary, is now a most deplorable object to behold. I do not know whether even the moral training the mind must have in visiting such a scene, repays the traveller for the miseries he suffers. Think of this, the chosen burial place of no less than sixty kings; the place where a Roman Pope thought of seeking the last decades of Livy, now inhabited by a people in the most abject condition, without the spirit or the pride of the savage, and yet with all his poverty, whose palaces now would be but pig-sties in our happy land; and such a people living too where the asylum of learning was during the dark ages, where it was a glory to live, and a pride to die; now trampling recklessly over the broken coffins of Scottish, Irish and Norwegian kings; with their miserable hovels wretchedly contrasting with the ruins of the proud Cathedral their fathers reared! Think of the havoc Time works; of the change he effects! What Rome was once to Italy, this little island was to the people here, and what many a proud city now is, Iona was,

WRITERS OF SACRED HISTORY.

NO. II.

The books of the New Testament were written within thirty years of the death of our Saviour, with the exception of the writings of the Apostle John, who wrote probably, about sixty years after his crucifixion, and in the year of Christ ninety-three or four. It is agreed by all writers, that his gospel and his epistles were written much later than the other books forming the New Testament, and it is far the most general belief that it was as late or later than the year ninety. It is also supposed that he did not write in Judea, but at Ephesus, in Asia Minor. The other evangelical writers do not speak of or refer to heretics and impostors, as John does; nor to the doctrine of the *Logos*, which was much agitated before his death. Whether Matthew or Luke wrote first, is uncertain. The first, probably, wrote in Judea, and the other in Greece; and it is supposed about the same period; which was about thirty years after the death of Christ. Mark is supposed to have written at Rome, and soon after Luke and Matthew. The Gospel of John may be considered a supplement to the others. The Epistles of Paul were written between fifty-four and sixty-four; but not in the order in which they stand in the present Testament. The Epistles to the Galatians and the Thessalonians were supposed to be the most early. These books and histories and epistles, were known and circulated, quoted and appealed to as genuine, and as authority in matters of religion, especially of the doctrines and life of Christ, in the second and third centuries, and in all subsequent times. As to the genuineness of the second of Peter, of Jude, second and third of John, and of the Apocalypse, there were some doubts: But after much inquiry and consideration they were received by the majority of the christian churches; yet not so as that any doctrine taught or advanced by any one should be received only and solely on authority of one of these last mentioned books. The Apocalypse is evidently a prophetic book, and so highly figurative, that it is of difficult interpretation. And the short Epistles mentioned, as even having been doubtful, or objected to, contain no doctrine or precept peculiar, unless it be that Jude and Peter refer to the antedeluvians, which is not done by the other Apostles. But their allusions are short and somewhat obscure, and neither contradict any commonly received doctrine, nor advance anything absurd or unphilosophical. Copies of the Gospels, and other books forming the New Testament, were early made, and were studied and quoted both by Christians and Pagans, in the second and third centuries; by the former to explain and support the doctrines they professed, and by the latter, in the way of criticism and objection. The works of some of the writers who quoted the New Testament, and who made commentaries on them, are still preserved; and which prove that they were referred to as authority on subjects of the christian faith, and that they had the same books which have come down to us. Both Jews and Pagans refer to these books, and to the great events which are recorded in them; which also shows their antiquity, although they were not received by them as the works of inspired men. Here is proof, that the history of the Gospel, and the writings of its friends were known and read and examined, and that the events related *were not done in a corner*. The genuineness of the Christian Scriptures rest on the same human evidence (apart from their intrinsic, internal excellence and superiority) as the writings of ancient Greek and Roman authors, whose works have come down to our day, and of which there is not the least doubt.

DEATH'S FINAL CONQUEST.

BY JAMES SHIRLEY.*

The glories of our blood and state
  Are shadows, not substantial things;
There is no armour against fate:
  Death lays his icy hands on kings:
    Sceptre and crown
    Must tumble down,
And in the dust be equal made
With the poor crooked scythe and spade.

Some men with swords may resp the field,
  And plant fresh laurels where they kill:
But their strong nerves at last must yield,
  They tame but one another still.
    Early or late
    They stoop to fate,
And must give up their murdering breath,
When they, pale captives, creep to death.

The garlands wither on your brow,
  Then boast no more your mighty deeds,
Upon death's purple altar now
  See where the victor-victim bleeds:
    All heads must come
    To the cold tomb:
Only the actions of the just
Smell sweet and blossom in their dust.

* Born 1586. Died 1666. He was a great friend of the Leyden and Plymouth Pilgrims.

A person who was skeptical in his opinions, and a profane scoffer at religion, met a plain countryman on his way to the house of public worship, and inquired of him where he was going. "To church," was the reply. "What do you there?" "I worship and praise God, and hear his holy word." Then thinking to puzzle the illiterate man, he inquired, "Is the God you worship, a great or a little God?" "Both," replied the man promptly; "He is so great that the heaven of heavens cannot contain him, and so little that he can dwell in my heart."

A BEAUTIFUL SIMILIE.

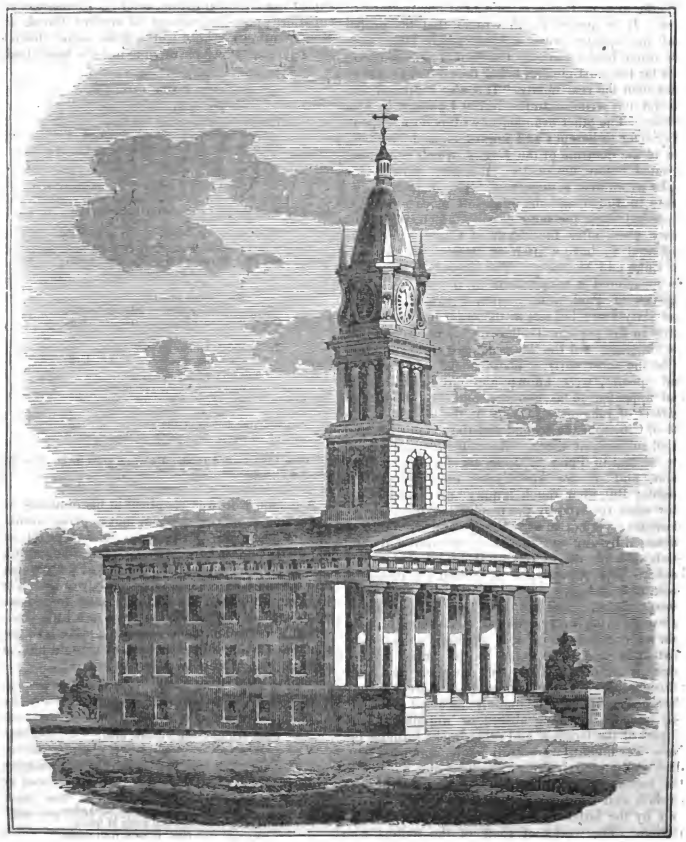
BY W. C. BRYANT, ESQ.

Upon yon mountain's distant head,
  Where spotless snows forever white,
Where all is still, and cold, and dead—
  Late shines the sun's departing light,

But far below those icy rocks,
  The vales, in summer bloom arrayed—
Woods full of birds, and fields of flocks
  Are dim with mist, or dark with shade.

'Tis thus, from warm and kindly hearts,
  And eyes where generous meanings burn,
Earliest the light of life departs,
  And lingers with the cold and stern.

He who refuses to do justice to the defenceless, will often be found making unreasonable concessions to the powerful.



View of Second Presbyterian Church, Auburn, N. Y.

SECOND PRESBYTERIAN CHURCH IN AUBURN, N. Y.

This Church, a view of which is given opposite, is one of the few specimens of correct architecture, of houses of religious worship in our country. And we can see no objection to having buildings for this purpose constructed with good taste, and according to the best models of architecture, any more than to other public edifices. We hope more care will be bestowed in future, in having churches built agreeably to the best models of antiquity. For there is a neatness and simplicity about them, which recommend them to the unperverted eye of every person of good judgment; and they need not be made expensive by a profusion of mere ornament. The architecture of our country, we think is improving; and it is desirable that men of good architectural taste should be consulted in the form and style of all public edifices.

The edifice, the view of which is here given, is the second Presbyterian Church in Auburn, in the State of New-York; and was erected in 1829. The main body of the Church is of brick; and is eighty feet by sixty, on a stone basement, with a doric portico. The steeple is quite lofty, rising to the height of one hundred and sixty-four feet from the ground. The view is rather imposing, at a little distance; nor do we think, as some object, that it is out of proportion to the building, for effect. The expense of the church, lot and furniture, is estimated at $17,500. The interiour is finished in a simple but substantial and appropriate manner. The ceiling is stucco, with moulded panels; and is a hemisphere segment arch, arising six feet from its own base, and thirty-one feet from the centre aisle. The church is furnished with an organ of fine tone and great power, made by Mr. Erben, a gentleman of great skill and taste in such matters.

Auburn is a flourishing village in the interiour of the State of New-York, and is about 170 miles west from Albany, and near the northern end of Owasco lake. There is a large Penitentiary at this place, established by the Legislature, sufficient to hold a thousand persons. It is said to be the best constructed and best governed of any institution of the kind in the United States. There is also in Auburn, a large stone building for a theological Seminary; an Academy, a Court House, and several houses for public worship.

TRANSIT OF MERCURY.

The Transit of the inferiour planet Mercury, over the Sun's disc, on the 7th of November current, was not observed by any one in this quarter, on account of the very thick and cloudy weather. In the southwest parts of the United States it might have been fully seen; and the transit would be longer noticed at the South than in this vicinity. This planet is the nearest of any to the Sun, and so small as to appear but a speck (being only 1-195th of that of the Sun) on the solar surface. Yet the diameter of Mercury is 3200 miles, about 1-7th that of the earth. It is only the two inferiour planets, Venus and Mercury, which can appear as passing over the Sun's body; or between the earth and that great central luminary. And usually, several years intervene between such transits. They appear as dark spots on the Sun, but soon pass off. These transits are noticed with interest by astronomers, as they assist in determining the Sun's parallax, as well as that of the planet; and an accurate knowledge of the parallax of these bodies is important, since it enables us to calculate their distances, respectively, from the earth. The transits of the planet Venus are best suited to determine the Sun's parallax; but these seldom happen. The last was in 1769; and another will not occur till the year 1872. The duration of the transit of Mercury was computed at five hours and eight minutes. The planet Mercury is so near the Sun, and therefore so much lost, as it were, in the light of that luminary, that little can be known of its peculiar elements; but the most accurate observations, as well as analogy, show it to be round, and to exhibit different phases. It is believed that it revolves on its axis in nearly the same time as the earth. The distance of Venus from the Sun is supposed to be twice that of Mercury, and that of the earth twice that of Venus. It is also supposed that the intensity of solar radiation is about seven times greater on Mercury than on the earth; and 330 times less on Uranus, the most distant planet. But unless we know the nature of the atmosphere of a planet, or the medium of the solar rays, our opinions may be unfounded, as to the heat.

SKEPTICISM.

It has been said, that Physicians were more inclined to infidelity and scepticism, than men of other professions. And it has been attributed to their peculiar studies and pursuits. They perceive the subjection of the animal frame to the laws of chemistry. They perceive a constant change going on in the material world; and that the composition and decomposition of matter produces new and various forms, approaching almost to miracles. But the thought occurs, on the other hand, that the anatomist, the naturalist, and those conversant with the varieties in the material world, and in the animal frame, both of operations and results, must be furnished with strong arguments for the great truth of natural religion, that there is an intelligent, designing first cause of all things. And the *essential* difference between mind and matter; their powers and properties; must convince every deep student, that the soul may and does survive the decay and dissolution of the body: accordingly we shall find, that the most learned and philosophical physicians of modern times are firm believers in the christian revelation. So true is it, with regard to that profession, as well as others,—"That, though a little learning may incline men to skepticism, a deeper philosophy and more extensive knowledge will bring them back to religion."

Gas Lights from Rosin.—From a report of M. *****, on results obtained by Messrs. B. & D. in the manufacture of illuminating gas from rosin, it appears, that the illuminating power of gas from rosin is about double that from oil; and that five cubic feet of gas from rosin, give as much light, as nine of oil gas.—*Journal of Arts and Sciences.*

HINDOO AVATARS.

Though the principal and leading design of our publication is to illustrate the history, customs and scenery of our own country, we believe there is a strong interest to learn what is very peculiar or extraordinary of the manners and habits of other nations. And we have therefore occasionally referred to the chronology and religious opinions of ancient tribes in the old continent. The Hindoos, the Chinese, and the Indians of Asia, are in many respects, a singular people. All that extensive territory was early settled; and it is probable, that even Noah, or some of his children and grand-children travelled far to the east from Armenia, or the north of Chaldea, where the ark rested after the deluge, and extended far and wide in that temperate climate, while others travelled north, west, and still more south, to Syria, Palestine, Arabia, Egypt, and Ethiopia. The greatest cause of surprise, is the probable early spread of polytheism and idolatry among a people, whose early ancestors had been worshippers of the one true God. And yet, if this fact is at all wonderful, it is not singular. For all nations soon corrupted their ways; and apostatizing from the worship and belief of the true God, paid homage to many inferior deities, rendered religious veneration to eminent human characters, after their death, and even bowed down to gods of their own device, made of gold and silver, wood and stone. It is not improbable, that vague traditions of Noah were the origin of worship paid him under numerous names and aspects. The author of "The Wisdom of Solomon," speaking of idolatry says—"On the idols of the Gentiles there shall be a visitation; because in the creature of God they are become an abomination and stumbling blocks to the souls of men, and a snare to the feet of the unwise. For the devising of idols was the beginning of fornication, and the invention of them was the corruption of life. For these were not from the beginning, neither shall they be forever. For it was by the vain glory of men that they entered into the world; and therefore they shall come shortly to an end. For a father afflicted with untimely mourning, when he had made an image of his child, early taken away, honoured him as a god, though he rendered and delivered to those under him, ceremonies and sacrifices. And thus in process of time an ungodly custom was kept as a law, and graven images were worshipped by the order of princes."

In nothing, perhaps, is so strongly, certainly so lamentably exhibited the aberrations and darkness of the human mind, as in the practice of idolatry and polytheism. But it is a satisfaction both to the true philosopher and the sincere Christian, to find proofs, on close inquiry, of the worship and belief of one God among the earliest generations of mankind; and that polytheism and idol worship afterwards prevailed, must be resolved into the fact that the second and third generations separated far from the parent stock, and were destitute of stated means of religious instruction, and being in ignorance and chiefly under the influence of the senses, became erroneous and debased in their views as well as in their conduct.

Sir William Jones, the eminent oriental scholar of the last century, was of opinion, that the most early religious faith and worship of the Hindoos recognised one Supreme Deity; and that their thousands of gods were acknowledged but at a subsequent period. The celebrated Rajah Rammohun Roy has expressed the same opinion. And no better authority, perhaps, can be had on the subject. Still the variety and singularity of the gods, or of the images and symbols formed to be worshipped among the Hindoos afford matter for surprise. It is strange that the human mind could be so perverted, as to make such grotesque figures and call them divine, or consider them worthy of religious homage. It would seem that the imagination must have been tasked to the utmost, to present such unnatural and deformed objects. We present ten of these images or symbols, by the Hindoos, called *Avatars*, that is, incarnations. For their creed is that celestial beings take the form of humanity, and are also changed from one human and animal form to another. Their incarnations are numerous and almost infinite; and their gods have assumed different forms at different periods. The ten principal *Avatars* of Vishnu are the following—the fish, the tortoise, the man-lion, the dwarf, the purushoo rama, the rama—, krishna or kishnu, buddha and kalki, or kulkee.

Fish Avatar.

The fish Avatar, or incarnation, had this origin. The sacred books, or vedas, were stolen by some demon, and buried in the ocean. *Vishnu* assumed the form of a fish and brought up the sacred books from the deep.

Tortoise Avatar.

Of the tortoise avatar, they relate this story:—In a war between the gods and demons, the latter were victorious, and wantonly cast the celestial treasures into the sea. At the close of the war, the gods agreed to churn the ocean; and they tore up a great mountain for a churning stick, and took

the divine serpent for a rope, which they wound round the mountain: but the operation made the earth to tremble and sink; and *Vishnu* took the form of a tortoise, and on his back bore up the sinking earth.

Hog Avatar.

The boar, or hog avatar is thus explained:—A celebrated demon, by his religious austerities, had acquired such power that he sunk the earth in the great abyss. *Vishnu* assumed the form of a boar, drew up the sinking earth with his tusks, and slew the demon.

Lion Avatar.

This account is given of the lion avatar: an impious giant, who was a scourge to the world, had a pious son, whom he attempted to kill. After many vain attempts, he asked, "who and where is your preserver?" The son replied, he is every where. Is he in yonder pillar, said the angry father—Yes, said the son. Then I will insult him, said the father, and gave the pillar a violent blow! *Vishnu* burst from the pillar, in the form of a huge man-lion, and tore out the bowels of the atheistical father. Afterwards Vishnu was worshipped under that form.

Dwarf Avatar.

The dwarf avatar is thus accounted for: A great giant, terrible in the wars with the gods, became almost invincible, and threatened universal destruction: to prevent which, *Vishnu* became incarnate in the form of a pigmy brahmin, and requested of the giant as much territory as he could measure with three footsteps. The favour was granted. The dwarf then assumed his god like power, and with one step covered the earth, with a second he overshadowed the firmament, and then demanded room for the third. Thus he deprived the giant of his kingdom, and forever held him debtor.

Purushoo-Ram Avatar.

Purushoo-Ram was incarnate to destroy a thousand-headed giant, and persecuted the worshippers of the gods. The giant survived twenty-one assaults, and then was vanquished.

Rama-Avatar.

The other Rama-avatar was of similar origin, and overcame a giant, who had stolen the wife of Rama. An army of monkies was collected to regain the lady, who formed a bridge of rocks to Ceylon, who passed over and subdued the giant.

Kishnu Avatar.

Kishnu, or Crishna avatar destroyed several impious giants, in the form in which he became incarnate.

Buddha Avatar.

Buddha became incarnate also to destroy giants; which he did not by violence, but by deceit. He preached a system of skepticism, which the giants embraced, and thus neglected to pray to the gods for power and strength to enable them to do mischief. Some of the Hindoos say, they are now under the iron age of this incarnation.

Kulkee Avatar.

Kalki, or Kulkee incarnation is still expected to come; and according to the *shasters* and brahmins, infidelity will increase till almost all hope shall perish; when, however, a few faithful worshippers will remain, and at length *Vishnu* will descend from heaven on a white winged horse, and placing himself at the head of the faithful few, he will do away infidelity and convert this iron age into a gold one.

To the early superstitions of India, the worship of Brahma succeeded, which was invented by the Brahmins, so celebrated in ancient times for their wisdom and sanctity, who were long anteriour to the composition of the Vedas, which seems to be a plan to combine in one system, the different elements of the popular superstitions. But some have thought the latter to have been the original religion of India.—No bloody sacrifices were offered to Brahma, because this deity being supposed the Creator of the world, he could not delight in the destruction of the beings he had made. At present there are no temples to this god in India. An annual festival, however, is celebrated to his honour, when an image of god, with *Siva* and *Vishnu* on the left, is worshipped by songs, music and dancing; and then the three gods are thrown together into the Ganges. The superstitious notions of the origin of this god are too ridiculous and too obscure to be mentioned.

On the decay of the worship of Brahma, two sects have sprung up in India; one is composed of the worshippers of *Siva*, the other of those of *Vishnu*. The sect of Siva is considered the most ancient, and the worship of this god is more widely extended than any other. He is represented in various ways; sometimes as a silver-coloured man, with five faces, and in each face three eyes, one of which is in the forehead. He is seated on the lotos flower, and clothed with a garment of a tiger's skin. Sometimes he is depicted with one head, but still with a third eye, with the figure of a half moon on the forehead, riding on a bull, naked and covered with ashes, his eyes inflamed with intoxicating drugs; in one hand he carries a horn, in the other a drum. Another form of *Siva* is the lingam, a smooth black stone almost in the shape of a sugar-loaf, with a rude representation of the Yoni projecting from its base. It is under this symbol that Siva is most frequently worshipped. Innumerable temples have been erected in his honour throughout Hindostan, where the Yoni Lingam, (the symbol of the vivifying, generative power of nature) is the only image worshipped. *Siva* is sometimes worshipped under the appellation of time, the great destroyer, in which form he is propitiated with bloody sacrifices. In this character, his image is that of a smoke-coloured youth with three eyes, clothed in red garments, with a chaplet of human skulls about his neck. This god is supposed to be a personification of the principle of life, which in passing from form to form, first animates, vivifies, and developes, and then wears away and destroys the sheath in which it is enclosed. It is the material principle which pervades the universe, considered as distinct from the great intellectual first cause.

The worship of *Vishnu*, which may be considered perhaps, as a reformed Sivaism, has succeeded to that of the destroying and renovating god: but in proportion as it is more refined and spiritual, it is the less adapted to replace the popular superstition. The titles and attributes of *Vishnu* are those of redeemer and preserver of all things. The other gods are said to stand in need of his assistance. This title makes it proper for him to assume different forms, which the Hindoos call *Avatars*, which signifies metamorphosis. These *Avatars*, or incarnations of *Vishnu*, are almost infinite, as pretended; but ten, as before mentioned, are considered the most important: viz. the fish, the tortoise, the boar, the man-lion, the dwarf, parusurama, the —— rama, krishna, or kishnu, buddha and kalki. Nine of these are said to be passed, and the tenth is expected!

Stone images of *Vishnu* are made for sale, and worshipped in the houses of those who chose him for their guardian deity. There are no public festivals in honour of this god; yet he is worshipped at the offering of a burnt sacrifice, by mediation as practised by the Brahmins. No bloody sacrifices are offered to *Vishnu*. The offerings presented to him consist of fruit, flowers, water, sweet-meats, &c. He is revered as a household god, and is worshipped when a person enters a new house, and other times, to procure the removal of family misfortunes. The description of the heaven of *Vishnu* is exceedingly gorgeous. It is 80,000 miles in circumference; and formed entirely of gold. The

palaces are constructed with jewels, and all its pillars, architraves and pediments blaze and sparkle with gems. The crystal waters of the Ganges descend from the higher heavens on the head of *Siva*, and thence through the bunches of hair of the seven famous penitents, find their way to the plains, and form the river of paradise. Here also, are beautiful small lakes of water, on the surface of which myriads of red, blue, and white water-lilies with a thousand petals, are seen floating. On a throne glorious as the meridian sun, sitting on water-lilies, is *Vishnu;* and on his right hand the goddess Lakshmi, shining like a continual blaze of lightning, while from her lovely form the fragrance of the lotos is diffused through the heavens. The praises of the god are perpetually chanted by the beatified spirits who share his bliss, and the gods often unite their voices with those of the worshippers.

But enough of this absurd and ridiculous superstition; which is surpassed only, if surpassed at all, by the unnatural and incredible stories to be found in the Koran of Mohammed. How thankful should the Christian be, while he mourns over the errors of paganism, for the glorious light of the gospel, which requires a reasonable service, and makes known the only true God, and his anointed Messenger!

ELECTIONS.

Elections are rapidly descending, both as to the manner and the object, to the unfortunate condition of these occasions in England. There are parties, and we fear mere parties, though each indeed, professes to be governed by patriotic and honourable motives. Each professes to be friendly to liberty and the Constitution, to republican and whig principles: but each brands the other as opposed to whiggism, and as supporters of tory maxims. That many in each party are honest and sincere, there can be no reasonable doubt; nor can there be doubt of their wishes to maintain equal rights and equal liberty. But all the leaders are not entitled to this honourable credit. In some respects, and on some measures, they may and do probably really differ. But if they were seeking the welfare of the whole, "and the greatest good of the greatest number," they would not treat each other with so much rancour and injustice; but would be content with stating their views fairly and coolly. When men rail, they may justly be suspected of preferring party objects to the general good, and of seeking for victory, rather than for truth and justice. Twenty years ago, a similar spirit of bitterness and violence was manifested; and its fruits were very mischievous, and hostile to social intercourse. Mr. Monroe and Gov. Brooks, and some other good men endeavoured to quench or to allay that bad spirit—and for some time, it was truly "the era of good feelings." "We were all federalists and all republicans." But that happy era has gone by. The spirit of party is indeed, more bitter than ever. And in many cases there is a resort to personal abuse, which is dishonourable to any cause. And there is a disposition to mistate and misrepresent the opinions and views of political opponents. The true patriot laments this state of things, and sincerely wishes that there may be more candour and fairness, more regard for truth and justice, and more moderation united with firmness in support of republican principles; so that able and honest men may be chosen to places of power, and the noisy, the selfish and violent may be duly rebuked.

INTOLERANCE.

"We discover little knowledge of human nature," says Dr. Channing, "if we ascribe to *constitutions* the power of charming to sleep the spirit of intolerance and exclusion. Almost every other bad passion may be put to rest; and for this plain reason, that *intolerance* always shelters itself under the name and garb of *religious zeal.* Because we live in a country, where the gross, outward, visible chain is broken, we must not conclude that we are necessarily free. There are chains, *not made of iron*, which eat more deeply into the soul. An *espionage* of *bigotry* may as effectually close our lips and chill our hearts, as an armed and hundred-eyed police. * * * We say we have no Inquisition. But a sect, skilfully organized, trained to utter *one cry*, combined to cover with reproach whoever may differ from themselves, to drown the free expression of opinion by denunciations of *heresy*, and to strike terror into the multitude by *joint* and *perpetual* menace,—such a sect is as perilous and palsying to the intellect as the Inquisition. It serves the minister as effectually as the sword. One of the strongest features of our times, is the tendency of men to think and act in *crowds;* to sacrifice individuality, to identify themselves with parties and sects. Let us not forget, that *coalitions* are as practicable in *church* as in state; and that *minor* differences, as they are called, may be sunk for the purpose of *joint* exertions against the *common foe.* Happily the spirit of the *people*, in spite of all narrowing influences, is essentially liberal. *Here lies our safety.*"

The following are the oldest Princes in Europe.

Anthony, King of Saxony, was born in 1755.

Francis, Grand Duke of Mecklenburg Schwer, born in 1766.

John Joseph, Prince of Lichtenstein, born in 1760.

Frederick, Duke of Saxe-Altenburg, born in 1763.

Charles, King of Sweden, born in 1764.

William IV., King of Great Britain, born 1765.

Gregory XVI., Pope, born in 1765.

Frederic William III., King of Prussia, born in 1770.

Louis Philip, King of France, born in 1773.

Francis, Emperor of Austria, born in 1768—*dead.*

Louis, Landgrave of Hesse Homburg, was born in 1770.

Frederic IV., King of Denmark, born in 1768.

William I., King of Holland, born in 1772.

He is a temperate man whose *reason* rules his appetite: and he is an intemperate man whose *appetite* rules his reason.

THE COLONIZATION OF FREE NEGROES.

The *Colonization* of free negroes on the coast of Africa, commenced in 1787, at Sierra Leone, by the English. This place is in North latitude 9°; and is bounded on the South by Liberia, the Colony founded by citizens of the United States, in 1820, for a similar purpose. The chief town in Sierra Leone, is called Freetown, and has nearly 5,000 inhabitants: but there are several other large and thriving villages in the colony. About 20,000 recaptured negroes have been placed here; together with about 1,200 slaves taken from the United States during the war of the revolution, and several hundred Maroon negroes from Nova Scotia. The climate has proved unhealthy; but at the last accounts, the Colony was in a prosperous state.

The chief towns in Liberia, (which extends 150 miles along the coast, and a considerable distance into the interior,) are Monrovia, Caldwell, and Millsburg; the former has 1,000 inhabitants.

The federal government sanctions and favours the colony. The number of free blacks and emancipated slaves from the United States removed to Liberia, up to 1828, was 1,200. It is now said, that the number amounts to upwards of 3,000. There are, also, some small tribes of the natives within the territory. The articles of trade to be obtained and exported from Liberia, are rice, coffee, wax, palm-oil, ivory, hides, tortoise shells, &c. The commerce is increasing; and the Colonists employ many of the natives. Schools have been established, religious worship and instruction is regularly enjoyed; and there are other indications of a civilized and religious society.

The object of the Colonization Society is highly laudable; and promises extensive and lasting blessings to Africa. Those who descended from native Africans, and are of good moral and christian character, will be likely to live in peace with the present inhabitants, and to initiate them in the arts of civilization, and the knowledge of the gospel. And as religion and civilization extend, the slave traffic will be discouraged and decline. None but the sober and industrious should be sent to the Colony; for every thing depends on the character and example of the early settlers. There will probably be no want of settlers; for every year, more or less of the slaves in the southern states will be liberated, if they can be sent out of the country; and a place, like Liberia, ready to receive them and give them proper and useful employment.

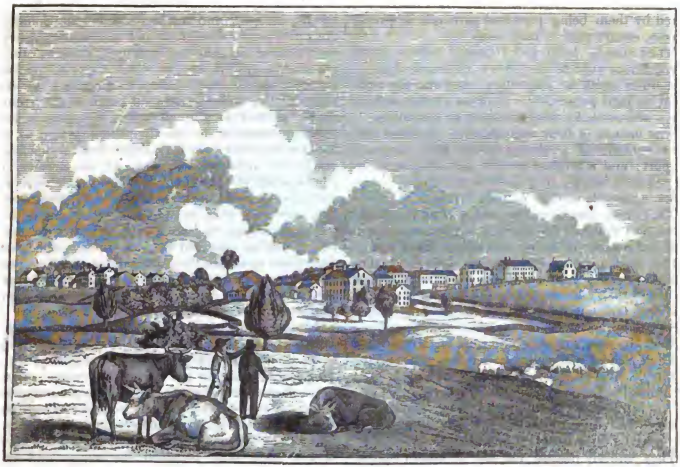
In 1534, the whole Bible was published in the German language, by Luther. In 1535, Coverdale printed at Zurich, the first entire English Protestant version of the Bible. Two English versions had before appeared, in the fourteenth century, (published or circulated, but not printed;) the first was that of Wiclif. The New Testament was first printed in English, in 1526, by Tindal: it was a translation from the original Greek. But the whole impression was bought up and burnt by the Bishop of London! The following is a specimen of Coverdale's translation—"The very heavens declare the glory off God, and the very firmament sheweth his handie worke. One daye telleth another, and one night certifieth another. There is nether speach nor language, but their voyces are herde amonge them. Their sounde is gone out into all landes, and their wordes into the endes of the wordie.—The lawe of the Lord is a perfecte lawe, it quickenethe the soule. The testimony of the Lorde is true, and giveth wisdome even unto babes."—This version was presented to Henry VIII., and he gave it to some Bishops to examine. They detained it a long time, till the king sent for them, and demanded if it was correct. They said it had some faults. He then asked if it contained any heresies, and they said, they had found none—Then said Henry, in God's name, let it be sent abroad among the people. The alarm and anger and vindictive cruelty of the popish party, were stirred up by this measure: but the light of scripture discovered the darkness of the times,—ignorance was detected, truth was separated from error, and religion distinguished from superstition.

"The pen of Wiclif made the Bishop of Rome tremble on his throne. His writings, carried into Bohemia by a native of that country, who had studied in England, made John Huss a reformer; and the sermons of Huss, found by Luther, first opened the eyes of that bold reformer. Writings had but wings, the *press* had the speed and force of lightning. It sowed Wiclifs in every land, and raised up Husses and Luthers a hundred fold."

Suttees.—By a document lately published in England, it appears that in February last, a suttee of most atrocious character, had taken place at Admednugger, when *five* unhappy females were burnt to death, to propitiate the manes of the deceased Rajah, a drunken profligate, who had a few days before his death married one of them. They were compelled to this sacrifice under circumstances of the most flagitious atrocity. The Directors of the East India Company promised to adopt measures for preventing such shocking cruelties in places under their jurisdiction.

New method of producing heat.—A mixture of water and oily matter in a certain proportion, projected on fire, produces a flame, the heat of which is very intense. The flame will languish, if the water be in excess, and if in too small a quantity, smoke is produced. For one measure of tar, it is necessary to employ one and a half measure of water: fifteen pounds of the oil of turpentine, mixed with fifteen pounds of water, and projected on twenty-five pounds of New Castle coal, produces as much heat as 120 pounds of this coal.—*Journal of Arts and Sciences.*

Personages now in England from the East.—Mr. *Honigberger*, a native of Transylvania, who has been several years a resident in the *Pewjal*, has distinguished himself by some discoveries of Indo-Grecian antiquities, and has brought a very valuable collection of coins and other relics from North Western India. Another remarkable personage is *M. du Bois de Jancigny*, who has come on a special message from the king of Oude, with his *solid* golden presents to the king of England.



THE VILLAGE OF THE UNITED SOCIETY OF SHAKERS, IN CANTERBURY, N. H

This Village is located in the northeasterly part of the county of Merrimack, on the main road from Concord to Conway, twelve miles from Concord, on an eminence; at the foot of which, as you approach the village, is a spacious granite watering trough, from the bottom of which boils a bountiful and never-failing spring; furnished by the Society for the accommodation of travellers.

As you approach the Village, the first object is the Meeting House on the right, the only white building in the village, which stands a few rods from the road, at the head of a large open lawn.

On the left, stands the Trustees' Office, a new, spacious and elegant building of hewn granite, and pressed brick, seventy-two by forty feet in size. In this the Trustees reside, and transact all the regular business of the family. To this office customers, strangers, and visitors are to apply, who wish to buy or sell, or for the transaction of any business with the Society whatever.

All sales and purchases are made by the Trustees, who are the general Agents of the Society for transacting all their secular matters; and in whom the fee of all the real estate in trust is held.

The total number of dwellinghouses in the Society is ten, mostly of wood, painted yellow. There are also many other large and convenient wooden and brick buildings, occupied as workshops; also store houses and graneries, wood houses, barns, &c. which are spacious, and convenient.

The whole number of buildings in the Village is about one hundred; many of which are very valuable, composed of the best materials, and built in a faithful and durable manner. Among these is a convenient school house, one spacious grist mill, two saw mills, three carding machines, one fulling mill, one trip-hammer, five mills for sawing firewood, three turning mills, and two tanneries, besides various other machinery. These buildings are all laid out and constructed in a regular, plain and elegant manner, which gives the Village a very fine appearance.

The Society own and occupy upwards of 2,500 acres of land, which though stony is a good deep soil; about 2000 of which lie in one body, enclosed with good stone wall and cross-fenced with the same materials. Grass, corn, grain, and potatoes are raised in abundance.

The Society was established in this town and vicinity in the year 1782, although the Church was not gathered till the year 1792, at which time the members collected into a more compact body, under the ministration of Elder Job Bishop who deceased December 5, 1831, aged seventy-one years. He was succeeded by Benjamin Whittier, who yet supplies that place.

They are industrious, frugal and temperate. They manufacture many useful articles for sale, which are very neat and durable; such as leather, whips, sieves, tubs, pails, churns, measures, rakes, brooms, trusses, snaiths, &c. &c. Their gardens are large and perhaps the most productive of any in the country. They raise and vend a general assortment of garden seeds, and spare no pains to furnish those of the best kind.

They also collect and prepare a variety of botanical herbs, barks, roots and extracts, which are prepared in the most faithful manner:—the Herbs and roots are neatly pressed in packages of a pound, and papered and labelled. All the medicines pre-

pared by them being pure and gathered in proper season, ensure them a very ready sale.

They usually keep about twenty horses, eighty cows, fifteen yoke of oxen, five to six hundred sheep, and other stock in proportion; and cut hay sufficient on their premises for their own consumption. They also annually slaughter forty or fifty swine.

The income of their manufactories, together with their agricultural products, yields their temporal support; and what they receive more than is necessary to their wants, they bestow to charitable purposes, agreeable to their church covenant.

They freely pay their proportion of all the public taxes, and share all the burdens of government, except the bearing of arms, which they deem incompatible with genuine Christianity; being, as they believe, directly contrary to the precepts and spirit of the gospel. So tenacious are they of this fact, that they not only refuse to bear arms, but decline even to receive pensions for their former military services, to which some of them are legally entitled.

Their School will compare well with any in the country. The English language is taught, and partly on the Lancasterian system. They are careful to furnish the School with good books, stationary, &c. so that their scholars who are disposed, may acquire a good education.

They entirely discard the use of ardent spirits, except occasionally in medical preparations, but drink some cider.

They are temperate and regular in all their habits; their food is plain and wholesome, avoiding all luxuries. They allow eight hours in twenty-four for sleeping.

The Society, from its commencement, has gradually increased in number, as well as in good order. At present it consists of about 240 members.

The number of deaths which have occurred in the Society since its first establishment is eighty: viz., thirty-three males and forty-seven females. Comparative ages as follows:—Under 10 years, 2; between 10 and 20 years, 5; between 20 and 50 years, 28; between 50 and 70 years, 19; between 70 and 80 years, 14; between 80 and 90 years, 9; between 90 and 100 years, 1; over 100 years, 2; average ages about fifty-seven.

As many false impressions and erroneous opinions are entertained, concerning the people known by the name of Shakers, in compliance with the request of its friends, we publish the following sketch of their religious tenets, furnished by one of the Society, which we have reason to believe correct.

In the first place, we observe, that among those who have appeared before the public, as informants of our religious faith and principles, but on whose statements concerning us no reliance can be safely placed, as many of them are wholly destitute of truth, are the writings of E. and P. Merrill, in their Gazetteer of New-Hampshire, which were afterwards noticed in a pamphlet, entitled "Collections," &c. published by Hill & Moore, Concord, 1822; Vol. I.—No. 1, pages 52, 53, 54. Also the account in Allen's American Biog. and Hist. Dictionary. Also, the statements of the Rathbuns, Taylor, West and others, as well as those of more recent date; viz. the accounts given of our Societies by Dr. Dwight, and one by Pr. Silliman. Some of the writings are slanderous and malicious misrepresentations of our religious faith and practice; others are more dignified, and in some respects, give an impartial and correct account according to the views of the writer.—How far either of the writers before alluded to and all others not here noted, have ignorantly or designedly misrepresented us, or how far they may have drawn their conclusions from disaffected apostates who have left the Society, in consequence of having been foiled in their views of obtaining pre-eminence in the Society, from common report, or from any other incorrect source, we will not presume to judge; but in justice to ourselves, and an impartial and discerning public, we feel bound to notice these productions, and caution all who are desirous of obtaining correct information of us or our principles, not to credit the common reports of us from any source whatever.

Among all the accounts of the "*United Society*" that have ever yet appeared before the public, from under the hands of those who have apostatized from the Society, whatever the writers' pretensions might be, we have never seen one that has met our approbation, or that we could justly consider as entitled to the character of truth, honesty, or impartiality: And all who have drawn their accounts from such writers, have only deceived themselves and the public in so doing.

AN OUTLINE OR SKETCH OF OUR RELIGIOUS TENETS.

We, the members, constituting a religious community in the town of Canterbury, County of Merrimack, and State of New-Hampshire, commonly styled *Shakers*, first embraced our present religious faith and doctrines, and formed a Society in this town and vicinity, in the year 1782, through the instrumentality of Ebenezer Cooly, Israel Chauncey, and other ministers from New York. Societies were established in the States of New York and Massachusetts two years previous to this date, through the ministration of Mother Ann Lee, William Lee, James Whittaker and others, who came from Manchester in England, to New York, in the year 1774.

The appellation "Shakers," was given to the first leading characters of the Society, by their opponents, in consequence of their remarkable operations of *shaking* under deep conviction and irresistible power. Similar operations under the same influence, have been more or less manifest among us to the present day. And by divine agency we are taught and induced to lead a sinless life, contrary to our fallen propensities; according to the precepts and example of Him, whom we acknowledge to be the author of our faith and eternal salvation; and who said, "Follow me, or ye cannot be my disciple."

"If a man love me he will keep my sayings." Hence we appeal to the *life* and *doctrines* of *Jesus Christ* and his *faithful witnesses*, and to no other *precedent*, for the propriety of both our *faith* and *practice*. Therefore it is in obedience to his sayings that we abstain from all fleshly lusts, which war against the soul; from the rudiments and friendship of the world (which are not of the Father,) and live a life of celibacy and virgin purity. (See

Luke 20. 34, 35, and 1 Cor. 8. James 1. 27.) In obedience to his sayings we abstain from the political affairs of the world—decline to take oaths, to bears arms or accept posts of worldly honour, trust or profit,—refusing even to give our suffrages in the election of officers, either for civil or military trust. (Matt. 5. 34. John 18. 36.) It is likewise in obedience to his sayings, that we call no man on earth Master; nor do we seek to be called of men Rabbi, or Master.

Being aware of the great and numerous evils incident to society from the use of ardent spirits, and considering them injurious to the health, and intellectual faculties, as well as the moral character of man, we have for many years entirely discarded the use of all spirituous liquors; except in the composition of medicine when directed by competent judges. And, as we are friendly to every moral virtue, we cordially approve of the persevering efforts abroad, to extirpate the baleful use of ardent spirit; and to restore its degraded subjects to rational beings.

Another principle of the Society is to keep clear of debt, and to abstain from getting trusted on any terms, agreeable to the counsel of St. Paul to the Romans, "Owe no man any thing, but to love one another; for he that loveth another hath fulfilled the law;" which is maintained to the letter, and we thereby avoid paying interest money and other expenses attending the credit-system, and keep free and clear from all litigation in that respect; and having from the first organization of the Society adhered to this principle, and realized the benefits resulting therefrom, we confidently recommend it to others, as the surest, safest and most independent manner of transacting business.*

"A new commandment I give unto you, that ye love one another." It is evident from this and other passages of Scripture, that love is the greatest characteristic of the true church of Christ. Therefore in obedience to this new commandment, the temporal interest of the Society for more than forty years past, has been united in one joint compact, by the mutual consent and free choice of the members, who hold equal rights and privileges in all things pertaining to the same; without any difference on account of what principal or value any one has brought in, and thus consecrated; but, possessing all things in common, according to the example of the Apostolic Church at Jerusalem. Deacons or Trustees, have also been appointed by the Church, whose official duty it is, not only to provide for, and make distribution among the members, according as every one hath need, but also to make all just and lawful defence; to secure and protect the said joint interest, against all unjust claims or encroachments from without. (Acts 6. 3.)

Thus having had more than fifty years experience in this faith of self-denial, and upwards of forty in a joint capacity, we are conscious it is the true faith of the Son of God once delivered to the saints, and for which we earnestly contend. It is that faith which works by love and purifies the heart; and leads to that salvation from all sin, which our weary and heavy ladened souls had long sought in vain, among nominal christian professors. Obedience to this faith is that yoke of Christ which is easy—that burden which is light—that cross by which the enmity [carnal mind] is slain, and reconciliation restored; and in a word, it is that gospel of Christ which is the *power* of *God to salvation.*

In behalf of the Society:

Francis Winkley, Israel Sanborn, David Parker, } *Trustees for and in behalf of the Society.*

November, 1835.

Note. The Editor of the Magazine feels it to be his duty to the public to observe, that while he has no reason to doubt the truth of the above statement of the peculiar opinions and rules and practices of the *United Society* of Shaking Quakers, and while entirely willing to publish their account and apology, he does not personally vouch for its correctness or validity. He wishes to judge fairly and impartially; and thinks every sect should be heard in its own defence.

To a Correspondent from Decatur, Alabama, referring to an article in the Magazine for July, respecting the weight an elephant could carry, the Editor begs to say, that as the sentence reads, it might be set down very like a *whale story.* It is too evidently an error of press, to lead any to suppose it was our design to deceive the ignorant, or hoax the credulous. The error occurred in the absence of the Editor; the copy furnished being partly in figures and partly abbreviated. We must believe our correspondent too candid to apply *seriously* any hard names to us for such a mistake; especially when we assure him, that the mistake has given us much regret, and yet being so evidently an error, that any one could perceive it. The copy was probably one ton and 1700 wt. and not as printed in the Magazine. When we see an account of an *alligator* in the south of 170 yards in length, we shall consider it a typographical error, and not construe it into a design to deceive.

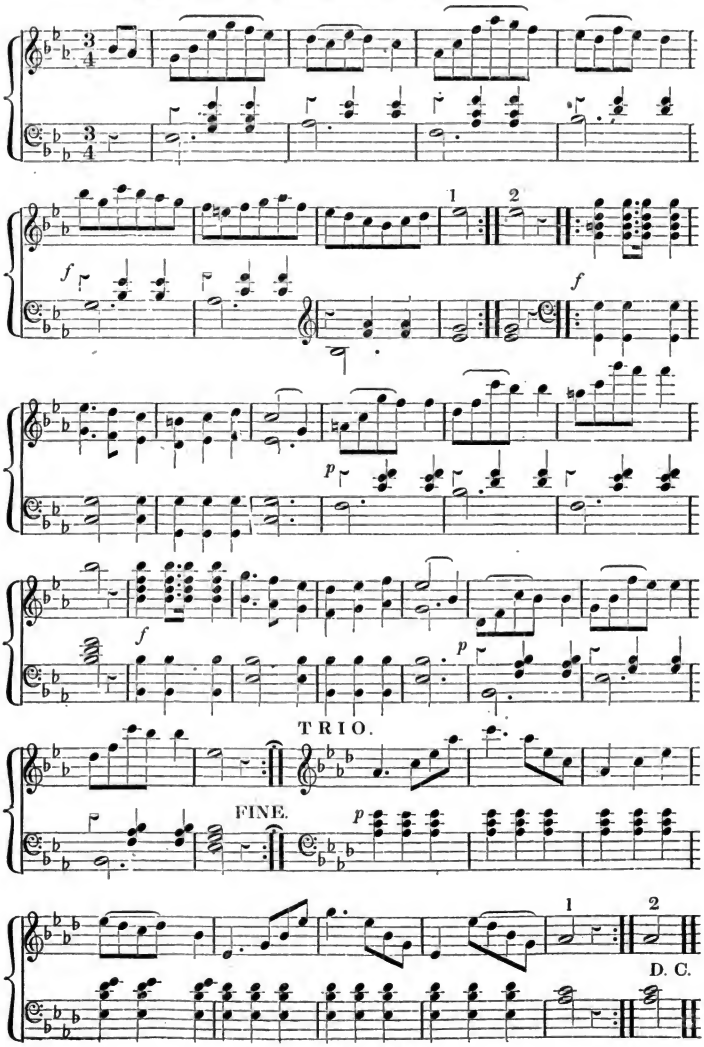
☞ The article on the Constitution of the United States in our last number, was not intended to excite controversy, but inquiry; not to create discontent, but to produce union. Our danger consists in pushing *federal* powers beyond the spirit and intent of the Constitution, or in denying the exercise of those clearly delegated, which would render the general government powerless, and leave us where we were under the old Confederation. The Union of the States can be preserved *only* by adhering closely to the Constitution; which was formed with great care and wisdom—which gives specific powers to the federal government for *general* purposes, and leaves and guaranties all other powers (indefinitely and unlimitedly) to the several State governments.

We should be happy to present our friends and patrons with more original and native poetry, especially as the Magazine is intended to be American in its character and matter: And we respectfully request the kind notice of the favoured ones of the poetic muse, who receive this work.

* The adoption and observance of this principle would be for the happiness of all other citizens. Editor of Mag.

LAKE ERIE WALTZ.

COMPOSED FOR THE AMERICAN MAGAZINE, BY CH: ZEUNER.



DECEMBER.

PERKINS, AND MACHINERY.

Jacob Perkins, who has been greatly distinguished for his ingenuity and mechanical skill, in various ways, was born in Newburyport, Massachusetts, July, 1766. His ancestors lived in that town, and Ipswich in the vicinity. At quite an early age, even before he had began his spelling-book, he discovered an inquisitive disposition. His attention was attracted by a watch, which he heard ticking, and he was desirous of knowing the cause of the noise. He was sent to a common public school, at the usual age, and attended till he was twelve years old. He was then put an apprentice to a goldsmith, and it is said, his fondness for the mechanic arts induced his parents to have him taught that trade. His master died when Perkins was fifteen, but he continued in the business and the shop of his late master, and was much occupied in making gold beads, then worn by females. His reputation was high for honesty and fidelity. He also engaged in making shoe-buckles, which were then much worn; and he discovered a new method of plating them, which gave him a profitable

business. Before the adoption of the present general government of the United States, Massachusetts had a mint for copper coin, and the Master of the establishment employed Mr. Perkins, then only about twenty-one, but of whose skill and ingenuity he had heard, to make dies, in which he fully succeeded. At the age of twenty-four, he invented the nail machine, which cut and headed nails by one operation. This was considered a very useful invention, and promised Perkins great profits; but he was deceived by speculators, who had no property, and by whom he lost all his property, and the fruits of several years' hard labour. He suffered much also by the creditors of the company.

Sometime after this, Mr. Perkins's talents were taxed to prepare a device for preventing the counterfeiting of Bank bills, which had become a very serious and extensive evil, and which most were at a loss how to remedy. He first made a stamp on the bills, which was of some benefit; for the stamp was seldom imitated. The check plate, so called, was then prepared, (1809) which proved the best preventive and security, which had then been used. Public prosecutors have said, they never heard of a good imitation of it. There was a law passed, requiring all the banks in Massachusetts to use this plate. Some years after, it was repealed, or disregarded by the banks, but to the regret of the most judicious citizens.

It has been said by Mr. Perkins's particular friends, that he felt and lamented the deficiency of his early education. The young men of his day, had not the advantages which are now enjoyed, when the physical sciences are taught in academies, and by lecturers in most of the towns in the Commonwealth. A knowledge of natural philosophy, and the mechanical powers might be acquired at the University; and by studying with some eminent individuals in the State; but few were able to meet the necessary expense.

After several years of employment at his trade, and in usual family concerns, Mr. Perkins discovered a method of softening and hardening steel at pleasure; which has been attended by several useful results, and it extended the field of his labours. The softness of copper-plates, which often required retouching, precluded the possibility, by these means, of producing a perpetual similarity in dies for bills, or other use; but this invention has effected the object practically, if not mathematically.

Mr. Perkins, we believe, was among the first, to maintain the compressibility of water. He had long doubted the correctness of the commonly received opinion. When he first announced it, and this he did not, till numerous experiments had satisfied him, it was almost wholly discredited, both in this country and in Europe. His doctrine is now, we think, generally admitted. His invention of the bathometer, to measure the depth of water, and his pleometer, to mark with precision the rate at which a vessel moves through the water, are founded on this doctrine.

Mr. Perkins resided several years in Philadelphia, where the arts, (twenty-five or thirty years ago) were much in advance of other places in the United States. Of late, Boston is becoming a powerful rival in this respect. About fifteen years ago, Mr Perkins went to England; probably in the hope of finding more able patrons, or a greater opportunity for improvement in his favourite pursuits. It was said at his departure, that he expected to be employed by the English government, in preparing plates to prevent the counterfeiting of bills of the bank of England. He has not been idle there. The Mechanic's Magazine owes much to him for ingenious papers published in its pages, from its earliest date; particularly relating to the power and uses of steam. But the English have not been ready to admit all his claims to discoveries in this respect. His proposed improvements in the high pressure and safety engines, which were to save fuel, have not been so useful as expected. His claim to a "new method of generating steam," they say is not just: And his celebrated steam-gun requires an expensive apparatus. The Duke of Wellington doubts its utility.

The following account of an exhibition of the steam artillery, invented by Mr. Perkins, is from an English publication, near the close of 1825:

"Soon after nine, numbers of military officers in carriages and on horseback, alighted at the manufactory. They were soon followed by the Duke of Wellington, and immediately afterwards, the discharge of steam, which had been previously occasional and of comparatively slight force, commenced with a continued roar, resembling the loudest thunder we ever heard. The group of eminent persons then assembled, consisted of his Grace, the Master-General of the Ordnance, and his Staff; the Marquis of Salisbury, Mr. Peel, Sir H. Hardinge, Lord Fitzroy Somerset, the Judge Advocate General, and many military officers of the highest rank; together with a committee of Engineer and Artillery officers, who it appeared had been officially appointed by the Duke of Wellington to examine into the merits of this wonderful specimen of human ingenuity and destructive power. The discharges of steam now became almost incessant for two hours, during which, its incalculable force and astonishing rapidity in discharging balls excited amazement and admiration in all present. At first the balls were discharged at short intervals, in imitation of artillery firing, against an iron target, at the distance of thirty-five yards. Such was the force with which they were driven, that they were completely shattered to atoms. In the next experiment, the balls were discharged at a frame of wood, and they actually passed through eleven one-inch planks of the hardest deal, placed at the distance of an inch from each other. Afterwards they were propelled against an iron plate one fourth of an inch thick, and at the very first trial the ball passed through it. On all hands this was declared to be the utmost effort of force that gunpowder could exert. Indeed, we understand that this plate had been brought specially from Woolwich; for the purpose of ascertaining the comparative force of steam and gunpowder. The pressure of steam employed to effect this wonderful force, we learnt, on inquiry, did not at first exceed 65 atmospheres, or 900 lbs. to the square inch; and it was repeatedly stated by Mr. Perkins that the pressure might be carried even to 200 atmospheres

with perfect safety. Mr. Perkins then proceeded to demonstrate the rapidity with which musket balls might be projected by its agency. To effect this he screwed on the gun-barrel, a tube filled with balls, which falling down by their own gravity into the barrel, were projected one by one, with such extraordinary velocity as to demonstrate that, by means of a succession of tubes, filled with balls, fixed in a wheel, (a model of which was exhibited,) nearly one thousand balls per minute might be discharged. In subsequent discharges or volleys, the barrel, to which is attached a moveable joint, was given a lateral direction, and the balls perforated a plank nearly twelve feet in length. Thus, if opposed to a regiment in line, the steam gun might be made to act from one of its extremities to the other. A similar plank was afterward placed in a perpendicular position, and in like manner, there was a stream of shot-holes from the top to the bottom. It is thus proved that the steam gun has not only the force of gunpowder, but also admits of any direction being given to it. But what seemed to create most surprise was the effect of a volley of balls discharged against the brick wall by the side of the target. They absolutely dug a hole of considerable dimensions in the wall, and penetrated almost one half through its thickness. We heard several officers declare their belief, that, had the balls been made of iron instead of lead, they would have actually made a breach through it—the wall was eighteen inches thick."

It is not intended to say any thing in derogation of the mechanical talents and ingenuity of Mr. Perkins. And yet several of his inventions, (if indeed they are entirely new) have not been so useful in practice, as his friends might have wished. The English may have been too reluctant in admitting his claims to important discoveries and improvements in physics; and what merit may be fairly awarded him for his inventions, are sufficient to establish his reputation as one of the most ingenious and philosophical citizens of the United States, of the present century.

NEW AND IMPORTANT INVENTION.

Among the many useful and scientific discoveries of the day, we are called upon to notice, particularly, one which is said to be of inestimable value and importance. Mr. J. C. F. Salomon, of Pennsylvania, obtained a few days ago letters patent from the United States for a *Safety Steam-Boiler*, so that any degree of pressure upon it could not produce its explosion. The Philanthropist will receive the glad tidings of this invention as the dawn of a better day for the navigator and merchant, and contemplating the saving of human life and limb from destruction by the application of this ingenious invention, will hail the inventor as a public benefactor. Every scientific man who has seen the model, we are told, pronounces it unequalled in its importance. We insert an extract of a letter on the subject of the Safety-Boiler, written to Mr. Salomon, by one of the most scientific mechanics of our country, and one, too, to whom the public is indebted for several valuable inventions in other branches of machinery.

"Dear Sir,—I have taken the liberty of addressing you on the subject of your newly invented Steam-Boiler, and I assure you the more I examine the principle and mode of its construction, the more confident I am that in every sense of the word it is preferable to any I have ever seen before, and for strength and durability it cannot be surpassed. It presents a greater surface for the fire to act upon than the common cylinder boiler, the heat will act with double the advantage to what it would on a round cylinder boiler. In short, I think when this principle of yours is fairly tested, it will appear better in practice than in theory. Every man of science will give it the preference. The same weight of metal I venture to say, cannot be put in any other form to contain as many cubic feet of water, and have the same strength. It is my opinion that it will be capable of resisting almost any pressure of steam that can be conceived of."

We understand that the ingenious inventor was not permitted to take out a patent without opposition, a claim for priority or invention having been alleged in behalf of another claimant. Mr. Salomon was, however, enabled to prove an earlier period of publication, and the arbitrators, to whom the matters in question were referred, gave their award in favour of him. This circumstance is another evidence of the very great importance of the invention; for even the approval of a plan of machinery, by a man of as much science and skill as Col. Humphreys, (the other competitor,) would go far in recommending it to attention.

A full test will, we are informed, soon be made of this invention, and it is boldly predicted that the Safety Steamboat Boiler will prove itself, if not the first, one of the first and most valuable inventions of the age.—*National Intelligencer.*

Tuesday evening, 17th of November, there was an unusually bright and extensive *Aurora Borealis*, which continued, with variations of extent and brightness, for four hours. It was noticed in various places in the New England States, and in New York. These phenomena are probably owing to sudden changes of weather, and a consequent change in vapours in the atmosphere.

A Diamond has been lately found in North Carolina, of the most rare and precious kind. It is already known that the State is rich in gold mines. If diamonds should be found there in large quantities, it will make the State as valuable as any others, notwithstanding its pine plains and sandy soil.

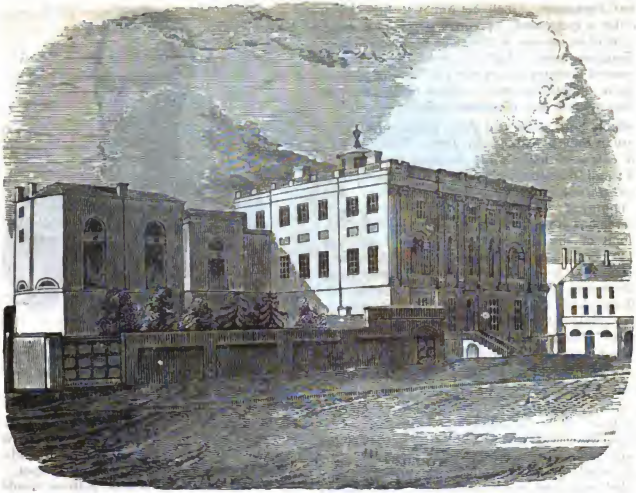
There is now living in Pittsylvania County, a female of the age of twenty-one years, only three feet in height, and weighing 233 pounds. She is free from deformity of any kind, except obesity; in other respects her limbs and body are well proportioned.

Proper time of Rising.—Among the curiosities of Apsley House is the truckle bed in which the Duke of Wellington sleeps. 'Why, it is so narrow,' exclaimed a friend 'there is not even room to turn in it.' 'Turn in it!' cried his Grace—'when a man begins to turn in his bed, it is time to turn out.'

NEW ZEALAND CHIEF, TOOI.

The Church Missionary Society in England has employed preachers, for several years past, at New South Wales and New Zealand. In 1817, one of the Missionaries, who had spent some years at New-Zealand, returned to England, and brought with him *Tooi* and another Chief from that place. The climate of England proved unfavourable to their health, and they soon returned to New-Zealand; not however, without some literary and religious improvement. *Tooi*, as well as the other Chief, and indeed most of the tribe, are represented as irritable, and easily provoked: And notwithstanding his professions, since his return to his own country he has been engaged in fighting with individuals, and with another tribe on one of the islands of New-Zealand. *Tooi* died in 1825; having exhibited the contradictory traits of character, of violent temper and gentleness, of love of war and tender feelings to friends, of gross immorality and apparent contrition for his sins: like most others of our race, who are not habitually under the influence of religious principles. He was only twenty-five when in England; and showed a good deal of natural shrewdness and discernment. Towards his teachers, and the members of families where he resided, he manifested great kindness and regard. He professed gratitude to his instructers; but often disregarded their wholesome counsels. He was another proof "that savages and Indians will be savages still, after great efforts to tame and reform them." When New-Zealand was discovered by the Dutch in 1642, the savages were very dangerous, killing all those who ventured to land. They were then believed to be cannibals; they certainly were very ferocious and cruel. They are of athletic frame, and rather taller than Europeans; being generally above six feet in height.

The number of Seamen in the United States, employed in various ways, on foreign voyages, fishing and coasting, is over one hundred thousand.



UNIVERSITY OF PENNSYLVANIA.

This very elegant building, of which a southeast view is here presented, is in the city of Philadelphia, on Ninth Street, between Chestnut and Market Streets, and in some degree a retired part of the town. It was erected in 1796, and intended as a residence for the President of the United States, and more particularly from respect to General Washington, then the Chief Magistrate, who passed most of his time in Philadelphia, at that period the place of the meeting of Congress. It was soon after purchased by the Trustees of the Pennsylvania University; and in 1802, was occupied for the use of that ancient Seminary. In 1807, when the pupils increased, a large wing or addition was made to it, on the south side. The whole building is quite spacious, and its internal arrangements are said to be very convenient. The Medical department is large, and justly celebrated for its teachers and professors. It was chiefly for their convenience that the wing was added. There are now four distinct faculties in the University: That of arts, the physical sciences, law and medicine. Efforts are making to have all the departments filled by able teachers, as well as the medical, which hitherto has been particularly distinguished. Half a century ago, the Quakers and Germans, making a large portion of the population of the State, did not highly appreciate the benefits of human learning. The present generation judge better in this respect, and give greater encouragement to the means of education.

CONTRACTION AND EXPANSION OF WATER.

In the congelation of water, there is an anomaly, or peculiarity, which is not easily accounted for. The general law respecting fluids, is that of decrease in bulk as the heat is diminished: and *vice versa.* Steam and vapour occupy a far larger space than water in its natural state. But there is, in some measure, an exception to this principle. The greatest density of water is at 39° Farenheit. When highly heated, if water is cooled, it gradually contracts; and if the reduction be continued to the temperature of 39°, it finds its greatest density. But this law, or principle, appears not to operate at a greater degree of heat. A *reversion* or different effect takes place on a farther reduction of heat, and an expansion gradually takes place and continues down to 32°, when the water becomes solid. The rate of expansion is the same on each side of the maximum point which is 39°. The following explanation has been given; and to some appears satisfactory. The expansion is owing directly to heat, or an increase of caloric; but the contraction only indirectly. Increase of temperature, or heat, produces an expansive power, as an approach to the quiescent state *(inertiæ)* of cohesion; but a diminution of heat does not generate a contractile power, (in which case it would act directly) but only removes or lessens the power opposed to cohesion. Thus when highly heated water is cooled, it gradually (though not always very sensibly) contracts; and if the reduction of heat or temperature be sufficiently continued, it finds its maximum at 39°, as before suggested; yet on a greater reduction of temperature, there is (not a contraction, but) a

gradual expansion, which continues to 32°, when the water is congealed, or converted into a solid. The rate of expansion is the same on both sides of the maximum point: And this similarity of rate is in favour of the supposition of a similarity of course: Yet it is difficult to conceive how either heat or cohesion operate as a *divellant* agent.*

Probably both solids and fluids follow an increasing rate in their expansion by heat. Each portion which enters a body must weaken the cohesive power; and therefore will render the operation of the next portion introduced of more efficacy. Let 1000 represent the attraction, or cohesive power, one increment of heat will be as 1000—1=999. The next unit of the divellant agent, i. e. heat, will have to operate only on 999, and will therefore produce an effect greater than the first, in proportion of 1000 to 999, and so on in continued progression. It follows then, that the cohesion, or attractive force, of solids is less at a high than at a low temperature. Hence also arises, the difference between the cohesion of the same solid body in different states, or at different degrees of temperature.

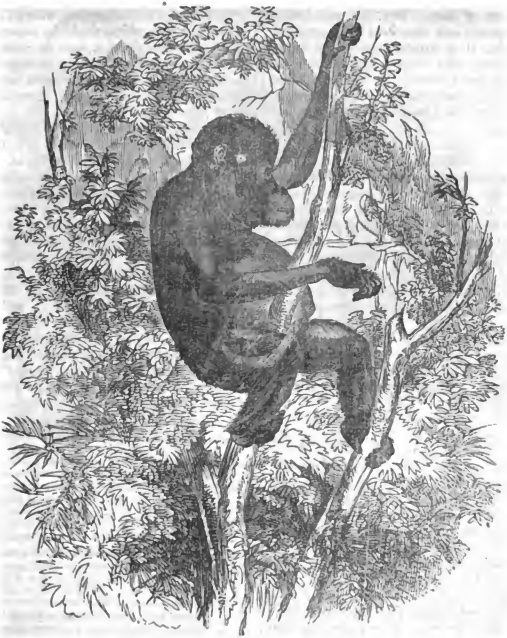
One reason, however, given for the expansion of water when congealed, apparently contrary to the laws of heat (or for its filling a greater space, as it does when ice causes a vessel to burst) is, that there are many interstices in the ice, or cavities containing air, which prevent an absolute solidity in the congealed mass, and increases the bulk. Ice could not float in water, or be borne up by it, as we know it is, if it were not specifically lighter than water. And it would not be lighter, (the bulk being the same,) if it had not pores or interstices, according to the statement here given. Nor is this phenomenon altogether peculiar to ice. Glass is a very hard or solid body, in the common sense of the term; but it has numerous interstices or pores, as otherwise it could not transmit the light.

It is often asked, what is the cause of the bursting of a vessel when the water is congealed. The answer must be, that the ice requires more space than the water did in a fluid and warmer state; and that it expands horizontally as well as perpendicularly; and that in being converted into ice the air is mixed with it, or insinuates itself into the mass as it is congealed. The upper surface of the water, being most exposed to the cold, is first congealed, and it expands and rises. As the water continues to freeze, having no way to expand at the top of the vessel, by reason of the ice, the expansion continues and the vessel bursts. It is not then the increase in bulk, or expansion of water, (when the heat is sufficient to melt the ice,) which causes the bursting or cracking of a vessel, but it is owing as above stated to the expansion of the water as it becomes congealed, and a quantity of air uniting with it.

* The celebrated Newton was one of the first experimental investigators of the nature and properties of heat; and he asserted as one of its laws, that when the temperature of a body exceeds that of the surrounding medium, if the times of cooling be taken in arithmetical progression, the reductions of temperature proceed by a geometrical series. But it has since been found that this law, or rule, is not strictly correct; for when the temperature is very high, the rate of cooling is faster than the law would indicate.

SIR HUDSON LOWE.

This British Officer was the Governor of St. Helena, while *Napoleon Bonaparte* was confined on that Island. The government of England has been considered as acting with undue severity, and even with dishonour, in transporting the deposed Emperour of France to that solitary place, when he had voluntarily surrendered himself into their hands; and keeping him by force in so desolate a spot. The excuse was, that the peace of Europe would not have been secure while he was at large, to adopt projects of ambition, however desperate. He had once left Elbe, where he had been banished, and filled all Europe with terror and confusion. Had he been suffered to remain in England, or to have retired to America, he might have again disturbed the repose of the world. But we shall not undertake to give an opinion of the policy of England in the confinement of Napoleon. The duty of guarding him was assigned to Sir Hudson Lowe, a brave and honourable man, as the British officers generally are, but strictly obedient to the orders of the government, whatever rigour or severity it might require. There is no evidence that the English Governor was wanting in humanity. The brave are usually benevolent and kind; but he was faithful in the discharge of his duty, and that duty was to watch the imperial prisoner, and to guard him with great strictness. In the performance of this service, he was obliged to deny Napoleon that degree of recreation, or that extent of excursion, which he and his friends desired, and might have thought necessary to his health. Whatever of rigour or severity, there was in the treatment of Napoleon, it seems proper to charge it to the mistaken policy of the British government, rather than to a cruel disposition in Sir Hudson. The Physician and attendants of the ci-devant Emperor, did complain of severe treatment, and that degree of watchful interference on the part of the British, which was irritating and uncomfortable to the prisoner: But the orders of the English government were strict and peremptory; and the Commander of the island was determined to prevent his escape, if possible; for which no doubt many plans were devised or proposed.



THE FEMALE OURANG OUTANG.—[SIMIA SATYRUS, VEL SATYRUS TROGLODYTIS.]

The Ourang Outang is not given for its beauty, (for it is truly a most disgusting animal) but for its peculiarity; and as it is one of the wonders of nature, it merits notice, as well as the most beautiful and attractive of animals. It is considered also as the link between man and the mere animal or brute creation; and yet we cannot be much flattered by being said to have any resemblance or relation to such ugliness. The Ourang Outang (or Orang Otang, as now often spelt,) is of the ape or monkey tribe; but in its form approaching nearer to the human species than any of the others. But we are not aware that it has given any indication of reason; or that it is more shrewd and cunning than some other animals. According to the best accounts, indeed, it is surpassed by the dog, the horse, and the elephant, the fox, and the beaver, in the faculty of reason, or of instinct. In its form even, it is like a human being, only or chiefly in its arms and hands, (except that the arms are much longer) and in its occasional erect posture. The upper part of the head also bears a resemblance to man; but the lower part is as unlike as that of a dog or a horse. The monkey and the ape are found in different countries, but the Ourang Outang only in Africa, and the southern parts and islands of Asia: And in Asia they are the largest and most terrible. They all inhabit warm climates, and seem unable long to survive a removal to a cold northern region.

The view here given, is of one only three years old; and is not so large as those which attain their ordinary stature. This is only three feet and a half, but some are five feet and a half. When in a cold climate, their first desire seems to be to find heat and warmth. They run near a fire-place, or get under bed clothes; and it is very difficult to remove them. They use all their strength to keep on their covering, if any attempt is made to take it off. They are easily tamed, if taken young; and generally less mischievous and ill-natured, than common monkeys and satyrs. To have a warm place or covering, appears more important to them, than even food itself, which consists of fruit, milk, &c. but they eat very little. This animal, like the various monkey tribes, is fitted to climb trees with a good degree of ease, but it is found on the earth more commonly, than they are.

The name sometimes given the Ourang, is "The wild man of the woods"; and many strange stories

have been related of them: But this was before they were fully known and described by naturalists. When full grown, they attack negroes, if found alone, and it is said, that elephants fear and shun them, rather than attack them. It is also related of them, that they sometimes seize negro women, and carry them into the forests and oblige them to remain with them.

ARTEDI.

John Artedi, a celebrated Ichthyologist, was born A.D. 1705, in the province of Angermania, in Sweden. From his youth, he had an ardent passion for all branches of natural history, but he excelled most in that of Ichthyology. In 1724, he went to the university of Upsal, where some years after he gained the friendship of the immortal Linne, (commonly called *Linnæus*) who narrates the principal events of his life, in the following animated terms.

"In 1728," says Linne, "I came from Lund to Upsal, and I wished to devote myself to medicine. I inquired who, at that university, excelled most for his knowledge: every one named Artedi. I was impatient to see him. I found him pale, and in great distress for the loss of his father, with his thin hair and dress neglected. He resembled the portrait of Ray the naturalist. His judgment was ripe, his thoughts profound, his manners simple, and his virtues antique. The conversation turned upon stones, plants, and animals. I was enchanted with his observations, equally ingenious and new; for at the very first, he was not afraid to communicate them to me with the utmost frankness. I desired his friendship, he asked mine. From that moment we formed a friendship, which we cultivated with the greatest ardour for seven months at Upsal. I was his best friend, and I never had one who was more dear to me. How sweet was that intimacy! With what pleasure did we see it increase from day to day! The difference, even in our characters, was useful to us. His mind was more severe, more attentive; he observed more slowly, and with greater care. A noble emulation animated us. As I despaired of ever becoming so well instructed in chemistry as he, I abandoned it; he also ceased to study botany with the ardour, to which I had devoted myself in a particular manner. We continued thus to study different branches of science; and when one of us excelled the other, he was acknowledged to be the master. We disputed the palm in ichthyology; but I was soon forced to yield, and I abandoned that part of natural history to him, as well as the *amphibia*. I succeeded better than he did, in the knowledge of birds and insects, and he no longer tried to excel in these branches. We marched together as equals in lithology, and the history of quadrupeds. When one of us made an observation, he communicated it to the other; scarce a day passed in which one did not learn from the other some new and interesting particular. This emulation excited our industry, and mutual assistance aided our efforts. In spite of the distance of our lodgings, we saw each other every day. At last I departed for Lapland; and he went to London.

"In 1735, I went to Leyden, where I found Artedi. I recounted my adventures: he communicated his to me. He was not rich, and therefore was unable to be at the expense of taking his degrees in physic. I recommended him to Seba, who engaged him to publish his works on fishes. Artedi went to join him at Amsterdam.

"Scarcely had I finished my *Fundamenta Botanica*, before I communicated it to him. He let me see his *Philosophia Ichthyologia*. He proposed to finish the work of Seba as soon as possible, and to put the last hand to it. He showed me all his manuscripts which I had not seen: I was pressed in point of time, and began to be impatient, at being detained so long. Alas! if I had known this was the last time I should see him, how should I have prolonged it! Some days after, as he returned to sup with Seba, the night being dark, he fell into the canal. No one perceived it, and he perished. Thus died this great ichthyologist by water, who had ever delighted in that element. He bequeathed to me his manuscripts and his books."

The first edition of his works was published by Linne in 1738, and the second, which is the most valuable, in 1792.

THE SNOW.

The silvery snow! the silvery snow!
Like a glory it falls on the field below;
And the trees with their diamond branches appear
Like the fairy growth of some magical sphere;
While soft as music, and wild and white,
It glitters and floats in the pale moonlight,
And spangles the river and foam as they flow!
Oh, who has not loved the bright beautiful snow

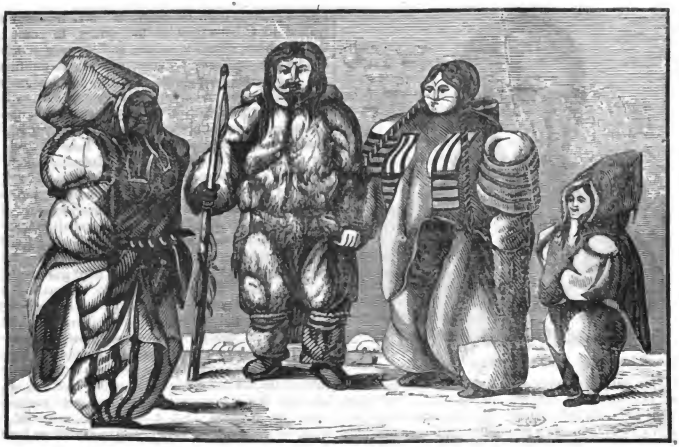
The silvery snow, and the crinkling frost—
How merry we go when the earth seems lost:
Like spirits that rise from the dust of Time,
To live in a purer and holier clime!—
A new creation without a stain,—
Lovely as Heaven's own pure domain!
But ah! like the many fair hopes of our years,
It glitters awhile—and then melts into tears!

THE SNOW BIRD.

The birds, when winter shades the sky,
Fly o'er the seas away;
Where laughing isles in sunshine lie,
And summer breezes play.
And thus the friends that flutter near,
When fortune's sun is warm,
Are startled if a cloud appear,
And fly before the storm.
But when from winter's howling plains,
Each other warbler 's past;
The little Snow Bird still remains,
And chirraps 'midst the blast.
Love, like that bird, when friendship's throng
With fortune's sun depart,
Still lingers with its cheerful song,
And nestles on the heart.

LIGHTS AND SHADES.

The gloomiest day hath gleams of light—
The darkest wave hath bright foam near it:
And twinkles through the darkest night,
Some solitary star to cheer it.
The gloomiest soul is not all gloom:
The saddest heart is not all sadness:
And sweetly o'er the darkest doom,
There stands some lingering beam of gladness.
Despair is never quite despair,
Nor life, nor death the future closes,
And round the shadowy brow of care
Will Hope and Fancy twine their roses. HEMANS.



A GROUP OF ESQUIMAUX INDIANS.

The Esquimaux constitute a very widely diffused race, occupying all the shores of the northern ocean, both of America and Asia. They are found along the whole coast of the American polar sea, and in the channel near Behring's Straits. The Samoides and Kamtschatdales in northern Asia, appear to be of the same family. A similarity of visage and figure, huts, boats and instruments, in character, habits and mode of life, might have been produced by the common pressure of the same peculiar outward circumstances. The affinity of speech, however, which is such as to prove the dialects of all the Esquimaux to be mere varieties of one common language, affords a clear proof that an original race has spread over the whole range of those immense and desolate shores. This migration must have been facilitated by the vast continuity of coast which stretches along the Arctic ocean (which late discoveries show to be of immense extent) and which is not equalled in any other quarter. Hence, probably, the Esquimaux, at distant periods, connected the old and new continents; which at all other points were then unknown to each other. In America, they are found from Behring's Straits to the Labrador coast; from 55° to 165° longitude, and from 50° to 75° latitude; and in a very great extent of territory in the north of Asia. Since the year 1765, portions of these people have been visited by Moravian Missionaries; and some of them have been improved by their labours.

The Esquimaux differ in many respects from the North American Indians, early found in New England, and those now remaining in the western parts of the United States, Mexico, &c. No doubt the climate, which they inhabit, and which exposes them to severe cold and to peculiar modes of living, has had an influence on their form and features. They are lower in stature than the other Indian races, as well as Europeans. Their height is seldom more than five feet and five or six inches; but the trunk of their body is thick, while the extremities are small, especially the hands and feet. The face is broad and flat, the nose small, and sunk deep. Their visage presents the peculiar form which the face assumes in intensely cold weather. The expression of the female countenance is often agreeable; and but for dirt and grease they might be called handsome. On account of the cold climate they inhabit, their dress is more ample and prepared with more care than is usual among other savages. That of the men consists of a double coat of deer skin, and a spacious hood is raised to cover the head. They also cover their limbs with skins, quite to the knee to overtop their boots. The female dress is of the same materials, and they are very fond of *wearing breeches*. They also wear boots of a large size, which are a hindrance to walking with speed. They carry a large quantity of goods and sometimes their children in their boots; and shelter within them whatever they take from others without leave.

A census has just been taken of the City of Boston, which gives the number of inhabitants to be 78,000. In 1830, there were 61,400; and in 1820, 43,300; which gives an increase of 19,000 in the last five years; and in fifteen years, (since 1820) an increase of 37,000. In 1810, it was only 33,000, and in 1790, only about 20,000. The increase of wealth is supposed to be in a still greater proportion. The Banks in the city are twenty-nine and the Insurance Offices twenty-nine also.

ELI WHITNEY.

This individual gave early indications of mechanical and inventive talents, for which he was afterwards so highly celebrated. His father was a farmer in Westborough, Massachusetts, and was not able to give the son more than a common education. But Mr. Whitney was desirous of the advantages of College, and at the age of twenty-three entered the University in New Haven. He received the honours of that Seminary in 1792; and soon after went to Georgia, in the expectation of keeping a private School. In this expectation he was disappointed; and became known to Mrs. Greene, the widow of General Nathaniel Greene. By her hospitable attentions he became acquainted with some rich planters, who were desirous of some method of cleansing the green seed cotton, or of separating it from its seed, and who said it would be of incalculable benefit to the cotton growers. Mrs. Greene informed them that young Whitney had an ingenious and mechanical turn of mind, and might invent something useful. They spoke to Whitney on the subject, who replied, that he had never seen cotton, or cotton seed in his life. It was not then the season for cotton in the seed, but he searched in the warehouses where cotton was kept and found some in that state. He then engaged, with such rude materials and instruments as he could procure, to form a machine for the purpose of separating the seed. In a few months, the machine was so nearly completed as to leave no doubt of its success. It was soon examined by some of the cotton growers; and they were astonished to find that more cotton could be separated from the seed in one day by the labour of a single hand, than could be done in the usual manner, in many months. The report of the invention soon spread through that State. The planters and others were eager to see the machine, but Whitney declined showing it, as it was not entirely completed, and as it might be imitated by others, and he deprived of the benefits of a patent. But some lawless individuals broke into the building and carried off the machine. Thus several machines were constructed with very little deviation from the original. Mr. Whitney returned to Connecticut in the spring, to complete the machine, obtain a patent, and forward a number for sale to Georgia. But he met many difficulties in obtaining a patent; and the clandestine use of his invention, imperfect as it was at first, when taken from him by force, were very serious disadvantages, in a pecuniary view. He afterwards disposed of the right to the State of South Carolina, for that State, for fifty thousand dollars; which he said was a 'mere song,' compared to the real value. North Carolina also purchased the right for that State, and laid a tax for five years on every saw employed in ginning cotton. He soon after became engaged in lawsuits in Georgia, on account of violations of the patent laws; but his expenses were very great, *as every one knows who goes to law.* In 1812, Mr. Whitney applied to Congress for a renewal of his patent, in the hope of still receiving some substantial benefit from his invention. But the southern delegation generally, were opposed to it; which was the more unexpected, as his invention had proved of very great advantage to that part of the United States. A writer well acquainted with the subject says, "he did not exaggerate when he asserted, that it raised the value of the southern States from fifty to one hundred per cent." Judge Johnson observes, "if it should be said, that the benefits of this invention exceed one hundred millions of dollars, it can be proved to be true." Few men of genius have rendered so great benefits to their country by their inventions, who have been harshly treated and so poor remunerated. For practical men, who make new and useful discoveries usually meet a just and honourable reward, though learned philosophers are not duly appreciated in their labours.

Mr. Whitney engaged also in the manufacture of arms, in which he was more fortunate, as regarded the pecuniary profits to himself. Oliver Wolcott, when Secretary of the Treasury of the United States, who knew his worth, employed him in that business. "It is universally conceded, that his genius and industry greatly contributed to the improvement of the manufacture of arms, and indeed to the general advancement of arts and manufactures; for many of his inventions for facilitating the making of muskets were applicable to most other manufactures of iron and steel. Mr. Whitney died in 1825, eight years after his marriage. He had a mild and happy disposition, was a kind husband, and fond of the innocent prattle and sports of children. In his person, he was much above the ordinary size, but of a dignified carriage, and of an open, manly and agreeable countenance; and he possessed high and honourable principles, which uniformly governed his conduct.

The train of cars came up from Boston, one day in November in fifty-five minutes; being at the rate of thirty miles an hour. The engine used is a new one, made in this place.—*Lowell paper.*

It is stated in a late number of the Medical Journal, that common *cranberry juice*, applied externally, several times, is a specific cure for ring-worms

EMPLOYMENT OF LEISURE TIME BY THE YOUNG.

There seems to be a period, in the early part of most men's lives, which is not so profitably improved as it might be. It is an important period, and the character of a man very much depends on its being properly occupied. We refer not so much to professional men; for they must perceive the necessity of study, if they would be eminent or useful; as to the working portion in society, who labor a great part of their time for a living.

Our public common schools are on a good footing; and all may be taught the rudiments of knowledge, before they are fourteen years of age, unless their parents are criminally negligent in giving them an opportunity to obtain that degree of information which is now generally considered to be essential. But after this period, and this advantage, with a youth who must attend to manual labor for a subsistence, his literary, as well as his moral advancement depends very much on himself. And if he has duly improved the means of education afforded him, he has laid a foundation, on which he may erect a goodly superstructure. A perception of the value of knowledge, it is supposed, he has already acquired. His desire, as well as his duty, then, will be to make further progress. He may meet with difficulties and obstacles in his way: but these must be overcome; and they can be overcome by one of a resolute and persevering spirit. He will not have so much time for reading and study, as he may wish; but, if he is only ardent in his desire to cultivate his mind, he will often find hours which he may devote to it. He must learn to *redeem* time. Less must be given to sleep and to amusements. His business is exercise and recreation enough for him. Instead of eight hours for sleep, six will be found sufficient. And the hours thus saved must be given to study. Two or three in twenty-four, will afford opportunity for much reading in the course of a year.

The difficulty of procuring books is not now very great. In every neighbourhood will be found a library of useful books, which the generous owner will rather loan to a studious young man, than to have slumber on his shelves. And in most villages there are circulating libraries for the use of every one disposed to read. The key of knowledge is not in our country in the hands of a few, who would lock up books from the people, as was done three centuries ago. And a few volumes, well chosen and well studied, will contribute more to the improvement of the young, than a great number of the *common trash* of the day, or a hasty perusal even of those of a better character.

There is nothing fully understood without study: And youth is the proper season for application. Much depends also upon the character of the books, which the young read. They should choose books for profit rather than amusement; to acquire useful information, rather than to pass away time. A knowledge of our own language and of geography is important to every one. Mathematics richly merits a large portion of time. Ancient and modern history should be read; compends will be sufficient if judiciously made. But the history of our own country should be more closely studied. There is much in it to instruct and to improve. No one should be ignorant of the history of the nation to which he belongs. Every one is liable to be called on to legislate, or to give an opinion or a vote, on great constitutional questions. It is a shame for a republican to be guided wholly by others. He should be able to form a correct opinion, and to give a reason for that opinion. There are some books on theological subjects, not of a controversial character, which it would be useful to read. Such as Paley's Natural Theology, and his and others' evidences of christianity. Treatises on ethics and moral philosophy are highly useful; they will enable us to understand our own minds, their faculties, powers and capacity for improvement. Physics, or the study of the laws of nature in all their variety and branches, cannot fail to be useful; as the mind is enlarged and elevated thereby; and a sure preventive is furnished against superstitious and idle fears, at the same time that we are presented with abundant proofs of the infinite power, wisdom and goodness of the Creator. We shall see intelligent design and benevolent purpose every where displayed.

We repeat that there is much time for almost every one, from fifteen to thirty-five or forty, to devote to reading and study. And the occupation of it in study will save young men from expensive amusements and degrading habits, as well as lay a foundation for greater usefulness to their friends, and to society, for respectability in the decline of life, for self-satisfaction in retirement, in poverty, and in old age, when the common means of pleasure can no longer delight or gratify. B.

Mineral Magnetism is just now attracting attention in England, in consequence of experiments exhibited by a learned professor before the Royal Institution, by which it is shown, that magnetism, electricity, heat, and galvanism possess properties in common. The favorable effects of mineral magnetism are not indeed of recent discovery on the continent of Europe. In its primitive form it was employed as a remedy in some cases, before artificial magnets were known. "The amulets of former ages were of loadstone. And it was mineral magnetism probably, which gave occasion to the wonderful stories of animal magnetism. The theory on which the supposed *curvative* property of the magnet is founded is the close alliance of the magnetic fluid, which pervades the earth and man, with the nervous power of the animal system; and it is said to operate by quieting irritated nerves and giving strength to those which are weak. The whole catalogue of nervous affections comes under its influence. Its action is produced by directing a magnetic current through the diseased part."—The most powerful magnets are also made by the advocate of the system in a few moments. It has heretofore been considered a powerful magnet which would lift its own weight; but some prepared by him sustain *ten times* their weight. And he gives it a *permanent* power of pure magnetic attraction, without the aid of the galvanic battery.

SILKWORMS.

DIRECTIONS FOR RAISING SILK WORMS FROM AN OUNCE OF EGGS.

The eggs of the silkworm that are of a yellow colour in the spring, should be rejected as useless. The other eggs are to be placed in a room warmed by the sun, at the time the mulberry trees begin to unfold their leaf-buds. The apartment in which they are placed for hatching must be particularly dry. Care must be taken that the sun's rays do not reach them, (or the worm in any stage of its existence.) In this room the eggs will be hatched in about eight or ten days; before which there should be prepared tables, or shelves, or wicker draws, sufficient to afford the space of seven feet four inches square, ready for the reception of the worms as soon as hatched.

The following are the signs of hatching; the ash-gray colour of the egg grows bluish, then purplish, then gray with a cast of yellow, and finally of a dingy white. When the eggs become of the last mentioned colour, the worm is formed, and may be seen within the shell, by the aid of a glass. They should then be covered with white paper with holes pierced in it. As soon as the worms climb through the holes and appear on the upper surface of the paper, small twigs of mulberry, with a few leaves on them, should be laid on the paper to collect them. If they do not find food they will wander away, and may be lost. Their proper colour is dark hazel or chestnut. If red at their coming out, the eggs are bad, or have been ill kept. Worms of this colour should be thrown away, since they do not produce cocoons.

A stock of leaves should be in the house sufficient for several days, to secure food in the event of wet weather. Be careful not to expose the worms to the smell of tobacco. It is better to keep those that hatch each day by themselves. It will be better, though not perhaps indispensable, to have artificial means of producing heat, in case any cold or rainy weather should set in.

Those that have the means of extending the spaces allotted, may do so to advantage, for the more room the worms have, the better they eat, digest, &c. Any sudden change from heat to cold and vice versa, is highly injurious. Some circumstances may modify the proportions of food specified; but the cultivator must be supposed to have intelligence enough to judge in such cases. Overfeeding, as well as scanty feeding, must be guarded against.

A great object is to obtain the greatest quantity of fine cocoons with the least quantity of leaves. The more leaves there are (within certain limits) the greater will be the proportion of cocoons. But be cautious,—over-feeding must always be guarded against. It is not only a waste of leaves, but an injury to the worm.

The care required in its first four ages are neither many nor puzzling; yet on these, and particularly the first two, their health or feebleness depends, upon which is based success or failure.

The first two days after the worm has cast its skin, it eats sparingly, then it become voracious: but this hunger soon diminishes and even ceases. These occurrences are common to every age.

If not treated with care, when it requires it, it suffers, sickens and dies; therefore it is best to have an account of the daily food requisite for its health.

As a general rule, give the worms their daily food not in one, but four meals, dividing the time so as to allow six hours between each.

Again, in the early part of each age, each meal should be larger than the preceding, and in the last part of each age, each meal should be less than the preceding. It is better not to give at once even what is allotted for a meal, but to keep back a part a short time in order to give it when it is most needed. Sometimes, too, it is good to give a little food at intermediate times. The quantity of food specified, is for the whole day. In about one hour and a half the worm eats its portion, and then remains more or less quiet.

At the beginning of the fourth day many of the worms begin shaking their heads, which shows that their skin is too heavy for them. Some of them eat little, but keep their heads reared up, and toward the close of the day, most of them appear torpid.

During the time of changing their skins, they must not be disturbed. The tables, or whatever they may be, on which they are kept, should be cleaned before and after each moulting, until the fourth age; once during that age; before and after the fourth moulting; and every two days during the fifth age.

If the weather permits, gather the leaves several hours before they are given them, that they may lose their first sharpness.

Second age—the worms must not be lifted from their litter until they are nearly all revived. There is no harm in waiting till they are well awake and stirring, even should that be twenty or thirty hours. Third age—when nearly all the worms are roused and begin moving their heads, some having already left the litter, preparation should be made to remove them, that the spaces they have littered may be cleaned. Third day of second age; the leaves should be distributed in proportion as they are wanted, and with attention, because the greediness of the worm abates toward evening, and may show, by rearing their heads and not eating, that they are approaching the period of torpor, and some are already torpid. If between the moultings any worms should appear sick, they must be removed to another room, where the air is purer and a little warmer. As the worm grows, it breathes more freely, and its excrements are more plentiful, which makes it necessary that the air should be more frequently renovated. A sign that the worms have roused after their torpor, is an undulating motion of their head when blown upon horizontally.

To ensure the worms continuing of an equal size, particular care must be taken to distribute the food equally, that all may partake alike.

In the third age, we shall hear, when the worms are fed, a little hissing noise; this does not proceed from the motion of the mouth, but the feet.

When the worms lie too thick, the food is wasted, but when they have room, they will eat every particle of the leaf. Besides, when crowded, the action of their breathing tubes is hindered, which must materially injure their health.

Be careful not to give them branches with the *fruit on*. If they eat the fruit, they become sick.

The fifth age of the silkworm is the longest and most decisive. Should the worm die in the first age, the loss is trifling; but should they perish in the fifth age, it is considerable. We ought then, during this age, to be particularly careful of them; their litter must be cleared away often, and the air which they breathe kept fresh, and plenty of room allowed them.

After the fourth moulting the food should consist of the full grown leaves of the oldest trees.

On the third day of the fifth age, they could eat a larger quantity than is specified, but it is best not to increase it, that they may thoroughly digest what they have—this course will strengthen and enliven them. On the fifth day of the fifth age, they should, if necessary, have food between the regular meals, when the specified quantity being given, is devoured in less than an hour and a half. They must not be suffered to fast five hours. Although the quantity is fixed, still exceptions are to be made by experience.

Sixth day of fifth age. Should food be wanted between the specified meals, it must be given, and so of the seventh day and of the eighth.

During these last days of the rearing, the worms should be fed with the best sort of leaves, culled from the oldest trees. Care should be taken to guard against too great heat: this would cause the worms to stop eating and to wander about in search of cool corners, to form their cocoons before the time; thus defeating all the care that has been be stowed on them.

On the tenth day of the fifth age, the worms are usually perfected and ready to form their cocoons; this may be ascertained by the following signs:

1. When, instead of eating, the worms rear their heads, as if in search of something.
2. When held so that the light shines through them, they are of a whitish yellow colour.
3. The worms move about slowly; instinct urging them to seek change of place.
4. Their rings draw in, and their greenish colour changes to a deep golden hue.
5. Their skins become wrinkled about the neck, and their bodies are softer to the touch.

The contrivances are various for their rising upon; perhaps bundles of twigs placed archwise over them may be the simplest.

Thus having conducted the cultivator through a course of feeding, we shall leave to him, to put the precepts in practice, wishing him the utmost prosperity, and at the same time warning him that to be successful, he must be patient and attentive to his charges.

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QUANTITY OF FOOD NECESSARY FOR EACH DAY OF THE LIFE OF THE SILKWORM: ALSO THE SPACE REQUISITE FOR EACH OF ITS AGES, ADAPTED TO THE NUMBER WHICH ONE OUNCE OF EGGS WILL PRODUCE.

First Age.

First day.—Give in four meals, (six hours between each) about three fourths of a pound of soft leaves; the first meal to be the smallest, the second larger, and so on, increasing gradually.

Second day.—One pound and one fifth of a pound.

Third day.—Two and two fifths pounds.

Fourth day.—One and sixth tenths pounds.

Fifth day.—Three tenths of a pound will be about enough; these should be scattered lightly several times a day, where the worms appear to be still feeding. Should all have left off feeding, of course it will be unnecessary to distribute any more leaves.

In the first age then, the worms from an ounce of eggs, require about six and a quarter pounds of leaves. Space required, seven feet four inches square.

Toward the end of this day the worms are torpid.

Second Age.

First day.—One and four fifths pounds tender shoots, and the same weight of leaves.

Second day.—Six pounds of leaves will suffice.

Third day.—Six and three fifths pounds.

Fourth day.—One pound and four fifths of a pound.

During the second age then, is required eighteen pounds of food. Space required, fourteen feet eight inches square.

Third Age.

First day.—Three pounds tender shoots, the same weight of leaves.

Second day.—Eighteen pounds of leaves will be needed; the last two meals being most plentiful.

Third day.—Nineteen and two fifths pounds; the first two meals being most plentiful.

Fourth day.—Ten and one half pounds; first meal largest—last, least; those only that seem to require it, being fed.

Fifth day.—Five and two fifths pounds, or thereabout.

Sixth day.—The worms that have been torpid begin to rouse, and thus accomplish the third age, which requires fifty-three and four fifths pounds of food, and thirty-four feet ten inches square, of space.

Fourth Age.

First day.—Seven and a half pounds of shoots, twelve pounds of leaves.

Second day.—Thirty-three pounds of leaves; the last two meals being most copious.

Third day.—Forty-five pounds of leaves.

Fourth day.—Fifty-one pounds of leaves, fourth meal least.

Fifth day.—Twenty-five and three fifths pounds leaves, last meal least.

Sixth day.—Seven pounds are enough. It will be easy to find where and in what quantities needed.

Seventh day.—The worms that have been torpid rouse, and thus accomplish the fourth age; which requires about one hundred and eighty-two pounds of food, and eighty-two feet six inches square of space.

Fifth Age.

First day.—Eighteen pounds of shoots, and the same weight of leaves.

Second day.—Fifty-four pounds of leaves.

Third day.—Eighty-four pounds.

Fourth day.—One hundred and eight pounds.
Fifth day.—One hundred and sixty-two pounds.
Sixth day.—One hundred and ninety-five pounds.
Seventh day.—One hundred and eighty pounds.
Eighth day.—One hundred and thirty-two pounds.
Ninth day.—Ninety-nine pounds.
Tenth day.—Forty-eight pounds.

This accomplishes the fifth and last age of the worm in which food is required. This age requires ten hundred and ninety-eight pounds of food, and one hundred and eighty-three feet five inches square of space.

First age requires six and a quarter pounds of food; second age, eighteen pounds; third age, fifty-three four fifths pounds; fourth age, one hundred and eighty-two pounds; fifth age, ten hundred and ninety-eight pounds. Total, one thousand three hundred and fifty-eight pounds of food, for the worms produced from one ounce of eggs

Some *general* directions will be given hereafter.

THE CRUSADES.

Few events in the history of man have so strongly indicated his natural disposition, or aptitude, to enthusiasm, as the enterprises to the holy land, in the 12th and 13th centuries, called the *Crusades*. This term was applied to the wars for the conquest of Palestine from the Mahometans and Saracens, carried on by Christians, who followed the holy banner, and wore the sign of the cross. "The people of Europe were grieved, that the Holy Land, where the Saviour lived and taught and suffered for mankind, should be polluted by infidels, or remain in their possession, and thus prevent the pilgrimages then desired to be made to the city of Jerusalem, and the sepulchre of the divine Redeemer." Those who made the hazardous journey, related on their return the difficulties and the ill treatment which they met, and raised the indignation of the Christians in the west of Europe to a degree of fanaticism against the infidel intruders, and they formed the extravagant plan of driving them from the sacred territory. The Mahometan chiefs, in general, treated the christian visitors to Judea with great severity.

The prejudices against the followers of Mahomet were increased by their cruelties as men; the wars and confusion caused by the invasion of the west and south of Europe by barbarous hordes had also ceased; and the disposition for enterprise was seeking occasions for action and display; an uncommon excitement was produced: and men of all classes, but chiefly the honourable and the noble, poured forth from France, and other parts of Europe, and zealously engaged in the holy Crusade. Constantinople was then in the hands of a christian emperor, and was designated as the place of concentrating the forces from the west. Great numbers pressed on in the enterprise under the influence of a blind zeal, without order, discretion or forethought: All suffered and many perished. But an army was finally collected of eighty thousand men, under the command of brave dukes and princes, who traversed Germany and Hungary, conquered Nice, Antioch, Edessa, and lastly Jerusalem, in 1099. This intelligence revived anew the zeal and fanaticism of the west of Europe. In 1102, an army of two hundred and fifty thousand was raised, and marched for the Holy Land; but a part perished by disease on the journey, and a part fell by the sword of the Saracen chief of Iconium.

The second principal Crusade was caused by the loss of Edessa, which the Saracens captured in 1140; for it was feared that the Holy City would also fall into the hands of the infidels. The Pope called on the Emperor of Germany and the King of France to defend the *cross*. They readily obeyed the summons, and led large forces to the East; but they were not successful in their enterprise, and they left Judea in a weaker state than they found it. This was about the year 1148: And in 1187, the Sultan Saladin took Jerusalem from the Christians, which again enkindled the fanaticism of Europe, and engaged the united forces of Germany, France and England in the holy warfare. This may be regarded as the third Crusade. The enterprise under the Emperor was entirely unsuccessful; but the forces of France and England so far succeeded, that they took possession of Acre, which long remained the bulwark of the Christians to the East. Other similar enterprises were undertaken at later periods, under the King of Hungary and the Emperor of Germany. The latter recaptured Jerusalem, but was not able to conquer the country of Judea. These *Holy Wars* were the occasion of numerous feats of bravery and heroism; and served alike to introduce the age of *Chivalry*, and open a channel to the west for the literature of the east. These were the incidental benefits resulting from the Crusades; while the direct object and the character of the agents serve to show the weaknesses or vices of professing Christians; they thought to atone for their sins by visiting the place where the Saviour had suffered, rather than by imitating his example and copying his virtues; and to display their zeal in his cause, by destroying rather than saving their fellow-men.

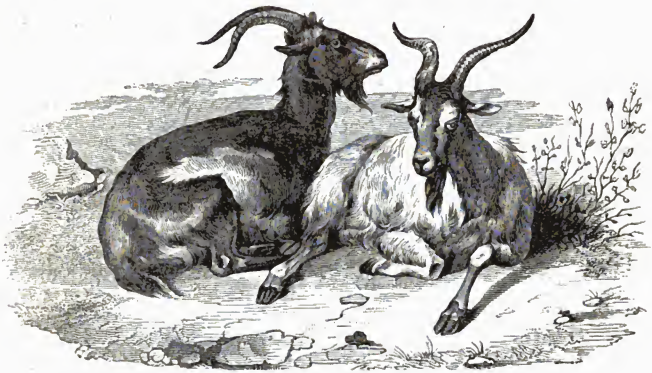
COWPER'S COMPARISON OF VOLTAIRE TO A POOR COTTAGER.

Yon cottager who weaves at her own door—
Pillow and bobbins all her little store—
Content though mean, and cheerful if not gay,
Shuffling her threads about the live-long day,
Just earns a scanty pittance, and at night,
Lies down secure, her heart and pocketa light:
She for her humble sphere by nature fit,
Has little understanding, and no wit;
Receives no praise—but though her lot be such,
(Toilsome and indigent) she renders much;
Just knows, and knows no more, her bible true,
A truth the brilliant Frenchman never knew.
And in that charter reads, with sparkling eyes,
Her title to a treasure in the skies.
O happy peasant! Oh unhappy bard,
His the mere tinsel, her's the rich reward:
He praised, perhaps, for ages yet to come,
She never heard of, half a mile from home:
He lost in errors, his vain heart prefers,
She safe in the simplicity of hers.

Sir Isaac Newton was a poet as well as a mathematician and philosopher. The following is the true language of poetry: "The grain is God's *bounty*, and the flowers are his *smiles*."

The 4th of October completed three centuries since the first *English Bible* was printed. The Bible had been printed before in German; and the New Testament in English. This ter-centennial period was duly celebrated in England. And what can be greater cause of rejoicing, than the possession of the holy scriptures, "which are able to make us wise unto salvation," in our vulgar language, so that all may read and be sanctified and saved, by the belief of divine truth. We hope the time will soon come when *all* in christian countries will enjoy this great privilege and right. There has been a great portion of the christian world which have been denied this blessing, by those who hold the *key* of *knowledge*, and refuse to unlock the treasures of wisdom and grace.

It appears by a letter of an English Missionary from the South Sea Islands, that there has lately been a great and lamentable falling off in the new converts there—not that they have relapsed into idolatry, but have become very immoral and dissolute, which is chiefly attributed to the large introduction of ardent spirits; and especially of New-England from the United States! The Missionary is probably correct in the opinion he gives, "That the work of taming, civilizing and christianizing a barbarous people is very great and difficult." Sudden conversions seldom last long; and we may be deceived by the mere professions of the heathens. One great difficulty is the barter in ardent spirits carried on by the English and Americans; and another is their immoral and licentious conduct.



THE COMMON GOAT.—[CAPRA.]

The goat of the old continent is a very useful animal, and is found in most parts of Europe and Asia; particularly in the southern parts of the former, and the western parts of the latter. There are several varieties of this animal, and all are valuable. The *Ibex Capra* is naturally very untractable, and yet it is from this species the common domestic goat has sprung. They require less watching and care than sheep, and are kept at less expense. But their skin and hair are almost as valuable. The morocco leather is made from goat skins; it takes a dye better than any other skin, and is very extensively used. The milk is excellent, and in many parts of the world is that chiefly used. It is supposed to be very favourable in consumptive complaints. The flesh is much relished by some nations, but is far inferiour to mutton. They were domesticated in the most remote periods; and frequently were the chief support of families in retired places. They cannot endure extreme cold; and yet they generally prefer high and bleak mountains. It is an agile and swift animal, and climbs the most precipitous and abrupt heights. One would suppose they had claws like the fox or dog. The goat abounds in the Alps; but that is the species called the Chamois goat, and its horns make a semicircle and are parallel. But the horns of the common goats are diverging, and less of a perfect curve. The Cashmere goat is found in Asia, in the kingdom of Cashmere, and is smaller than the common goat, but its hair is much more valuable, being long and fine. The Cashmere shawls are manufactured from the hair of this species. It has been introduced into France, where it has bred with another variety, much to the profit of the owners. The Cashmere is a noble species and descended from those of Thibet, which feed on the sides of the Himalaya mountains, the highest in the world. Thibet is on the north, and Cashmere on the south, and consequently warmer—but those in the colder and more mountainous regions produce the finest wool or hair.

There is also the Angora goat, which has a soft, silky hair, of a white colour. The finest camlets are made of the hair of this species. The goat of Syria furnishes yet another species. It has remarkably long ears, and appears to have been known

to the Greeks at an early period. In North America there is a native goat of singular form and appearance. Some indeed, have chosen to rank it among the varieties of the sheep (ovis) and have given it the name of the mountain Sheep, as it is found on and about the Rocky Mountains. The first notice of this animal was by Clarke and Lewis. It has since been described by Dr. Richardson and Major Long. We have referred to this species in a former number.

We give several specimens, though not of the Chamois or Cashmere species. It is sometimes asked, why the common goat or other species have not been more reared in this country. And perhaps, it is difficult to assign any other reason than that the early inhabitants accidentally had the cow and the sheep introduced among them, which rendered the keeping of goats unnecessary. The soil and face of the country generally, is favourable to the support of the former. And yet there are some tracts better fitted for the goat kind. It will not be strange, such is the spirit of enterprise of our countrymen, if the Cashmere goat (or the variety now in France, which is partly of that species) should be reared in the United States for the manufacture of the hair. It was only fifteen years ago, they were carried to France.

[GOATS.]

ADVANTAGE OF DRINKING WATER.

It is a great mistake to think that any drink is better for hard-working men than water. There was a party employed in draining by task work, in Richmond Park, who were patterns of English labourers. They worked hard from morning to night and in all weather, but drank only water or coffee. They did not even use beer. The expense of coffee was comparatively trifling; and they performed as hard a day's work as any men in England, and where often exposed to wet and cold. A proof of this may also be found in Capt. Ross' recent voyage to the Arctic regions. He says, that on a journey of great difficulty and hardships, he was the only one of the party whose eyes were not inflamed, and he was the only one who did not drink grog. He was also the oldest of the party, yet for the same reason he bore the fatigue better than any of them. He adds, that whoever will make the experiment on two equal boats' crews, rowing in a heavy sea, will soon be convinced that the water-drinkers will far out-do the others. No better testimony to this is required than the experience of men who work at iron foundries, which is the hardest labour done by man: But they know that they cannot perform it if they drink even beer, and their sole drink during the hours of this hot and heavy labour is water. It is a well attested fact, that when an armed brig was wrecked in Plymouth harbour in 1779 (the last of December) in a severe snow storm, the men who drank freely of spirits perished by the cold, while those who refrained wholly, or took very little, survived till they were taken from the wreck.

[From the Albany Zodiac.]

"VÆ VOBIS."*

"Væ vobis," ye, whose lip doth lave
So deeply in the sparkling wine,
Regardless though that passion-wave
Slant from the soul Heaven's light divine;
"Væ vobis!"—heed the trumpet blast,
Fly, ere the leprous taint is deep,
Fly!—ere the hour of hope be past,
And pitying angels cease to weep.

"Væ vobis," ye, who fail to read
That name which glows where'er ye tread,
The Alpha of an infant creed,
The Omega of the sainted dead.
'Tis written where the pencill'd flowers
Their tablet to the desert show,
And where the mountain's rocky towers
Frown darkly on the vale below:
Where roll the wondrous orbs on high
In glorious order strong and fair,
In every letter of the sky
That midnight graves, 'tis there—'tis there!
It gleams on Ocean's wrinkled brow,
And in the shell that gems its shore,
And where the solemn forests bow
"Væ vobis," ye, who scorn the lore.

"Væ vobis," all who trust in earth,
Who lean on reeds that pierce the breast,
Who toss the bubble-cup of mirth,
Or grasp ambition's lightning-crest;
Who early rise and late take rest,
In mammon's mine the care-worn slave,
Who find each phantom race unblest,
Yet shrink reluctant from the grave.

L. H. SIGOURNEY.

* "Woe unto you."

The flagrant inconsistency of all protestant intolerance, is a *poison* in its veins which must destroy it.

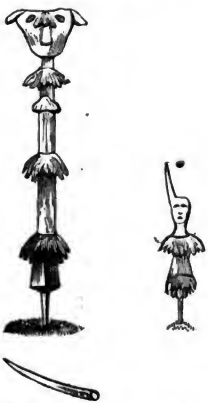
[A NATIVE HOUSE IN WEST AFRICA.]

IDOLS AND IDOLATROUS HOUSE, IN WEST AFRICA.

On an island at the mouth of the Rio Pongas, a river about 100 miles northwest of Sierra Leone, on which river the Church Missionary Society has a Station, called Canoffee, is a small town, named Debora, inhabited by people of the Bagoe Nation. In this town there were more marks of superstition than usual. There were houses for the worship of the Devil, or of Departed Spirits, as is customary in the Native Towns; and several images of Devils, to which they offer sacrifices. Besides these, there were Gregrees, or superstitious charms, on every house.

The picture above given represents a house in this place. At the end of the pole which you see in the front, is a Gregree, which the inhabitants suppose will protect their dwelling from evil. Under the piazza, against the wall of the house, are two figures of Evil Spirits, the largest about a yard high.

These figures are here drawn larger, that you may the better see how disgusting are those idols which these poor people worship.



The face of the larger figure was defiled, when Mr. Bickersteth saw it, with the juice of the Kolah, a native fruit, which after having been chewed had been spit upon the face of the idol—the inhabitants thinking this an acceptable sacrifice! Tufts of grass are tied round, in different parts, as you see, of both figures; and a bag is hung in front of the larger. The horn which lies before it, is an offering. The smaller figure seemed to represent an Inferiour Deity.

The natives have other superstitions connected with the worship of Spirits.

This figure represents a post about a yard and a half high, into the head of which a small axe is stuck. The natives take hold of the handle of the axe, and repeat a form of words, in order to procure from the Spirits a prosperous day! This was seen among the Bulloms.

The House of Spirits, or Devils' House, which is found in every town, consists of a small hut, three or four feet high, raised on posts, and thatched with straw, far meaner than the poorest hovel. Beneath this roof is a nest of termites, or large ants; or there are sticks set upright. On the top of the nest or sticks are placed stones; and there are generally by the side a broken plate and a broken jug or bottle.

Figures of two of these Houses :—

Before these Houses the blood of bulls, goats, or ocks, is sprinkled; and a libation of palm-wine is poured out, and an offering of fruits or rice occasionally made.

So degraded are these people in their notions of God and of his worship!

Yet they are very kind and hospitable; and, if the dreadful Slave Trade, carried on among them by Europeans, did not set one man against another, they would soon gladly open their Towns for the reaching of the Gospel, as the Missionaries have found by experience.

When Mr. Bickersteth visited the Bagoe Town, where the House stood which you see in the first picture, the people were very kind. They brought fish and a cock, as presents; and, in order to get some palm-wine for him and the Missionary Nylander who accompanied him, a man quickly mounted a high palm-tree, by the help of a hoop which goes round the tree, and against which he presses his back, as you see in the picture. In this manner they mounted very rapidly, and fetch down the wine, which has distilled from gashes or holes which they make in the head of the tree, into a bottle placed to catch it.

Mr. Nylander said to these people, in their own broken way of talking—"Many good things in this place; but one thing bad I see here—people not know God, and therefore not love him, and not go to him when they die." They said, those were true words. Mr. Bickersteth asked them—"Would you like that White Men should come, and tell you about God, and teach his book to you?"—They said they should like it very much: those were good words that he had said to them.

Potatoes growing on a Cornstalk.—An Ohio editor says, he has in his possession a Cornstalk to which are attached firmly and growing, five or six potatoes, precisely similar to those on a potato root.

PHENOMENON IN NATURAL HISTORY.

We give the following statement without any alteration or addition: But we have no reason to doubt the truth of the account.

Mr. Editor,—Your Magazine being devoted, in a great measure to American, and natural curiosities, I communicate for insertion, a sketch of what I conceive to be an anomalous production of nature.

On the sixteenth day of August, 1821, as I was following the cradler in the harvest field, I found a head of wheat (summer wheat) on which was growing, with the wheat, a grain of oats. The above picture will illustrate the manner in which the two different kinds of grain were growing.

The wheat and oats were both perfect and plump, with full berries and chaff. I kept the stalk several days as a great curiosity, and exhibited it to many, when a rude person, to satisfy a foolish freak, picked it apart.

The cause of this singular production is a subject that will puzzle the naturalist and philosopher.

I shall venture a few hints as to the cause of this departure from the regular order of nature.

All substances constituting the nourishment and growth of vegetables are carried from the roots through the various parts by capillary attraction, excepting such substances as may be absorbed through the external surface, which, however, is but a small proportion of the constituent substances. Oats are a coarser grain than wheat—formed of larger particles, which ascend in larger capillaries.

The capillaries in the lower parts of plants are conceived to be larger than in the immediate vicinity of the fruit where the substances are refined for the fruit. This being the case, and an obstruction interposing in one of the capillaries, the fluid substances burst forth and formed the coarser grain; not being able further to ascend to be digested for a superiour berry, the cruder substances formed the coarser grain. THOMAS BARLOW.

For the ventilation of a stage coach, some one has suggested the following mode: That the sashes, instead of being glazed, as at present, and the panel formed by a pane of glass, should be of wire-gauze, such as is commonly used for window blinds. The coach would thus be amply ventilated without annoyance to any one by a current of air; and in case of rain, the sashes might be kept up without the choice of evils at present experienced, either to be wet through or suffocated.

FRESH POND.

This is a beautiful lake, or sheet of water, of about two miles circumference, lying in the west part of Cambridge, and near the northeastern bounds of Watertown. It is little more than a mile distant from the Colleges, and on the north side of a public road leading from Boston into the country. It is separated from Mount Auburn by this road, and a small tract of land. The land on the east and south of the pond is rich and well cultivated; the margin on the northwest is low and wet, and covered with forest trees. This lake is visited by parties of young men from the University, and from Boston, for fishing and sport. It contains the small fish usually found in fresh ponds in this section of the country; as perch, shiners and pickerel. Large and convenient boats are kept for the accommodation of the visitors; some with sails, and some with oars only. There is also a good house on the eastern side of the lake, for the entertainment of those who repair thither, for fishing or other recreation; and the early summer fruits may always be found there in abundance. It has long been a favourite resort for the inhabitants of Cambridge and Boston, and the students in the University. Most strangers, visiting Boston in spring and summer, go to Fresh-pond. It is a very pleasant ride of about four miles. But a few hours, generally, is a sufficient time to satisfy the visitors, unless they choose to go in the boats for fishing. The scenery is beautiful, and the vicinity of Mount Auburn, probably induces many to visit the Lake. *Nahant*, and other places on the seacoast in the vicinity of Boston, are now much frequented by the citizens and strangers, especially in the summer months. The cool sea-breezes and invigorating air of these places invite to a residence, for a longer or shorter time, as business or convenience will permit. In spring, the expert angler prefers the running streams, to draw out the delicate trout; but in the hotter days of summer, he loiters on the projecting rocks and headlands round the salt bays, to seize the finny tribe of the ocean.

An eighty feet Magnolia.—A resident of Mobile, Alabama, says, this is the land of flowers, of every variety, from the small picaroon Rose to the lofty and magnificent *Magnolia*. It is an evergreen, and here grows to the height of eighty feet and more. The leaves are of the deepest green, and so thick that the limbs are seldom seen. The blossom is of pure white, five or six inches diameter, and of very agreeable fragrance. This beautiful tree grows in great abundance in the forests near Mobile; where also are found the cucumber tree, a species of the Magnolia, and bearing still larger flowers; the acacia, &c.

We quote the following from a late paper: The library, we believe, is much indebted to the late Emperor of Portugal.

"The public library at Rio Janeiro is an edifice connected with the Emperor's palace, and contains about 70,000 volumes, most of which are very ancient. It contains a copy of the *first* printed edition of the Bible, on parchment, impressed in 1471, by the wonderful mechanism of John Faust, the inventor of printing."

THE COMET.

Halley's Comet, of which so much has been written and predicted for some time past, and which, according to the calculations of the most respectable astronomers, was to appear in August or September, was discovered by the learned Professors of Yale College, in Connecticut, on the night following the 30th of August last, about two hours after midnight; and again the following night, at the same hour: and also for several successive nights, including the 3d of September. It was discovered by them through a telescope; and it was not then to be seen by the naked eye. The place in the heavens where it was discovered is very nearly that which had been previously pointed out by astronomers, who had calculated the period of its revolution. It was in the northeast, and between the seven stars (pleiades) and the planet Jupiter; and nearest to the latter. Its apparent diameter two minutes; its right ascension (at two o'clock, A. M.) was 5h. 51m. and its declination N. 25°.

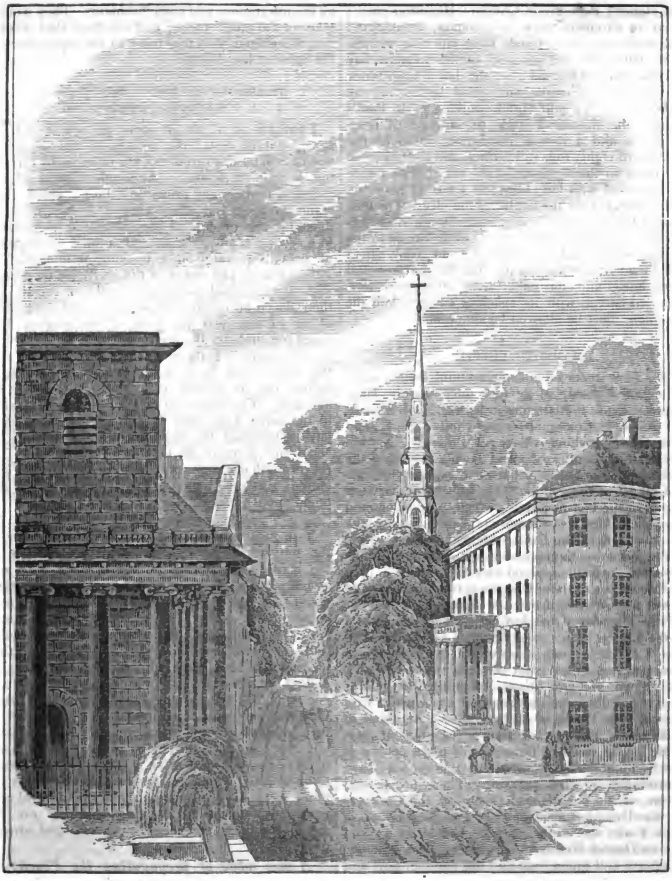
The Comet was also seen by a gentleman of Nantucket on the morning of the 4th of September, three o'clock, A. M. But it was so distant, that a glass of moderate power presented merely a faint light of triangular form. The Comet was seen by a citizen of Philadelphia, at half past three o'clock on the morning of 6th, with a telescope of three and a half feet, and a power of twenty. It was seen again on the morning of the 8th, from two to four o'clock, when it appeared brighter than on the 6th.

The Comet was visible, without the help of a telescope, on the evening of the 8th of October, and continued to be distinctly seen, (with some tail, though faint,) for thirty days in the northwest and west, and nearer the western horizon every succeeding evening, till it was lost in the light of the Sun. Its motion was very rapid, and for a few nights, its appearance was very brilliant, yet without so spacious a tail as it had in its last visit seventy-five years ago, if we may judge from the description then given of it. Mr. Downes of Boston, saw it the night between the 4th and 5th of September by help of a telescope. It was seen in Europe as early as the 5th of August, twenty-five days earlier than in America. Professor Farrar, of Harvard University, saw the Comet the morning of the 19th of September at three o'clock, through a telescope two feet long, with an object-glass of two and a half inches diameter, and magnifying twelve times; and also with a terrestrial telescope, of three and a half feet, having five glasses and magnifying forty times. He supposed it might be then seen with a good seaman's glass, or day-glass. He found the body of the Comet to subtend an angle about five times greater than the planet Jupiter. The appearance agreed very nearly with the description before given of it. It was like the faint, diffuse light of a star seen though a thick mist. Mr. Farrar says he could discover nothing like a nucleus; yet the light was stronger at and near the centre, and became fainter till it gradually vanished in an ill-defined and circular outline. He adds, that it is six days later than most previous calculations had fixed on, but the last and revised predictions of Pontecouelaut fixing the perihelium of the Comet on the 13th of November Mr. Farrar judged correct, from the time of its passing our globe. The Professor also noticed the Comet on the morning of the 21st of September. Its right ascension was then (at three o'clock) estimated at 6h. 12', and its declination 30° 17' N W. The corresponding elements on the 19th, 6h 7', and 29° 50' N., at the same hour in the morning. If it happen to pass over a star, he says, its place can be fixed with great precision; and one may also decide something of the physical constitution of the Comet; for in some instances a star has been seen through the centre of one of these bodies, thus proving it probable the nucleus is not solid, like the earth or planets. This remark has been made before, and by different astronomers. On the 21st September, the Comet was again observed, (and often still later) when it was brighter and appeared larger. It had approached nearer the earth It was then also seen by a few persons with the naked eye. Its motion has been computed to be at the rate of 10,000,000 miles in a month, or more. The earth is distant from the Sun about 95,000,000, and the Comet, when nearest the earth, was about half that distance.

Dr. Winthrop, professor in the University at Cambridge, when Halley's Comet made its last appearance, in 1759, observed it carefully, and described and spoke of its elements fully; and he calculated its return at the close of 1834. In this he was mistaken, and so were some other Astronomers in England. These errors as to the exact time of its return, are imputed to the supposition that the Comet is disturbed and retarded in its motion by the attractive power of large planets, near which it may approach in some part of its path or orbit. In its aphelion it is computed to be 2,800,000,000, distant from the Sun; in its perihelium 47,000,000. The motion of the Comet was supposed to be accelerated on its approach to our system. Its orbit is so elliptical, that its greatest distance is as 60 to 1, of its nearest approach to the Sun. In its course, it was within the orbit of Venus, but not within the orbit of Mercury. Dr. Winthrop says, its return in 1759 was the seventh on record. It was then visible here but a few days on its approach to the Sun; but was seen again after passing its perihelium. The longest axis of its orbit, was reckoned seventeen times greater than that of the earth. Its nearest approach to the Sun then, was April 25th, 1759. Now it is fixed at November 13th, 1835, making its period seventy-six years and nearly seven months. On its return from its perihelium point, it will be again visible for a short time.

"The discoveries and inventions of men, are but the results of mental efforts: they usually multiply with the exertions of reason. Free inquiry leads to important truths: And restraints on free inquiry must prevent the increase of knowledge."

Improvement in washing white clothes.—Take five gallons soft water, add half a gallon of lime water, a pint and a half of soft soap or a pound of hard soap, and two ounces of carbonate of soda But it does not succeed in calicoes and woollens.



VIEW OF TREMONT STREET, BOSTON.

The name of this Street is traced to that given the peninsula, in 1630, by the first settlers at Charlestown, on the north side of the river. They called it Trimontain, on account of three hills to be seen on it. The street ran by the eastern base of one of these hills. But the enterprising citizens have removed the mountain, near which the avenue wound its way. The street remains, but has been made of much greater width and reduced nearly to a level. The city has still the misfortune to have many narrow avenues. Great improvements have been made in this respect however, within a few years. But the work is not yet complete. From Court Street, Tremont Street extends southeast of Phillips-place, and the adjoining lots, which will soon be covered with elegant dwelling houses; passes the King's Chapel, so yclept in ante-revolutionary times; the Cemetery inclosed with a plain, neat granite wall; the new block of buildings, on that and Beacon Streets; the spacious and elegant Tremont-House; the new Theatre; another and larger Cemetery, crowded with sepulchral monuments

and stones; Park Street Church; Hamilton-place; when an extensive lawn, or common, ornamented with walks and trees, bursts upon the view on the right, with a distant prospect of the western bay and the country beyond; on the left a large block of stone-dwellinghouses, succeeded farther on, by a block of elegant brick buildings, St. Paul's Church, the Masonic Temple, the entrance of Temple-place, and a row of handsome houses for the distance of eighty rods still further, and the Common still lying on the west side of the street, with a wide mall studded with lofty elms, for a border between. This street is near the centre of the city. For bustle and business and crowds, State Street, Washington Street (which extends from State Street to the extreme south part of the town) and Kilby Street and Broad Street, surpass it. But for neatness, and appearance, and for effect with stranger-visitors, Tremont Street, with its spacious edifices, and the Common, must be allowed far superiour.

MAMMOTH CHEESES.

We have received a long account from a committee of Pulaski, of several uncommonly large Cheeses, made the last season by Col. T. S. Meacham of Sandy Creek, Oswego County, N. Y. and near the flourishing village of Pulaski. We are happy to take notice of all instances indicating the agricultural prosperity of our country, and the spirited efforts of the people. The statement partakes a little of the boasting style, which is too common among us; but we sincerely rejoice to hear of the rich products of the United States, whether owing to the farmer or the manufacturer; and their enterprises we cordially applaud and celebrate.

The largest of these Cheeses is two feet thick and eleven feet in circumference, weighing 1400 pounds; which is inscribed to *Andrew Jackson*, President of the United States; and designed for a present to him. A belt incloses it, having a suitable inscription, referring to his great services for the Republic. There are two others, weighing 750 pounds each; and intended as presents to *Martin Van Buren*, Vice President of the United States, and to *William L. Marcy*, Governor of the State of New York. The expense incurred for these articles is met by numerous citizens of New York, who have contributed for that purpose. There are several others, of 700 pounds each; one for the Congress of the United States—one to the Legislature of New York; one to the City of Washington; and one to *Daniel Webster*, with the words following; "Liberty and union, one and inseparable, now and forever." The other Cheeses also have inscriptions appropriate to the individuals or corporations, to which they are presented. We hope they will reach the persons for whom they are destined in good order; and serve to extend the fame of the industrious and generous architect, through the country. Oswego is a rich and fertile region, and is distinguished, in the empire State, for its good farms and enterprising inhabitants. The publishers of the American Magazine would be thankful for a cheese of *half* the weight of the smallest above described. Col. Meacham must excuse us for not giving all the inscriptions and embellishments: They would take up too much room; and we think they would not, if inserted, add any thing to the reputation of the value of his cheeses.

[From the Nantucket Inquirer.—By W. Folger.]

MAGNETIC NEEDLE.

I noticed an article in some paper a short time since, stating that "the polarity of any magnetic needle will be destroyed in a few minutes, by thrusting it into an onion." Although I knew of no "chemico magnetic principle" in an onion that could produce the effect alleged, I concluded to make the experiment. I communicated magnetism to a sewing needle, and floated it on a small piece of paper on water in a tea-cup; it immediately swung round, and rested in the magnetic meridian with the eye end pointing towards the North. I then placed an onion so as to present different parts of its surface near the poles of the magnet; but could not discover the least change in the direction of the needle. I afterwards thrust the needle into the onion, and there suffered it to remain four hours; but its polarity did not appear to be at all affected. The other end of the needle was treated in the same way, with the same result; and after having reversed the experiment several times, I could not perceive the polarity to be disturbed, or the strength of the magnet to be in any manner impaired. At one time the needle remained in the onion about twenty hours.

The Zodiac.—We are obliged by the receipt of the fourth number of a monthly publication with the above title, printed in Albany. We do not attach much importance to a name, and we rather doubt the propriety of such appellations, for papers or magazines, as 'the Globe,' 'the Orb,' 'the Sun,' and 'the Zodiac,' of a local and terrestrial circulation. The *Zodiac*, however, at least the portion we have explored, gives a bright and steady light. It does not glare like a meteor, nor astonish like a comet; but it affords a mild and pleasant radiance. One may look upon it without being compelled to turn away on account of an *overpowering* lustre; but the light is sufficient to guide and to cheer, without dazzling to deceive. We hope it will continue to shine with a uniform brightness; which we think more useful, than temporary and fitful coruscations, succeeded as they generally are by greater darkness, and often by a pestilential atmosphere.

A new mode of propagating the Peach.—A peach stone sent from Ohio to Berkshire County, Massachusetts, by accident was broken, and in attempting to separate the meat from the stone, that was also broken into two parts. Half of it was inserted, by making an incision in the bark, into an egg-plumb tree, six inches from the ground. The bark was closed over the meat, and earth thrown about the root of the tree, so as to compress the bark and keep out the air. This was in April last and on the first of October, the shoot from the peach had grown six feet, strong and erect; and a root also from the plumb of little more than six feet.

INNOVATION.

One of the greatest dangers which menace the welfare of our country, arises from a general and uncontrolled desire of innovation. The advocates of rational and constitutional liberty are the sincere friends of improvement; and they are generally in favour of change, so far as it is called for by the present state of society, and so far as it promises an amelioration of the condition of the whole people. But they fear the effects of an injudicious change, which is urged by the reckless and inexperienced, without a calculation of the evils and mischiefs which are likely to ensue, or a due regard to the nature of man, as proved by facts ever since civil society was formed. Because some changes have proved useful and may be justified, it is concluded that other and greater alterations in human governments will be for the benefit of mankind. Our fathers resisted arbitrary power and oppressive laws; and this is made a plea for opposing all law and order. Our fathers contended for liberty; and therefore we are ready to think it our duty or right to contend for freedom to any extent, and under any circumstances. But they were the advocates of constitutional liberty; liberty with law, and regulated by law; they condemned misrule and licentiousness, and violence and mobs, with as much zeal and decision as they opposed tyranny and oppression. Their conduct can never be justly pleaded as an apology for the reckless spirit of innovation which many now manifest in our country, or for weakening the legal provisions which protect the innocent from the vicious, and preserve the peace of the community.

In the old governments of Europe, no doubt, changes are required in many laws and institutions which had their origin in times of feudal oppression. These governments were founded in conquest and power; and have been maintained by force, without regard to the rights or happiness of the people. Numerous abuses had long existed, owing to the unjust prerogatives of princes, and the exclusive privileges enjoyed by the nobles. The great mass of the people had no more power or liberty than kings and lords were pleased to allow them. Great abuses have also existed, in the old continent, in ecclesiastical institutions. The people were kept in ignorance, as the best way to deceive and oppress them. What the prince and barons spared was seized by the priests; and the treasures of the church were augmented through the poverty and distress of the lower classes, for whose relief and comfort religion is designed.

Every true republican and every benevolent man must rejoice that light is pouring into these countries, where darkness and error have long brooded; that the spirit of civil liberty is awake and active; and that changes are taking place, so far as they are favourable to the rights and happiness of men. We rejoice, that the power of princes has been in some measure restrained and regulated; that feudal lords have less authority over their vassals, and that the claims of ecclesiastical usurpation are resisted and lessening. We rejoice even that the oppressions and abuses which have long afflicted our *father-land* are being *gradually* corrected and removed. We should regret to witness a sudden and entire revolution of the British government; for we think it would be attended with great extravagances and great sufferings, and we believe that there is much liberty and much enjoyment in that kingdom, so that a gradual reform would produce all the good desired, without convulsion and without violence. But we think we see reasons for many changes in that country, and that real reforms may be effected, in several departments. Some have already been brought about within a few years; and others probably will follow, producing results favourable to the liberty and comfort of the whole people.

In this country, there is no such call for change in the laws and institutions under which we have lived and prospered for many years past. Innovations in this land of republican freedom would not promote our happiness, would not prove a real reform, except perhaps, in a very few cases. The disposition for innovation and change then, among us, is rather ominous of mischief than of improvement; and the friends of republican freedom are called upon to oppose the radical spirit of the day.

We would hope that this desire of change and alteration, so frequently manifested, does not arise from a really bad spirit, seeking misrule and anarchy, or a levelling of the necessary and natural distinctions in society; but from a mistaken opinion, hastily adopted, that great changes are required by the spirit of the age, and would result in the greater happiness of the people, for whose benefit all laws and governments should be designed. But the plans of well-disposed men, if contrary to past experience, and founded in erroneous views of society and of man, are not only visionary but dangerous; and should be opposed by the wise and prudent, as well as the radical theories of those who would throw society into confusion that they might derive benefit from the plunder.

Our present danger lies in the wild plans of pretended reform from the young and inexperienced, or from foreigners who have settled in the country, but do not fully understand the nature and principles of our institutions. Let us be cautious how we change the "laws and customs" which have given us so much liberty and security. The changes which would be real improvements are probably very few. Crimes must be punished, laws must be executed, government must be upheld, our religious and literary institutions must be continued. Still it becomes the people to see that the criminal is not punished too severely; that the laws are agreeable to the spirit of the Constitution; that the men who administer the government do not assume and exercise more power than the Constitution and the laws give them; and that literary and religious institutions do not become exclusive, so as to give greater privileges and benefits to one class of citizens than to others. The Constitution is designed to guarantee equal rights and privileges to all. One great preventive of radical and frequent changes is to pass only equal laws, and such as will be for the benefit of all who are virtuous, sober and industrious, be they poor or rich. We should guard against all monopolies, and all legislation for the

benefit of a few. For as surely as we do this, changes will follow, or be attempted; and discontents will arise, and struggles be made to remove what unequal laws have produced; and revolution or distressing reforms will close the scene.

AND NOW ABIDE FAITH, HOPE AND CHARITY—THESE THREE —BUT THE GREATEST OF THESE IS CHARITY.

Faith holds the lamp which guides our feet
To him who fills the mercy-seat;
And *Hope* supports the pilgrim weary,
To make this earth appear less dreary;
Life's travels these, with life they 're gone!
Yet, still exists a nobler one;
Love fills, on earth, the Christian's breast,
And dwells in heaven among the blest.

ANIMAL MAGNETISM.

Considerable interest was excited on this subject, about half a century ago, in France, and experiments were made to test the existence and power of such a principle. But nothing was decided by the experiments then made. For though some effects were produced which led the advocates of the doctrine to believe in it, others resolved the appearances and motions into imagination or deception. Still there have been a few, during the period mentioned, who have favoured the theory; and some of them men of science and philosophy. They contend, that there is an attractive power or sympathy between all homogeneous bodies. The great and universal law of the universe affords proof of this fact. There is every where in operation an attractive power or influence. Electricity is of a similar power, and produces similar effects. There is also a magnetic power in certain bodies, which produces astonishing results. Why may there not be a corresponding power in animals, or of which animals are susceptible? Animal heat, as is well known, may be communicated from one animal to another: and the suspended or dormant powers of the animal are revived by the application of animal heat. The aged are sometimes advised to keep the young and healthy in contact with them, for the purpose of giving heat and strength to the system.

All this may be admitted, for it is supported by facts; but the question recurs,—to what extent can this animal power operate, and is it capable of quickening any one of the senses, as hearing, or seeing? The supposition is, that the magnetizer or operator imparts a vivifying, strengthening power to the magnetizee: And it is therefore only the more healthy and robust who are able to produce any benefit to those more feeble, or diseased. The operation is generally by close contact and rubbing: but sometimes by passing the hand near the magnetizee: And thus one who has animal powers *plus*, communicates a portion to one who is *minus:* as in electricity or metallic magnetism. Something of the temper and disposition is said to be thus imparted; and it is even pretended, that the magnitizer is sensible of losing a portion of his former usual power. The magnetizee gradually perceives an increase of strength, and also a serene and pleasant sensation, which leads to sleep, but not to a suspension of the senses. For in this state of apparent sleep, they converse as though they saw, and perform and predict many things of a very wonderful character: too extraordinary to be credited, except that they are verified by respectable witnesses.

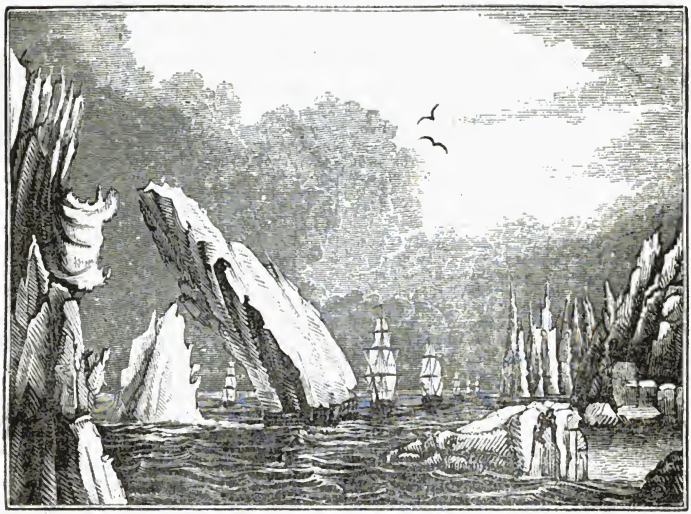
Some cases recently narrated in a publication of the French Academy, with the sanction of respectable characters as to the truth in their opinion, are thought worthy of record; nor do we perceive how they can be considered as the effects of the imagination alone.

A lady, afflicted with a cancer in her breast, submitted to be magnetized to remove the pain, or to weaken the sense of suffering. Magnetizing, it should be observed, produces apparent sleep, or somnambulism, as one of its effects. A celebrated surgeon who visited the lady, though not an operator in magnetism, was willing the experiment should be tried, as he saw no other hope of saving her life. The lady was magnetized, and a state of sleep followed, when the surgeon cut out the cancer. The patient was not sensible of the operation, being kept asleep for two days by the magnetizer.

It is still more surprising, that a person magnetized into a state of apparent sleep, or somnambulism, will perform acts requiring the greatest attention and judgment, and is able to see, or to act as one who has his sight, when the sense of seeing is thus suspended. A case is stated of a Mr. Petit, who being magnetized into a state of sleep, could play at picquet with great dexterity. It was impossible to deceive or embarrass him. His eyes were closed, but the ball of the eye seemed to move under the eyelids, and to follow the motions of the hands. Wide and thick bandages were placed over the eyes, still the man attended to the game, in all respects as one who saw. When afterwards he was suffered to take repose, and the magnetizer ceased his operations, and the man awoke, he said he had no recollection of any thing which took place while he was asleep.

What is even more wonderful, it is stated, that a person thus magnetized into sleep is able to determine what his disease or debility is owing to, and what will operate a cure. He can even predict when and what disease would afflict him, and the best remedy for his disorder.

Another magnetized person was able by a touch to determine the disease and constitutional temperament of any one presented to him. These are wonderful relations; too strange, perhaps, to be credited, or to be repeated. But they are stated in a report of learned men appointed to investigate the subject. The wonders performed by a somnambulist in this country which have been publicly related, are somewhat similar to those above referred to. But the state of apparent sleep was not produced by animal magnetism; and remains a wonder to be explained. To say that these persons are very delicately constituted, and of extraordinary susceptibility, is not sufficient to account for these wonders. For the patients do not feel and suffer exquisitely; but they see, discern and discriminate with more power and accuracy than those in health. Not only are their senses more acute; but they can see with closed eyes, and judge correctly without previous knowledge!



PASSAGE BETWEEN ICE ISLANDS.—[From a Design of Capt. Ross.]

Soon after the discovery of America by Columbus, near the close of the fifteenth century, several expeditions were undertaken to seek for a passage to India, by sailing westerly from Europe. There was an opinion prevailing, that such a passage might be found in the high northern latitudes. The ships of discovery fitted out for this purpose in England, in the sixteenth, and early in the seventeenth century, went far north, and they discovered Hudson's Bay, Baffin's Bay, and Davis's Straits, visited a great part of Labrador coast and Greenland, even to the 80th degree.* But they were not able to find a passage to India or Asia, in that direction, as many had hoped and expected. And as the survey of the coast was chiefly made, a long period intervened, without much attention or effort towards such a discovery. In 1789, Mackenzie, who had visited the English Fur Companies north of Canada, descended the river now bearing his name, and discovered the Arctic Sea, which revived the hope of finding a passage by water to the north of Asia, in a high northern latitude of the American continent. July, 1818, a project was formed, for an expedition to seek a passage by Davis's Strait, round the north extremity of America, and westward to Behring's Straits: And also another to proceed north and northeast to the sea of Spitzbergen, or polar sea, and if possible to reach Behring's Straits round the north of Europe and Asia. The latter expedition consisted of two ships under Captains Franklin and Buchan, and proceeded north to latitude 80° 30', when the ship commanded by Capt. Buchan, was driven by a storm among ice-bergs, and so much injured as to be unable to continue on the expedition. She returned, and Capt. Franklin judged it proper to accompany her back to England.

Captains Ross and Parry, in two ships, left Shetland in April, 1818, and passed Cape Farewell, the southern extremity of Greenland, in latitude 60°, the last of May. They soon met numerous islands of ice of different dimensions, and of great height. After passing some distance up Davis's Straits, on the west of Greenland, the ice-bergs were more numerous, and obliged them to pass near the Greenland coast. The navigation, in 70 and 73° lat., became very dangerous, on account both of the fields and islands of ice. We may form some idea of the obstacles they met and the dangers which surrounded them, from a view given by Capt. Ross of the mountains of ice lying in their passage, which is here presented. The utmost skill and activity were necessary to preserve the ships from destruction. And yet ships from Europe often visit these parts for whale-fishing. At the time Captains Ross and Parry were there, about forty whale ships were in the vicinity. Both Captains Ross and Parry have

* Greenland was visited and settled by Danes and Norwegians as early as the tenth or eleventh century: but was afterwards long neglected, and when search was made for the inhabitants in the seventeenth century, none could be found. Since, however, it is said some of the race remain in the interiour. An opinion has also been given by some writers, that North America was first settled by this early company from the north of Europe. Some Esquimaux have been found there. But these people are very different from the Indians of the more northern parts of North America. Whether Greenland is an island, or is joined to the Continent, is uncertain, though now supposed to be an island.

made several voyages for the purpose of discovery in the north part of America since, in which they have displayed great courage and perseverance, but without success as to the object they had in view. Accounts of these voyages have been published. But it appears pretty well settled, that there is no passage by water, which can ever be of practical utility: For it must be so far north, as to be attended with almost insuperable difficulties, and most imminent danger. Whether the continent continues to the north pole, or very near it, then is of little importance to be known.

WOOD FLOUR.

It has been of late clearly proved that all the chief alimentary matters employed by man may be reduced to three classes, viz., saccharine, oily, and albuminous substances, the most perfect specimens of which are respectively sugar, butter, and white of egg. The saccharine principle, in its extended sense, includes all those substances which are chiefly derived from the vegetable kingdom—means, in fact, the same thing as what we commonly call vegetable diet. It comprehends all those substances, whatever their sensible properties may be, into the composition of which the hydrogen and oxygen enter in the proportion in which they form water;—for example—what perhaps may not a little surprise the reader—the fibre of wood, which chemists call *lignin*. Much skilful manipulation and delicacy of experiment were required to establish this result; but the nutritive property of the woody fibre—in short, that a tolerably good quartern loaf can be made out of a deal board—has been proved by the recent labours of a German Professor, and may be verified by any one who will take the trouble to repeat them:—

To make wood-flour in perfection, according to Professor Autenrieth, the wood, after being thoroughly stripped of its bark, is to be sawed transversely into disks of about an inch in diameter. The saw-dust is to be preserved, and the disks are to be beaten to fibres in a pounding-mill. The fibres and saw-dust, mixed together, are next to be deprived of every thing harsh and bitter which is soluble in water, by boiling them, where fuel is abundant, or by subjecting them for a longer time to the action of cold water, which is easily done by enclosing them in a strong sack, which they only half fill, and beating the sack with a stick, or treading it with the feet in a rivulet. The whole is then to be completely dried, either in the sun or by fire, and repeatedly ground in a flour-mill. The ground wood is next baked into small flat cakes, with water rendered slightly mucilaginous by the addition of some decoction of linseed, mallow stalks and leaves, lime-tree bark, or any other such substance. Professor Autenrieth prefers marshmallow roots, of which one ounce renders eighteen quarts of water sufficiently mucilaginous, and these serve to form four pounds and a half of wood-flour into cakes. These cakes are baked until they are brown on the surface. After this they are broken to pieces, and again ground, until the flour pass through a fine boulting-cloth, and upon the fineness of the flour does its fitness to make bread depend. The flour of a *hard wood*, such as beech, requires the process of baking and grinding to be repeated. Wood-flour does not ferment so readily as wheaten-flour, but the Professor found fifteen pounds of beech-wood flour, with three pounds of sour wheat-leaven, and two pounds of wheat-flour, mixed up with eight measures of new milk, yielded thirty-six pounds of *very good bread*. The learned Professor tried the nutritious properties of wood-flour, in the first instance, upon a young dog; afterwards he fed two pigs upon it; and then, taking courage from the success of the experiment, he attacked it himself. His family party, he says, ate it in the form of gruels or soup, dumplings and pancakes, all made with as little of any other ingredient as possible; and found them palatable and quite wholesome. Are we, then, instead of looking upon a human being stretched upon a bare plank as the picture of extreme want and wretchedness, to regard him as reposing in the lap of abundance, and consider, henceforth, the common phrase 'bed and board' as compounded of synonymous terms?—*London Quarterly*.

MAMMOTH VEGETABLES: PRODUCTS OF WESTERN OHIO.

The following list and description of *mammoth* growths are taken from papers published in the State of Ohio. Some of the statements almost exceed belief; but they are said to be given on authority sufficient to entitle them to credit.

A Radish in Clark County, weighing twenty pounds; girth two feet two inches, length three feet nine inches.

A Beet raised in Highland County, weighing eighteen pounds, and measuring two feet five inches in circumference.

A single stalk of Buckwheat, raised in Clark County, produced three thousand six hundred and fourteen kernels.

An Apple raised in Green County, weighing two pounds two ounces: fifteen selected filled a half bushel measure.

A Pear raised in Warren County, weighing two pounds.

A Tomato raised in Green County, weighing twenty-four ounces.

A Pumpkin raised in Clark County, weighing one hundred and sixteen pounds, girth six feet six inches, length of vine on which it grew seventy feet.

A Potato raised in Huron County, near the lake, weighing three pounds ten ounces.

A mountain has been lately discovered in the State of North Carolina; perhaps, we should rather say *described*; which is higher than any other in the United States. It is in Yancey County, and is 6,750 feet in height. It had been supposed that Mount Washington, one of the White Hills in New Hampshire, was the highest; but that is only 6,230. It appears strange, that the mountain in North Carolina had not been measured and described before.

The younger Michaux, on his way from the valley of the Mississippi, thirty years ago, passed through the County of Yancey; and afterwards stated that the Alleghany ridge was probably the highest in that county.

THE REPORTED RIOT IN BOSTON.

We have thought our distant subscribers might be desirous of having a correct account of a *pretended* mob in this city, on the 21st of October, on the day of a proposed meeting of "the Anti-Slavery Society." We speak of it as a *pretended*, or *reported* riot; because it has been called a riot by some, and been denied to be such by others, and because the facts will enable every one to decide the character of the meeting of citizens on that occasion.

The occasion of the meeting of the citizens, which has been called a mob, was a *public* notice that the Female Anti-Slavery Society would assemble, and that addresses would be made by several gentlemen: And it was generally believed the notorious Thompson, a foreigner, would address the meeting. It is proper here to state, that about a week before, an attempt to get up a similar meeting in the city failed, by the influence of the discreet individuals who owned the hall, where the meeting was proposed to be: that Thompson's character and spirit had become more fully known, by the *well-authenticated* charge of dishonesty and *fraud* in England, and his late declaration at Andover, "*that the slave-holders ought to have their throats cut.*" The already strong feelings of disgust and indignation against Thompson for his imprudent interference with our political concerns, and highly incendiary speeches, tending to mislead, and deceive the ignorant, and drive them to deeds of misrule, opposition to government, and law and constitutional provisions; were now greatly sharpened by the fresh proofs of his immoral character and reckless and sanguinary spirit and designs; and it is said, many truly worthy citizens were resolved to prevent his again addressing the deluded and ignorant in this place, if it were possible to prevent it. He and his friends were frequently and publicly warned of such a feeling in the people generally; in that his object must be mischievous and incendiary, and would excite a mob, or some violent act. Garrison also, by his activity in the same revolutionary cause, in the same incendiary measures, and second only to Thompson, in recklessly braving public opinion, and publishing in his paper, the most provoking, vituperative and libellous paragraphs, not only against slave-holders, but against all the citizens of Boston and Massachusetts who were in favour of law, and order, and the Constitution, in opposition to his and Thompson's truly incendiary declarations, and speeches, and measures; he too, had made himself highly obnoxious to the people—the sober, quiet people of Boston and elsewhere. But, as if to court danger and persecution, as if to brave public opinion, and *nine-tenths* of the respectable citizens, and to seek for martyrdom, a second meeting was notified, and it was reported that Thompson and Garrison, or one of them, would be present and *dare* to repeat their incendiary and revolutionary doctrine. The feelings of many were highly excited and provoked. But still, it was hoped, and said, and believed, that no personal violence would be offered: that all that would be done would be to prevent their delivering another of their inflammatory speeches in the city, with as little force or alarm as possible.

Such was the state of things and such the feelings of many, who assembled near the place of the society's meeting, at the appointed hour. Walking to the post office, at half past three, we saw the collection, and turned a little from a direct course, to behold the crowd. We saw many we knew to be very orderly and quiet citizens, whose character seemed to be a pledge that no serious riot or mob was intended or would be permitted: but we did not linger on the spot scarcely a single minute. About this time, the sign-board of the society was taken down, but with little noise, or other violence or angry threats, except that there were calls for Thompson. Some went up into the room, (as we afterwards learned,) and ordered or advised the females to disperse; which they soon did without any thing being said or done to injure, or even to alarm them. Some tracts were also thrown out into the street and destroyed. A call for Thompson, it is said, was often made; but the Mayor, who through the whole affair conducted with equal firmness and moderation, assured them Thompson was not present; and probably not in the city. Soon after, as the report is, a call was made for Garrison; when it was also said by one of the sheriffs, that he believed Garrison was not present. Some, however, still believed he had been there, and was secreted somewhere in the building, when a search was made; and after a few minutes he was found in a carpenter's shop adjoining, in a place of intended concealment. He was taken and let down by a rope about his body, under his arms, into the street or lane, and dragged or forced along toward State Street and the City Hall, where probably some injury might have been inflicted on his person or clothes. Either the persons who found him, or others who were by, took him to the City Hall, where the Mayor, &c. were, for the laudable purpose of preventing any serious harm being done him, by any one at that moment of excitement, less discreet than the rest: And it is said, some were really desirous of carrying him to the common, to give him a suit of tar and feathers, as was done in olden times to very obnoxious individuals. The majority present, it is confidently said, had no such design or wish; and were satisfied in having prevented the meeting, or the speeches of Thompson and Garrison, and were averse to any further proceedings against Garrison or his accomplices. The Mayor had the prudence to have Garrison conveyed in a carriage to the jail for safe keeping, till the following day; in the mean time he was let off, and probably left the city.

This we believe to be a correct version of this unfortunate affair. We pretend not to justify it; really moderate and harmless as it was. We think mobs should never be encouraged in any state of things; for they lead to great and incalculable mischief; and law is always the best, and safest, and only proper remedy of all evils. And even on the late occasion, in this city, there was at one moment, after the people were excited and worked up, as is always the case, danger perhaps of committing personal violence, which would have been a deep and lasting disgrace to the people of Boston. Let us learn then to avoid mobs, as the greatest, or one of the greatest of evils. But, on the other hand, and

it is proper to speak out on this point, let the imprudent incendiary, and reckless despiser and opposer of public opinion, where that opinion is for order and justice, consider that they are really the authors of the violence and riots which ensue. They know what will be the consequence of their conduct, of their attempts to exasperate the people against the Constitution and the laws, and if they pursue it, they are the *mob;* they make the riot; they are the real authors of the violence and mischiefs which follow; and if they get up a mob, and suffer themselves by it, they have only themselves to blame. It is not the overt act, in all cases, which makes a crime. It is the design, the tendency of an act to produce crime, which is often criminal and the most criminal. Therefore, an accessory before the act, is a criminal in the eye of the law. The drunkard is ready for violence and insult; and if he puts himself in a state of intoxication may be forcibly prevented from doing mischief. It is treason to plot against the peace and laws of the Government. And speeches and writings tending to excite rebellion or insurrection, are crimes against the majesty of law, and the peace and dignity of the Commonwealth. We have the highest authority to support us in saying, that the writings and speeches and measures of the violent Abolitionists are revolutionary, and incendiary. And we therefore think there is law enough to prevent them in their reckless course. And we would have law processes, and nothing but law. But, if these men are so mad and so regardless of the peace and welfare of society as to continue their measures after all which has been said and predicted and forewarned, they at least cannot justly complain of any harsh treatment. The peaceable may complain and ought to complain of mobs, and we sincerely hope will always have resort to law for a remedy, instead of to force and violence.

THE PROVINCE OF WOMAN.

BY HANNAH MORE.

As some fair violet, loveliest of the glade,
Sheds its mild fragrance on the lonely shade,
Withdraws its modest head from public sight,
Nor courts the sun, nor seeks the glare of light;
Should some rude hand profanely dare intrude,
And bear its beauties from its native wood,
Exposed abroad its languid colours fly,
Its form decays, and all its odours die.
So woman, born to dignify retreat,
Unknown to flourish, and unseen be great;
To give domestic life its sweetest charm;
With softness polish, and with virtue warm;
Fearful of fame, unwilling to be known,
Should seek but Heaven's applauses and her own;
Should dread no blame but that which crimes impart,
The censures of a self-condemning heart.

MAHOGANY.

The Mahogany tree is found in Honduras, the eastern part of Guatemala, and a peninsula which separates it from Yucatan. A great part of this territory is covered with thick forests, containing Mahogany and logwood. The Mahogany trees, however, are but thinly scattered; and the expense of transporting them to the coast is very great, on account of the distance, and the thickets and mountains which must be passed. A great number of slaves are employed in this labour. The logs are so large, that those of seventeen feet long, weigh six and seven tons. One has been got out weighing seventeen tons. The tree has immense spreading branches, and a very large trunk, which make it one of the most magnificent trees of the forest; but in height some other trees exceed it. The largest trees are said to be of the value of $4000 or $5000.

The Mahogany also grows in Jamaica, Cuba and St. Domingo: and the English have found it a profitable trade. But there are now quite few remaining in the islands. The trunk is most valuable, as it produces the wide boards; but the limbs are preferred for ornamental work. The process of veneering is of recent origin, and a great portion of Mahogany is thus saved. In Philadelphia it is sawed into thin veneers by steam; a process of reducing, and yet saving appearances, which will be applied, probably, to marble for building, to a far greater extent than it has been.

The account of the first introduction of Mahogany to England is curious. A physician of the name of Gibbons was building a house in Covent Garden in 1724, when he received a present of some mahogany plank from his brother, a West India captain, and he desired his carpenter to work up the wood. The carpenter had no tool hard enough to touch it, and the planks were laid aside. The doctor's wife, after the house was finished, wanted a candle box, but the cabinet maker who was applied to, to work the planks, also complained his tools were too soft. But he persevered, and the candle box was completed after a rude fashion, but it was so much admired that the physician resolved to have a mahogany bureau, and when it was finished, all the people of fashion came to see it. The cabinet maker procured some planks and made a fortune. From that time the use of Mahogany furniture went forward, and the drawers and bureaus of walnut and pear wood were superseded in the houses of the rich. In 1829, the importation of Mahogany to England exceeded one thousand nine hundred tons.

The celebrated German poet and scholar, Goethe, says his father frequently employed him at an early age, to superintend the workmen which he had in his service. "He gave me to understand, that he expected the work would be seasonably and well executed, and that I must inspect and quicken the workmen. This, he adds, was of much advantage to me; as it gave me an opportunity of gaining a knowledge of many arts and trades; and I found pleasure in thus identifying myself with the feelings and views of others. I passed many agreeable hours in this employment; and learned to judge of every condition of life, and to estimate the pleasures and pains, the difficulties and enjoyments of each.

The first instance of the name 'America' occurring in print, is in a geography published in 1529, at Basil. And it seems to refer only to South America. Where would be the impropriety of giving the name of *Cabota* to North America?

PENOBSCOT EXPEDITION IN 1779.

Few of the present generation can recollect the Penobscot expedition; and as it was unfortunate to the American arms, there was less said of it, at the time, and has been since, than of other affairs of similar preparation and promise. British vessels of force were hovering on the coasts of Maine most of the Revolutionary war, from its commencement; and they took possession of Penobscot, (since called Castine,) in June, 1779. They were a great annoyance to the people far and near, and prevented all intercourse by water, between that section of the State, and Boston and vicinity. A plan was therefore soon formed, to drive off the British forces, and take possession of the town and harbour of Penobscot: And the enterprise was wholly undertaken and prepared by Massachusetts. The Continental Congress however, was consulted, and consented to the expedition; declaring, at the same time, that it could not subject the Union to the expense, and that there was little hope of success. Many in Massachusetts urged the importance of the project; and heavy as were the burdens on the people and great as was the number of men in the public service, it was concluded to make the attempt. As the British had several vessels of war there, a naval force was necessary on the part of the Americans. And this was the most difficult part of the expedition; though men were so scarce, that an impressment was resorted to, on this occasion; and apprentices and young men were taken in the streets in Boston and compelled to go on board the vessels and engage in the expedition. Some of them never returned: they found untimely graves on the Peninsula of Penobscot.

The British troops were about one thousand, under General M'Lane, and nine vessels of war, commanded by Commodore Barclay. The expedition sailed from Boston, in August, and was composed of nine hundred men, besides those belonging to the vessels. General Lovell, of Weymouth, had command of the land forces, and Commodore Saltonstal of the fleet; consisting of one frigate, ten other ships, several of them sloops of war of sixteen or twenty guns; seven armed brigs, and twenty-four other vessels for transporting the troops. This appears a formidable armament; but the expedition was too much hastened; and besides, there was a want of good understanding or concert between Salstonstal and Lovell. An assault, however, was made on the fort of the enemy: But in doing this, the Americans had to ascend a high cliff, which for the greater distance was almost perpendicular, exposed to the heavy fire of the British troops. They succeeded, however, in reaching the heights, and in driving the advance of the enemy into their intrenchments. Many of the Americans were killed or wounded at this time; and the Commodore failed to send recruits to their aid, as was expected; and it became necessary to retire to some distance from the British fort. A stand was made and a request sent to Boston for a reinforcement; which was immediately ordered; but before they arrived, the British received a large additional force, and it was in vain to oppose them. The Americans burnt several of their own vessels, but most of them fell into the hands of the enemy. Colonel Henry Jackson's regiment was ordered to Penobscot, as a part of the reinforcement; but the retreat was commenced when they were on their march. There was great loss of property and of lives; and some blame attached to the principal officers. The General Court ordered an investigation of the affair. The Commodore was censured for want of energy and decision; but General Lovell, and General Wadsworth (the second in command of the land forces,) were fully acquitted. The men suffered a good deal in travelling through the country from Penobscot Bay to Portland, which was then almost a wilderness. The Legislature of Massachusetts applied to Congress for a reimbursement of the expenses of the expedition; or a consideration thereof, by remitting a part of the requisition just before made by Congress on Massachusetts for a large amount. There were three large State ships in the expedition, and many vessels were hired for the purpose, most of which were taken or burnt. The expedition was altogether unfortunate, and added much to the debt of the State.

ORANGE LODGES.

There has lately been a good deal of excitement in England on account of the lodges or societies of Orangemen, as they are called. They are chiefly among the military, and the Duke of Cumberland is at their head. He and others, when questioned on the subject, have given evasive answers, or have refused to answer at all. There are bishops and priests also belonging to the society. The Bishop of Salisbury is the present Lord Prelate and Grand Chaplain of the order. The members are under oath; and the oaths are taken in secret. It is said that there are three hundred and sixty thousand members, who are capable of bearing arms, in the Kingdom and its colonies; many of them in Ireland, where they were put down, in a great measure, several years ago. Lord Kenyon declared the order illegal in 1821.

Parliament has lately taken up the subject. For such a number of men, whether military or not, who are under oath taken in secret, may well excite alarm. It is said their design is to resist or prevent all reform in the Government, and all plans for the greater liberty of the people. The sword and the mitre are united against the rights of man. A Committee of Parliament has just reported, "that an organized institution or society exists, pervading Great Britain and her colonies to an extent never contemplated as possible, highly injurious to the discipline of the army, and dangerous to the peace of the State; and that the lodges or societies have lately much increased."

Lord Brougham lately presented a petition in the Upper House of Parliament, praying that the bill for abolishing imprisonment for debt, before the House, might be passed; and in the remarks he made, he stated that there was a man in prison for debt, who had been confined *thirty-eight years; and that for a debt which he did not himself contract*

THE CLEARNESS OF SOUNDS AT NIGHT.

The greater clearness with which distant sounds are heard during night, is an interesting phenomenon. It was noticed by the ancients, and ascribed to the repose of animated nature. When Humboldt first heard the noise of the great cataracts of the Oronoco, his attention was directed to this curious fact, and he was of opinion that the noise was three times louder during the night, than in the day. As the humming of insects was much greater at night than in the day, and as the breeze which might have agitated the leaves of the trees, never rose till after sunset, he was led to seek for another cause of the phenomenon. In a hot day, when warm currents of air ascend from the heated ground and mix with the cold air above of a different density, the transparency of the air is so much affected, that every object seen through it appears to be in motion, just as when we look at an object over a fire, or the flame of a candle. The air, therefore, during the day is a mixed medium, in which the sounds are reflected and scattered in passing through streams of air of different densities, as in the experiment of mixing atmospheric air and hydrogen. At midnight, on the contrary, when the air is transparent and of uniform density, as may be seen by the brilliancy and number of the stars, the slightest sound reaches the ear without interruption. M. Chladni has illustrated the effect of a mixed medium by an experiment of easy repetition. If we pour sparkling Champaigne into a tall glass till it is half full, the glass cannot be made to ring by a stroke on its edge, but admits a dull, disagreeable and puffy sound. This effect continues as long as the effervescence lasts, and while the wine is filled with air-bubbles. But as the effervescence subsides, the sound becomes clearer and clearer, till at last the glass rings as usual, when the air bubbles have disappeared. By reproducing the effervescence, the sound is deadened as before. The same experiment may be made with effervescing malt liquors; and with still more effect by putting a piece of sponge, or a little wool or tow, into a tumbler of water. The cause of the result obtained by M. Chladni is, that the glass and the liquid contained, in order to give a musical tone, must vibrate regularly in unison as a system; and if any considerable part of a system is unsusceptible of regular vibration, the whole must be so. This experiment has been employed by Humboldt to illustrate and explain the phenomenon of distant sounds being more distinctly heard during the night.

Encyclopædia Americana.

ALCOHOL.

We lately received the following note:—"To the Boston Bewick Company. Gentlemen, I wish you to stop my American Magazine, as it has cost me more the last year than all my alcohol and tobacco, which you have a tack,—"

(Signed) S. H. H——n.

With reference to this frank and laconic letter, we deem it our duty to say a word for the benefit of those who shall continue to take the Magazine: As our old friend "S. H." has given up the work, we cannot expect that he will ever see our remarks. It is true, that we have referred to the common use of tobacco as useless, and in some respects as unfavourable to health; and therefore have ventured to advise to its discontinuance. We believe we are supported, in this opinion, by all respectable and learned physicians. Still, we have discriminated between "the nauseous weed," and *alcohol*. No sentence of condemnation has been uttered by us, no *blast* of denunciation has been sounded from our pages, against the lovers of *nicotia*. And yet we do say, seriously, that it had better be abandoned. But with the free and common use of alcohol, as a drink, in every form, we do mean to wage open war. For, after all that has been said and done, there is still a great amount of mischief and suffering arising from the consumption of rum, brandy, gin, and whiskey. We shall continue to speak and write against; "to cry aloud and spare not." And we appeal to the love of happiness, and the aversion to misery, in every one; to their pride and selfishness even; to their regard for personal reputation and comfort; and to their affection for family, wife, and children and friends; to avoid all ardent spirits, and whatever intoxicates. And we would speak particularly, to the mechanic and the labourer. For, if the rich choose to make brutes of themselves, and to dishonour themselves, they must take the consequences. But no poor man, or labouring man can *afford* to spend time and money in taking strong drink. He is bringing misery,—present as well as future misery, on himself and family. And he is bound to provide for their comfort. In no way can he so directly do this, if he has been a follower of strong drink, as by reforming wholly and immediately. By his prudence, and saving, and his sobriety of conduct, he can do much for the peace and welfare of his family. And this he may do, if he is not able to make them rich, or give them worldly distinction. He can set them a good example; and he may save ten or twelve cents a day by denying his depraved appetite for alcohol, which will be something for their enjoyment. Why should the labourer make himself miserable, because some rich men destroy their health and good name, by excessive drinking? This is a poor apology, and as poor a consolation. The honest, industrious and sober labourer is far more happy in himself, and far more respected, by those whose esteem is worth having, than the rich who are dissipated, idle and intemperate.

WOMAN'S ATTACHMENT.

Why should she cling so fondly to his breast?—
Go ask the moss on which thy foot is pressed,
Why it adheres so closely to the rock,
Whose iron surface but appears to mock
The feeble efforts by those tendrils shown,
To fix their roots within a barren stone,
While all their food is drawn from night's cold tears alone!

AN ENIGMA.

My complexion's dull and dark,
Yet I have a lovely sire:
I am wingless, but the lark
Through the skies ascends not higher.
Griefless tears I cause the fair,
Yet at my birth dissolve in air.

THE ANSWER.

Upon my word, 'tis quite a joke,
That six such lines should end in smoke.

THE ESQUIMAUX HUTS OF SNOW.

This is a view of the Village composed of low mounds or huts of snow, visited by Capt. Parry in one of his voyages to the northern regions of America, and to which reference is made in the article relating to his wintering there with the ships *Hecla* and *Griper*. It was in the north part of Hudson's Bay, in latitude 68°. The visit to these huts afforded some relief to the monotonous scene and employments of his winter confinement; and it served to gratify curiosity, to examine these snowy abodes of human beings. He is not very full in his description of their manners or occupation; but it appears from his statement, that the burrows were made of snow and ice; and that the interiour of each was about six or seven feet, and so low as to prevent one standing erect. The snow and ice are constantly melting, which makes these cabins very uncomfortable and dirty places of residence. But it is proper to take Capt. Parry's description in his own words:—"If one recollects that these habitations were within sight of our vessels, that many eyes were watching for whatever could break the monotony of our life, he may conceive of the admiration which was excited in us by this collection of huts together, with the assemblage of seventy persons, men, women, and children, who, surrounded by canoes, sleds and dogs, seemed to be fixed in winter quarters. The snow and ice were the only material employed in the building of their strange dwellings. Oblong blocks, from six to seven inches thick, and about two feet long, placed lengthwise, were united so as to form a circular wall. Every layer was slightly inclined inward, until at the top of the building, they were so near as to allow only a small opening at the summit, over which the keystone or rather ice, was skilfully laid. The interiour was not less remarkable: After sliding through two passages, ten feet long and four or five high, arched overhead, we reached a small circular space from which there were passages into three sleeping rooms. The females were sitting on their beds, with a lamp near them, and surrounded by their children and instruments of labour." Afterward Parry speaks of another encampment, that "some of their huts were covered with skins, and others built entirely of snow cemented with water."

WELCOME WINTER.

Come Winter, come, with freezing blast,
And spread around a dreary waste—
Come give a hint of simple truth,
Of outward beauty's *transient* worth.

The flower has fall'n within its grave,
The stream is chill'd like polar wave;
The trees have laid their leaves aside—
Mountain and vale have lost their pride.

Has *all* that's beauty lost its hue?
Has *virtue* faded from the view?
Has warmth of heart ceas'd or decay'd,
As outward loveliness did fade?

These fade not, like the summer flowers;
They flourish still in Winter's showers;—
Though beauty 's faded from the *sight*,
These give their fragrance and delight.

The form loses beauty and grace,
The eye and cheek give not a trace
Of that which once was bright and fair—
But pure the mind, and *beauty's there*.

Then brighter and lovelier the heart,
As wider its love we impart—
As we kindle the 'therial ray,
Which Winter's storms do not decay.

The winter of age comes with power,
To chill us and change us yet more;
He will shroud and bind us till late,
Then waft to the skies, when Spring shall awake

SWITZERLAND.

This justly celebrated country, situated between Germany, France and Italy, though of small extent, is one of peculiar interest to the friends of civil and religious liberty. It is only about 140 miles from east to west, and 120 from north to south, with 2,000,000 inhabitants. Switzerland was formerly divided into thirteen cantons, or districts; since the time of Napoleon, Emperor of France, it has been divided into twenty cantons. The largest of these is Berne, which contains 350,000. The largest city is Geneva, which has 26,900 inhabitants. Each canton manages its own internal concerns, and their government is partly democratic and partly aristocratic; some being more and some less democratic, but all styled republics, and the federal government of the whole is composed of a diet or congress, composed of one member from each canton. Switzerland is the Helvetia of the ancients, and was formerly, for many centuries, a part of the German Empire, till the tyranny and oppressions of the emperors, caused a revolt in the 14th century. The sufferings of the people were very great, but they finally obtained independence, and long maintained it by brilliant victories over their cruel oppressors. The Swiss, though bordering on Germany and Italy, are different, in many respects, from the people of both those countries; and for many ages served as a barrier between them.—But the characters and manners of the Swiss are the most entitled to consideration. From early times, they were an industrious and hardy people. Manufactures flourished among them, and in their manners, they were distinguished from the neighbouring nations by sobriety and frugality. Geneva and Lausanne, and Zurich and Basle, became thriving towns. The families of Savoy and Hapsburg were among the most distinguished and powerful. The counts of Hapsburg and of Savoy were among the most eminent military men of the times. But Switzerland has been most interesting in a moral and religious view. The work of reformation began there at a very early period. In 1518, Zwingle opposed the corruptions and oppressions of the Romish church. Two years before indeed, which was the year previous to Luther's opposition, he had attacked pilgrimages, and the invocation of the Virgin Mary. The people, however, were long distracted by religious and political controversies. Aristocracy and democracy struggled for the superiority, and the disputes between the papists and reformers engendered in some places an unhappy spirit of fanaticism. During the persecution of the protestants in France, near the close of the 17th century, the Swiss gave them an asylum and pecuniary aid. They have generally been the advocates of toleration, and the friends of protestantism. And they can also boast of a great number of learned men within the last hundred years—as Haller, Bonnet, Rousseau, Lavater, Gessner, Hottinger, Muller and Pestalozzi. The common people enjoyed a greater degree of freedom, than any others on the continent, excepting perhaps, the citizens of some of the United Provinces of Holland. But the French revolution extended its baleful influence even to those retired and peaceful regions; and the inhabitants were plundered and oppressed by self-styled Republicans, as much as they had before been by kings and emperors. In the southeastern part of France, and in Sardinia, which included Savoy and Piedmont, and borders on Switzerland, the people early opposed the Roman hierarchy; and were known by the name of *Waldenses:* And in all this country, northwest of Italy, remonstrants were found against the arbitrary claims and absurd tenets of the Popes, long before Luther raised his powerful voice in condemning the shameful sale of indulgences by the papal missionaries.

REDEEMING THE TIME.

If those who are occupied in the proper business concerns of life, and its severest toils, had really no time for study, then would the great mass of society be doomed to perpetual mental degradation. But every man can spare at least one hour in twenty-four, for the improvement of his mind: and one hour a day is equal to four years in twenty; which, as far as time is concerned, is sufficient to complete as extensive and varied a course of study as can be pursued, from entering to leaving the university. With an hour at his command, in every day, (and often it might be two hours) each man has the principle and power of freedom in his own bosom; and will be a nobleman and gentleman, a scholar and a philosopher, though he toiled at the desk or shop, or in the field, for his support.

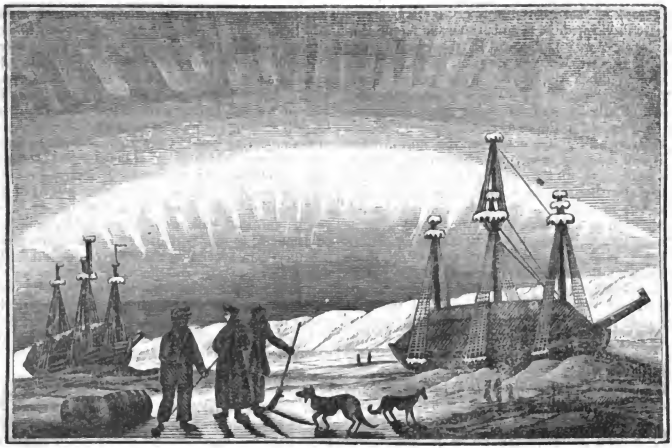
Freedom of the Mind.

I am acquainted with a great many *very* good wives, who are so notable and so managing, that they make a man every thing but *happy*:—and I know a great many others, who sing, and play, and paint, and cut paper, and are so *accomplished*, that they have no time to be *useful*. Pictures, and fiddles, and every thing but agreeableness and goodness, can be had for money! but as there is no market where pleasant manners, and engaging conversation, and christian virtues, are to be bought, methinks it is a pity the ladies do not oftener try to provide them at home.—*Hannah More.*

Dyspepsia is to be attributed to want of sufficient exercise, or high-seasoned food, or excess in quantity, or eating fast, or not masticating food properly. All these are causes of dyspepsia; the two last, as well as the others; and yet very little attention is paid to the subject.

The Stranguary.—This afflictive, and at some stages of life very common disease, in a great majority of cases, is cured by the use of Gum Arabic. Two ounces dissolved in boiling water, and taken in several successive draughts, are abundantly sufficient to cure this formidable complaint—it may be sweetened without lessening the effect. It is believed that even when this disease is connected with the stone, it would be much relieved by this prescription;—at least, it will be harmless in all cases.

It is supposed that 25,000 persons are employed in the manufacture of hats, in the United States, and the annual amount of this manufacture is sixteen millions of dollars.



THE WINTERING OF THE HECLA AND THE GRIPER, AT MELVILLE ISLAND.

Captain Parry, who had been a lieutenant under Capt. Ross, in his voyage of discovery to the north-west parts of the American Continent in 1818, and who was not fully satisfied with Capt. Ross' return, without greater and further efforts, was selected to command an expedition for a similar purpose in 1819. It consisted of the *Hecla* of 375 tons and fifty-eight men; and the *Griper*, a brig of 180 tons and thirty-six men, under command of Lieutenant Liddon. They sailed from England in May, (1819,) and passed Cape Farewell, the south point of Greenland, about the middle of June, where they met the ice-bergs, which were great obstacles to their progress up Davis's Strait, to Lancaster Sound, in 73° N. latitude, through which they proposed to pass westwards. By great effort, they proceeded westward to Melville Island, in latitude 74°, and longitude 110° west. In this route, several islands, capes, and inlets were discovered and named by Capt. Parry; among these was a large island, to which they gave the name of Melville. In a harbour of this island the Hecla and Griper wintered. They reached the harbour with difficulty the 24th of September; for the ice had then already been making for nearly twenty days. The ships were moored near the shore, where they remained till the last of May following. Capt. Parry conducted with great prudence and judgment amidst all these difficulties and dangers. He got up plays and other recreations, some of which were of an athletic kind, to employ and amuse the sailors. He was also attentive to their diet, clothing and cleanliness, by which their lives and health were preserved. He lost but one man of both vessels' crews.

In a subsequent voyage (1821) Capt. Parry explored the northern parts of Hudson's Bay, and wintered in about 68° north latitude. Here he was unexpectedly visited by a company of Esquimaux. They lived at a little distance, in a sort of village or group of huts made of snow. Being invited to visit them, several of the English accompanied the natives; but in order to enter their snow huts, they were obliged to creep on their hands and knees. The huts are low, smoky and dirty; and yet afford a shelter to the natives; who, however, are in a most degraded state, little superior to the brute creation.

CAPTAIN BACK'S EXPEDITION, IN 1833 '34.

The several expeditions undertaken, within a few years past by individuals from England, are generally known by the reading public in the United States. They give evidence of uncommon courage and resolution in the brave men who were engaged in these adventures. The objects were laudable; being either for the purposes of discovery and science; or for relief to those who are supposed to be suffering in a desolate region without the means of returning. Capt. Back's last adventure commenced in 1833, for the benevolent purpose of finding Captain Ross, who had been then absent more than two years, without any information from him; and of assisting him and his company in returning to England, if they still survived. Capt. Back took passage from England for New-York; and immediately, on arriving at that place, proceeded to Montreal, and thence to the north and west over an immense territory (of nearly 2000 miles) to Fort Reliance, at the northeast extremity of the Great Slave Lake, in about 64 degrees of latitude. The following winter was passed at this place; but early in June, 1834, he departed for the river Thewcechо,

a distance of 200 miles, transporting his boat and stores on rollers; there to embark for the Arctic Sea. This service was performed in thirty days; and Capt. Back, Mr. King his surgeon, and eight men proceeded down the river. They passed down, with some interruptions, till they reached the 65th degree of latitude, and 106 west longitude, where the river turned to the east, and destroyed the hope of soon reaching the ocean at the north. The river now became broad, and broken, as it were, into small lakes, till they reached one so large as to show a clear horizon on several points of the compass, but in which the ice proved a great hindrance, even in midsummer. After passing some distance farther, in which the river held an eastern direction, so as not to be far from the western shore of Hudson's Bay, when its course was again north; and on the 29th of July they reached the sea in latitude 67 and longitude 94. They found the river very wide in some places, and disturbed by rapids. They met some Esquimaux near the sea, who at first appeared hostile, but afterwards became friendly and useful.

The river first terminated in a narrow estuary, much embarrassed by shoals and sandbanks; and the view to the north was in some measure closed in by a lofty headland belonging to the eastern mountains, (afterwards called the Victoria headland.) The opposite shores, however, speedily increased their distance from each other; that to the westward falling back in a direction nearly northwest, while that to the eastward trended off to northeast 3-4 east, and as Capt. Back was now to the eastward of Capt. James Ross's Pillar, he considered it to be his duty to proceed to the westward, and so endeavour to approach it. But the drift ice was so closely packed on the shore in this direction, and was at the same time so frequently and dangerously set in motion by heavy northwest gales, that he was unable to advance beyond latitude 68 deg., 45 min. long. N., 96 deg. 22 min. W., when it bore N. W. by N. distant 83 miles. From this point a clear icy horizon was seen in the N. N. W., in about which direction there seemed no doubt that there was a passage to the open sea, the tides coming up from this quarter, and the vertebræ of a whale being found driven on the coast opposite to it, with several pieces of drift wood, little sodden with water, and of a kind (the white pine) known to be peculiar to the banks of McKenzie river. Due north were two blue objects, which seemed to be large islands. In the northeast were water and ice, with what is denominated a water sky beyond them. In the east the sea was clear, with one small island bearing E. by S. from fifteen to twenty miles distant; and to the right of this was also a wide open space before coming to the eastern land.

The packed ice seemed chiefly confined to the western shore; and beyond it, especially to the eastward, the passage appeared quite free. Had Capt. Back not known, therefore, of Capt. Ross's return, he would have proceeded in that direction: and so, probably, have set at rest a question which he has now rather raised than decided, viz. whether Capt. Ross was not merely on an island, and never on the main land of America at all. Under his circumstances, however, and with the extremely severe task before him of reascending so rapid and broken a river as the Thowcecho, to his winter quarters, he would have been inexcusable had he quitted the coast in his solitary, and by this time also damaged boat. Accordingly, he set out on his return on the 15th of August, having previously obtained from his friendly Esquimaux a delineation after their manner, of the adjoining coast, which he has brought home with him, and which, as far as he went, was remarkably corroborated by the results of his own survey. He also ascended the most favourably placed of the neighbouring hills, so as to extend his sphere of vision; and thus took every step possible, in his circumstances, to render the result of his journey satisfactory. In ascending the river, on his return, he was obliged to abandon his boat, and proceed on foot over the young ice; but his people, being well supplied with provisions, did not suffer materially under this additional fatigue. They arrived at Fort Reliance on the 27th of September, after an absence of three months and a half on their arduous service.

A Church restored to Light.—A part of the British coast, in the County of Cornwall, within 550 years has been overwhelmed with sand by the force of the tides and the winds. An ancient Church has thus been nearly covered; leaving a small portion of its walls visible. The interiour has been lately restored to light, and is found to be as complete as when first erected, except the doors and roof. It may amuse our readers to know its dimensions. The length is thirty feet, the breadth twelve and a half, and the height of the walls the same. The altar (at the east end as usual) is of stone, four feet by two and a half, and three feet high. There is a small recess in the wall above the centre of the altar, in which a crucifix was probably placed. The chancel was six feet, leaving nineteen feet for the congregation, who were accommodated with stone seats. The floor was composed of sand and lime, under which the dead were no doubt deposited. No vestige of a window is to be seen, unless a small aperture on the south wall of the chancel may be one. Cornwall County lies at the southwest extremity of England; and it is on the western part of the cape or peninsula that the church is located, where the sands have been washed up by the force of the current, which is very great on account of the projection of the land. There are many other instances similar to this; but few, perhaps, where the sands have accumulated to such a height.

THE FROZEN TEAR.

On beds of snow the moon-beam slept,
And chilling was the midnight's gloom,
When by the damp grave Ellen wept;
Sweet maid! it was her lover's tomb.

A warm tear gush'd—the wintry air
Congealed it as it flowed away;
All night it lay an ice drop there—
At morn it glittered in the ray.

An angel, wandering from his sphere,
Who saw this bright, this frozen gem,
To dew-eyed beauty brought the tear,
And hung it on her diadem.

Albany Daily Advertiser

Ancient Mexican Cotton Manufacture.—The Cotton manufacture was found existing in considerable perfection in America on the discovery of that continent by the Spaniards. Cotton formed the principal article of clothing among the Mexicans, as they had neither wool, hemp, nor silk; nor did they use the flax which they possessed for purposes of clothing; and their only materials for making cloth, besides cotton, were feathers, the wool of rabbits and hares, (known in commerce as coney's wool,) and the fibrous plant called the *maguei*. We are informed by the Abbe Clavigero, that 'of cotton the Mexicans made large webs, and as delicate and fine as those of Holland, which were with much reason highly esteemed in Europe. They wove their cloths in different figures and colours, representing different animals and flowers. Of feathers interwoven with cotton they made mantles and bed curtains, carpets, and other things, not less great than beautiful. With cotton also they interwove the finest hair of the belly of rabbits and hares, after having made and spun it into thread: of this they made most beautiful cloths, and in particular winter waistcoats for the lords.' Among the presents sent by Cortes, the conqueror of Mexico, to Charles V. were 'cotton mantles, some all white, others mixed with white and black, or red, green, yellow, and blue; waistcoats, handkerchiefs, counterpanes, tapestries, and carpets of cotton; and the colours of the cotton were extremely fine,' as the Mexicans had both indigo and cochineal among their native dyes. They also used cotton in making a species of paper; one of their kinds of money consisted in small cloths and cotton; and their warriors wore cuirasses of cotton, covering the body from the neck to the waist.—*Baine's History of the Cotton Manufactures.*

Intoxicating Liquor not a Friend any where.—When the attempt was first made to prove that ardent spirits as a drink on board of ships is unnecessary, serious objections on the part of seamen, at least of those who on shore manifested such love for it, might have been anticipated. Seamen who, when exposed to the temptation, had exhibited themselves its constant victims—victims to men who can make the health and happiness, temporal and eternal, of their fellow citizens a prey to their unprincipled and greedy avarice—we repeat, that from such seamen serious objections might have been anticipated to this experiment in the cause of temperance; we have heard of no such objection—on the contrary, how often have we witnessed from the lips of many of this noble yet injured class of men an entire approval of the reform. Their own choice, when embarking on a three years' voyage, is to be free from the temptation at least while at sea. What a comment this on the motives and conduct of the dram seller!! What a practical comment addressed to the serious and moral reflection of the *citizen*, of the *legislator*, who can talk of the *right*, of the *expediency* of vending intoxicating drink, and of sanctioning such right and such expediency by law! What a comment addressed to the man who believes that intoxicating drink is ever necessary or useful!—for where can it be necessary, useful, or excusable, if it is not so to guard against the effects of the pitiless ocean? Our seamen by hundreds and by thousands have now tried the experiment; they have drank ardent spirits at sea and on shore, they have met the tempest every where, they have endured the cold of the frozen regions and the burning sun of the tropics without it, and this not once, but for years. Ask them in a sober and reflecting moment, and they will tell you that every where, and under every circumstance, it is no friend of theirs, but an enemy.

What encouragement is thus afforded to faithful untiring efforts to withdraw the victims of intemperance from the gulf into which they may have fallen!

What encouragement never to despair in such efforts! Yet more than all, how imperative is the obligation on all our citizens to endeavour by every means to guard the yet virtuous and temperate from every temptation which may plunge them into such a vortex; to endeavour by all means in our power, to remove such temptation from amongst us; and to endeavour *that they shall never again receive a public sanction.*—*New Bedford Report.*

Tendency of the Temperance Reform.—1. It will tend to check the spirit of gambling.

2. It will tend to check midnight cabals, and prevent the keeping of late hours.

3. It will restrain vulgarity, and promote decorum in social intercourse.

4. It will prevent many amusements which are of immoral character, and chasten those which are in themselves innocent.

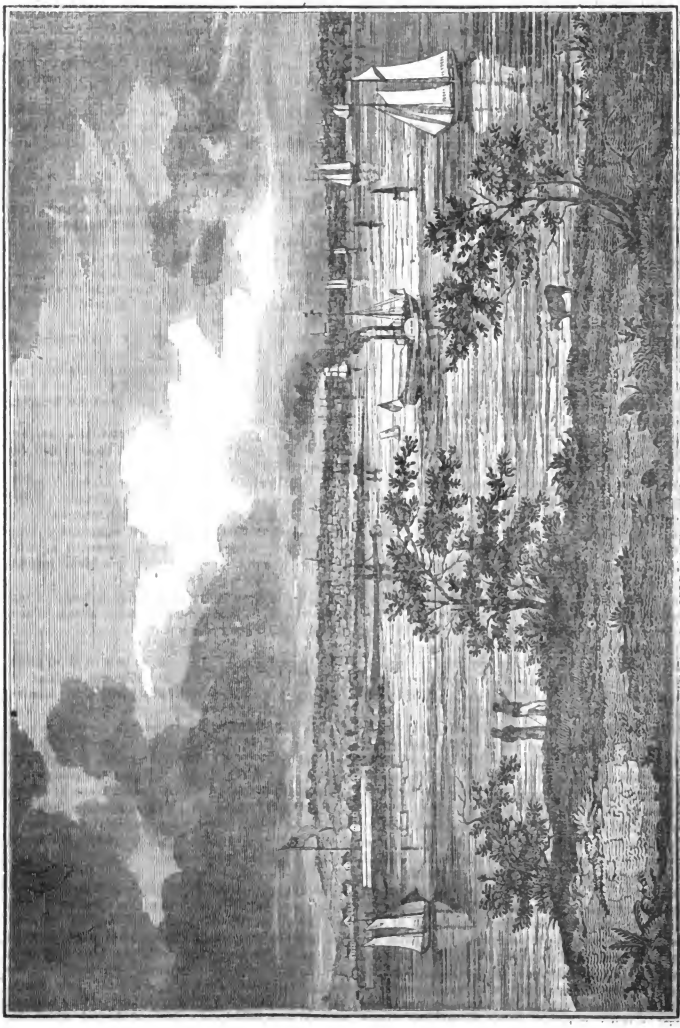
5. It will elevate the character of social intercourse, and promote kindness and affection among the members of families and neighbourhoods.

6. It will elevate the national character in the eyes of foreign countries, and fix upon an immovable basis our highly valued and cherished institutions.

7. It will increase the productive industry of our country, and render crime and want, almost, if not entirely, unknown among us.

Otto of Roses.—The royal society of Edinburgh received from Dr. Monro the following account of the manner in which this costly perfume is prepared in the East. Steep a large quantity of the petals of rose, freed from every extraneous matter, in pure water, in an earthen or wooden vessel, which is exposed daily to the sun, and housed at night, till a scum rises to the surface. This is the *otto*, which is carefully absorbed by a very small piece of cotton tied to the end of a stick. The oil collected, squeeze out of the cotton into a very diminutive vial, stop it for use. The collection of it should be continued whilst any scum is produced.

Intoxication.—A Bangor paper of 27th of November states that on Sunday morning the 22d, a man was found dead in the dock; and that on Monday morning the 23d, another was found dead, and the body much bruised, near the bridge and that both were in the habit of intemperate drinking, and no doubt were intoxicated at the time of their death. What a lesson! What a warning! Why will not rational man avoid the poison of alcohol, which destroys both soul and body in——?



VIEW OF PORTLAND HARBOUR, AND FORT PREBLE AT THE ENTRANCE, AS SEEN FROM FORT SCAMMEL, ON HOUSE ISLAND.
Engraved from an original Sketch by Capt. J. R. Vinton, of the U. S. Army.

Harwell, Sc.

A VIEW OF PORTLAND.

This very pleasant and flourishing city, the commercial metropolis, and for twelve years the capital of Maine, is situated in latitude 43° 40'. It is about 110 miles north by east from Boston, and 55 from Portsmouth, N. H. Its population in 1830 was 12,600: It is now estimated to be between 15,000 and 16,000. It is an ancient settlement; and was first called Casco, after the name of the bay, at the entrance of which it is situated. It was early incorporated by the name of Falmouth, which it retained till 1786, when it received that of Portland. The water almost surrounds the city, making it a peninsula, not very unlike the site of Boston. There are two long toll bridges leading to the city; one from the southwest, and the other from northeast; the entrance from the country west and northwest is nearly midway between the two bridges. The land rises gradually from the harbour at the southeast, and from the bay or large cove on the northwest. The town is well laid out, and is built in a convenient and elegant style. Few towns in the country appear so pleasant to the eye of the traveller. There are now sixteen religious Societies and places of worship. There is a Branch Bank of the United States, and five other banking companies. The harbour is large and safe, and is very seldom frozen over below Portland. On Cape Elizabeth, which is the southeast bound of the harbour, there is a stone Lighthouse seventy feet high. The town is defended by forts Preble and Scammel, on opposite sides of the ship channel, about a mile from the Lighthouse. The islands around the harbour are quite numerous and beautiful, and serve to protect it against the violence of the storms. The shipping of Portland is about 43,000 tons; 210 schooners, 100 brigs, 25 ships, 33 sloops, &c. And there is a very laudable spirit of enterprise in the citizens. With their wealth they appear disposed to improve the city by literary institutions and abundant means of education. There is an Athenæum, with a library of 3000. There is one public High School, in addition to several common schools; and there is an Academy, two High Schools for females, and several others, supported at private expense. The prosperity of the place has been aided by the stated and frequent running of steam-boats to and from Boston, and Bangor, a flourishing town on the Penobscot. The boats run between Portland and Boston in about ten hours, a distance of thirty-three leagues. A survey has been lately made, with a view to a Rail-Road from Portland to Quebec. But it is probable the rout will be from Belfast or Bangor, as the distance is less than from Portland.

BUFFALO.

No place in the West perhaps, is rising more rapidly in importance than Buffalo. Its situation for business and trade is peculiarly favourable; and the population and enterprise of the city have much increased within two years past. It was burnt by the British in 1813; but has been rebuilt, and contains fifteen thousand inhabitants. Several extensive blocks of stores are in building of four stories, and many elegant dwellinghouses. It is situated at the extreme east end of lake Erie, near the mouth of Buffalo creek or river, and not far from the mouth of the river Niagara. The great New York Canal, from Hudson through the state, terminates near this flourishing city; and adds much to the business of the place. It is thus a great thoughfare from New York and the Atlantic States to the western parts of the United States, and to Canada. The number of steam-boats going and coming is immense. To Detroit it is nearly two days sail; and the boats touch at Cleaveland and other places on the route. The inconvenience of a narrow entrance into the harbour opposite Buffalo, is sensibly felt, though the harbour itself is large. There is a plan to remedy this difficulty already adopted, and soon to be executed; which is to cut a canal from the river nearly opposite the city to the lake, where is a bay or indentation not more than eighty rods from the river. The canal is to be one hundred feet wide, and of sufficient depth for steam-boats of the common size. This entrance will be about a mile from the mouth of the creek, and will make the ingress and egress sufficiently accommodating. It is proposed to extend a pier into the lake on one side of the mouth of the canal, so as to form a smooth harbour. The plan and work are of individual enterprise.

Sheet Iron Steam-Boat.—A sheet iron Steamboat has recently been put in successful operation on the Canal. It was built in Poughkeepsie, and is reported to be owned by Mr. Parmalee of that place, and some gentlemen in this city. It is propelled by an Engine somewhat on the Locomotive plan, acting upon a central wheel forward of the machinery. She has a very sharp bow, and runs at the rate of seven miles an hour, without making any swell or wash against the banks of the canal.

We learn that she has proceeded on to Buffalo, and if the project succeeds, it will effect a great change in the system of canal transportation. Mr. Thaddeus Joy, one of our oldest forwarders, and a gentleman whose opinions are entitled to great respect, states his confidence in the invention.

Albany Daily Advertiser.

Rare Birds.—There are at this time to be seen at Mr. Henry Peckham's house in this village, two singularly coloured Robins, one black, the other so dark that it would not be known by its colour—they are in every other respect like our ordinary Redbreasted Robin; the black one has a yellow bill, the bill of the other is much lighter; their note precisely like that of the common Robin—they do not appear to be a mixed breed with any other species. They were taken last summer with three others from a nest in this vicinity, and tamed—the others are dead; they were of similar colour, one black, the other two like the lightest now living.

Fall River Recorder.

Omnibus Umbrella.—A French mechanic has invented a kind of *parapluie*, which has received the name of *omnibus*. The umbrella is light and of ordinary dimensions; but by means of a spring may be extended at pleasure, so as to cover two, four, or even six persons at once.

THE SOUTHERN CHARACTER.

The following tribute to the character of the South, is copied from an essay in the Portland Courier:

"The writer has travelled thousands of miles in the Southern country, and for several years he has been an attentive observer of character as it is developed beneath a Southern sun. He has mingled in the various grades of society. He has met her citizens under all circumstances, favourable and unfavourable. With these opportunities of judging, he would certainly come to a very different conclusion. Wherever he has wandered, the hand of hospitality has been extended towards him. How sweetly has the cheering voice of welcome fallen upon his ear! Many are the offices of kindness he has experienced, and not unfrequently from the hands of entire strangers. Grateful is the recollection he will ever cherish of scenes that are past, but which have obtained the most hallowed place in his memory. He is aware that his pen is incapable of doing justice to this subject; but he would do violence to his feelings, were he to suffer this opportunity to pass without recording his testimony in favour of the citizens among whom he resides. After wandering through the distant parts of our wide extended land, he feels authorized to say that, go where you will, you cannot find a more generous and patriotic, a more enlightened and high minded people than those who have received such a liberal share of abuse from the northern abolitionists. Does any one doubt this assertion? Let him come and examine for himself, and he will find this to be the language of truth and soberness."

By the last accounts from Spain, it appears that the *Cortes* have been assembled, composed of a majority of *liberals*. A new ministry has been formed of a similar political character, the members of which will go forward resolutely in the path of reform of ancient abuses, both in civil and ecclesiastical affairs. The conservatives appear to have lost all confidence, and are too few and feeble to oppose any formidable hindrances to the progress of liberal measures. The young Queen favours and sanctions this policy, whether from her personal sentiments, or the influence of others may be doubtful. The prospect now is highly favourable for the cause of liberty in priest-ridden and king-ridden Spain, after more than three centuries of frightful despotism, "during which, all sense of individual independence, and all the elements of public prosperity, had disappeared."

THE LATE COLD WEATHER.—The whole autumn down to the 23d of November, has been remarkably mild and pleasant. On Monday morning, Nov. 23, it began to snow, followed by rain in the afternoon. The weather then became cold and continued uniformly so until Friday, the 4th of December. On Friday the 27th Nov. the Thermometer fell to 15 degrees, in the morning, and rose no higher than 23 at any part of the day. Monday the 30th was still colder; the lowest point, during the twenty-four hours, being 11°, and the highest 21°. On Wednesday, Dec. 2, the highest was 18°, and the lowest (in the evening) 8°. And on Thursday morning the mercury stood at 6°. On Friday, Dec. 4th, the weather moderated, and the snow melted from the roofs of the houses. Icicles hanging from the south side of the roofs of houses, fully exposed to the sun and sheltered from the northwest winds, which formed on Monday, Nov. 23, retained their situation and size until Friday afternoon, Dec. 4,—eleven days. The Thermometer rose once during that period, above the freezing point, to 34°, but it was only for so short a time as not to melt the icicles on the eaves of houses, or to cause the snow generally to slide from the roofs. On Friday Dec. 4, the Thermometer rose no higher than 34°, but it continued above the freezing point through the day and night, and in that time melted the snow so as to destroy the sleighing, which before was tolerably good in this neighbourhood. On Saturday it again became cold —in the evening the Thermometer fell to 18°, and on Sunday morning to 12°.

ROCHESTER.—This youthful city is constantly and rapidly augmenting its population, its business, and its wealth. Possessing, as it does, every possible manufacturing facility, and surrounded by the richest agricultural soil in the world, it is destined to become, within twenty years, a city of twice as many thousand inhabitants.

The Rochester papers are furnishing valuable statistical tables of their manufactures: From these we learn that they have twenty-one Flouring-Mills, with ninety-six runs of stone, now in operation. These mills cost $540,000. They consume daily, 20,000 bushels of Wheat, making 5000 barrels of Flour. The annual value of Flour manufactured there, amounts to THREE MILLIONS OF DOLLARS.

LATE AMERICAN PATENTS.—Lever Press. Platform for Rail-Road. Hydraulic Cement. Application of Water to Mills. Steam Engine. Rail-Road Cars. Coffee Mill. Bedstead for Invalids. Supplying Air to Fires. Cooking Stoves. Ploughs, and Churns. Time-pieces, propelled by Air. Chimney and Fire-place. Washing Machines, *several*. Writing Ink. Candles Making. Tanning. Potash Making. Ship Building. Brick Machine. Bricks for roofs. Wire Door-spring. Saddle Tree. Brushes. Vapour-Bath. Chairs, making. Steam-boilers. Forcing Pump. Neck Stocks. Grates. Fire Engine. Saddles. Ever-pointed Pencils. Water-proof Shoes. Making Vinegar. Steam-accidents prevented. Water-pumps. Locks and Latches. Chisels. Piano Fortes. Handles for Stoves. Fire-proof Chests. Fire-place. Bridges. Cheese Press. Warming Buildings. Oven. Bee-house. Truss. Time-pieces. Printing Press. Cooking Stove. Boiler for Kitchens.

An English Review, referring to Col. Poussin's work on Internal Improvements in the United States, since 1824, says, "It will impress its European readers with some idea of the GIGANTIC LABOURS of a nation, to which we are the progenitors:" —and again, "The only feeling we have towards Brother Jonathan's improvements is a sort of half-surprised, half-jealous uneasiness at their magnificence and extent."

Improvement in Steam Engines.—Mr. Price, of the Durham Glassworks, (England,) has published a plate of a steam safety-valve and chest, which has been in constant use for upwards of seven years without accident. Instead of the common valve, there is a cup placed on the top of the steam-chest, with an aperture for the steam to escape. In the cup is placed a loose brass ball, weighted to the pressure the boiler can bear. When the steam rises above that pressure, the ball rises also, and allows the steam to escape. Connected with the steam-chest below the ball-seat, there is an elbow pipe, which also enters the waste-pipe. In this is a handled valve, by which the engineer can blow off his steam, or regulate it. It must be understood the ball cannot be weighted by the engineer. So soon as the steam rises above the safety pressure, it escapes; and when sufficiently blown off, the ball returns to its place.

New Publication of Books, during the year 1835, in the United States.

Indian Sketches, by J. T. Irving, Jr. Voyage of the Potomac to the Pacific, India, and round the globe, under command of Commodore Downes.—The Linwoods, or Sixty years ago: by Miss Sedgwick.—An English critic says, 'I presume Miss S. is an American: but whether she is an American, or an English lady, either nation may be proud of her.' Pencillings by the Way; by N. P. Willis. Ship and Shore, or a Journal of a Cruise to the Levant. Four years residence in England; by Colton. The Stranger in America; by F. Leiber. Residence in West Indies, after the Abolition of Slavery. The Debtor's Prison, a Tale of a Revolutionary Soldier. Danger to the Free Institutions of the United States, from foreign emigration. Narrative of a Visit to the American Churches. Clinton Bradshaw; or the early course of a Lawyer. The Monikins; by the author of the Spy. Ross's Voyage to the Polar Regions. Calaver, a novel; by Dr. Bird. History of Massachusetts, from 1620 to 1820. American Biography, vol. III.; by Jared Sparks. Sermons, by Rev. Orville Dewey. Sermons, by Professor Palfrey, 2d edition. Washington's Life and Letters, Vol. ——; by Jared Sparks. Compendious Commentary, by W. Jenks, D. D. History of Woman, of all ages, 2 vols. Lectures on Greek Language and Literature. The Jurist and Law Miscellany; by Judge Cranch. Comprehensive Atlas, Commercial, Geographical, &c. Balbi's Geography, new edition, with additions relating to America. Record of a School, exemplifying the general principles of Culture. Comprehensive, pronouncing, and explanatory Dictionary; by J. E. Worcester. Shepherd's Treatise on Mineralogy. Geological Report of the Country between Red River and Missouri. Introduction to Natural Science; by Professor Olmstead. Conquest of Florida; by H. De Soto. Reminiscences of Neibuhr the historian; by F. Leiber. The Southwest.

New Books published in England.—Wisdom of God in the Works of Creation. Drew's Chronological Charts, illustrative of Ancient History and Geography. Martin's History of the British Colonies. Story of Justin Martyr, in verse. Hogg's Travels in the East, to Alexandria, Damascus, &c. The Characteristics of Women, a new edition. History of English Literature. Democracy of America. Recollections of the private Life of General Lafayette. Memoirs of the Life of Sir James Mackintosh. Notices of Algiers, and neighbouring States of Barbary; by P. B. Lord, M. D. History of Italy; by George Percival. The Philosophy of Legislation; by A. Mandell. Lives of eminent Literary Men. Life of Episcopius, pupil of Arminius. Parallels of Shakspeare and Scott. Mephistophiles in England, or Confessions of a Prime Minister. The Lords and the People. Gerald's Scriptural Views of our Lord Jesus Christ. Archbishop Usher's reply to a Jesuit, and the Errors of Popery. The Writings and Opinions of Clement of Alexandria; by the Bishop of Lincoln. The Union of Religion, with Intellectual Culture. Natural Religion; by Lord Brougham. An Excursion to the Monasteries of Alcobaca and Batalha. Belford Regis; by Miss Mitford. Consumption Curable; by Dr. Ramadge. An Address to the Bishops; by a Low Churchman. Life of Rev. Dr. Cary, first Baptist Missionary to India.

Several Books by American authors, and from the American press, have been published in England, and commended.

ODE,

In commemoration of the Landing of the Pilgrims in Plymouth, Dec. 22nd, 1620.

By Mrs. Sigourney.

A bark is moor'd below,—
'Mid the tossings of the bay;
What seeks it, where the hunter's bow
Hath evermore held sway?
They stand on Plymouth rock,
A feeble, pilgrim band,
Why hide they thus the wintry shock,
In a wild, stranger land?

Their welcome who can tell,
Save the bitter blast that blew
And the snows that coldly fell,
Ere their lowly cabins grew?—
An axe amid the trees!—
The rugged hearth-stone flames—
Yon dreary, shapeless huts!—are these
For England's high-born dames?

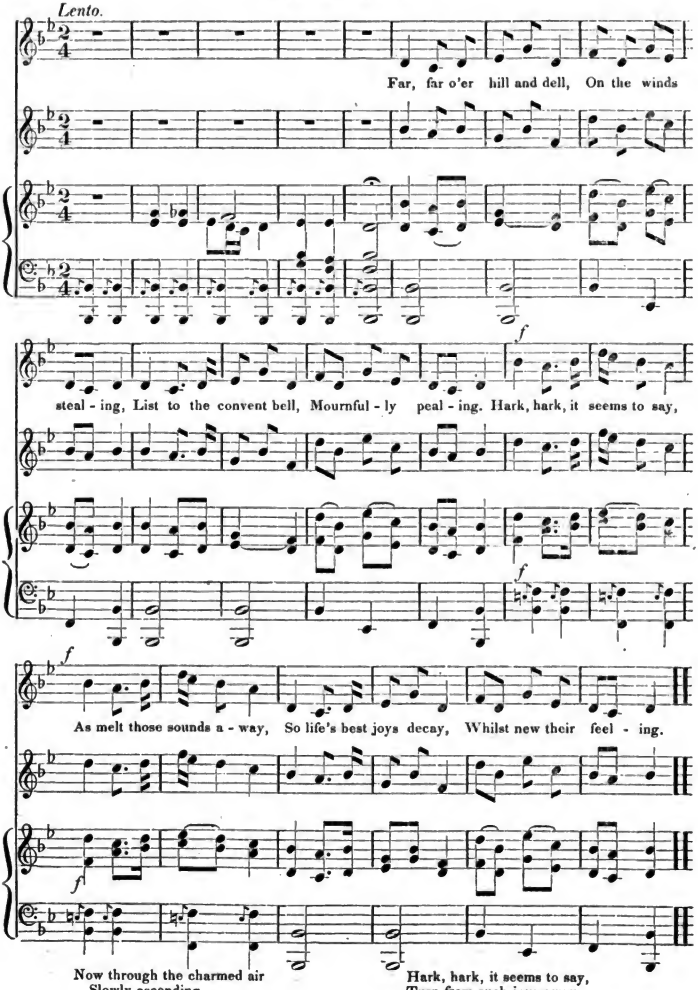
Hark!—to the war-whoop wild!
Look! 'tis the Indian's crest;
The Pilgrim-Mother clasps her child,
And girds the warrior's breast.
No corn upon the vale,—
No vessel o'er the wave,—
What cheers them when their cheek is pale?
What lights the alien's grave?

Old Harvard hath a voice,
Within its classick halls,
A whisper from *their* hallow'd dust,
Who rear'd its ancient walls;
'Mid all their weary toil,
'Mid all their wasting woe,
They cast an acorn in the soil
For this lordly Oak to grow.

Recount their deeds of yore,
Sons of those glorious sires,
And kindle on this sacred shore
High Freedom's beacon-fires.
And praise ye Him, whose hand
Sustain'd them with his grace,
And made this rock whereon ye stand,
The Mecca of their race.

FAR, FAR O'ER HILL AND DELL.

A SPANISH MELODY.



JANUARY.

DE WITT CLINTON, AND INTERNAL IMPROVEMENT.

If the late Governor Clinton, of New York, did not originally suggest the project of a Canal from Hudson to Lake Erie, it was owing to his influence that that great work of internal improvement was prosecuted with energy and success. It was under his auspices, as Chief Magistrate of that great State, that the plan was so promptly undertaken and accomplished. It required a large amount, and this could not be obtained, but from the public treasury, or on the credit of the State. Governor Clinton gave all his influence and support to the project, and it was by his recommendation that the Legislature voted large sums of money for the purpose. Mr. Clinton was not a mere theorist; he was also a practical man; and the union of these two traits of character enabled him to accomplish what a speculative person, though a genius, would have failed to perform. To construct a Canal of 365 miles, in the situation of the country ten years ago, and when only a single project of the kind had been undertaken in the country, and that on comparatively a small scale, required uncommon talents, and great personal influence, arising from a confidence in the wise direction of those talents. The character of De Witt Clinton, for intelligence, decision and perseverance, stands high on the list of great men which have arisen in the United States, since the era of our National Independence. He was in public life at an uncommonly early age. As Mayor of the city of New York, at a critical period,

as Senator in Congress, and as Governor of the *Empire* State, his powers were called forth on many trying occasions; and he always proved himself able, faithful, and efficient. Dr. Hosack's Eulogy on the life and character of Governor Clinton, though written by a personal friend, is a proud monument to the memory of that eminent Statesman. The Erie Canal and other plans for internal improvements in the State of New York, are chiefly indebted to Governor Clinton for their rapid execution, if not for their original contemplation. Without his powerful mind to arrange and carry forward these great works, it is not too much to say, perhaps, that they would not have been completed, even at the present time. His native State is much indebted to his decision and resolution of character, for its present high fame for public enterprise and improvements. Others have caught the generous spirit for public works; and Pennsylvania and other States have been cheered on in the march of improvement by the successful example of New York. These public works serve to form a new era in the history of the United States; and those who took the lead in such enterprises will richly deserve the grateful remembrance of posterity, for their promptness and zeal. We refer to a former number of the Magazine, for an account of Canals in the United States: (See Vol. I., page 478,) and for a sketch of the character of Governor Clinton, Vol. I., page 438.

A Correspondent notices our remarks on *Clement*, in a late Magazine, and asks for an explanation of the following passage of Scripture—'It is not for kings, O Lemuel, to drink wine; nor for princes, strong drink.' We do not recollect the opinion of commentators on this text: but from our own acquaintance with scripture phraseology, we venture to say, that the terms are to be taken with some qualification, as many other passages must evidently be, to avoid an absurd or unreasonable doctrine. We are told, we must turn our cheek to him who smites us, and give our coat to him who asks it; nor take thought for the morrow, and even hate our own family and relations. All these and similar texts must be interpreted so as to be reasonable. Paul says, 'it is best not to marry.' Yet we do not consider him as doing evil, who marries; nor celibacy better than wedlock. The Scriptures bear testimony against drunkenness, and all other excess, in drink, meat, or apparel. Kings and rulers, as well as priests, should be temperate, and not *set long at the wine*; nor take it so as to intoxicate, or to injure and weaken the intellect. Such indulgence would be improper in any; but more so in men in public stations, as it would unfit them for their duty; and others would suffer as well as themselves. We believe drinking wine to excess, was a practice in former times, and that men of wealth and leisure indulged in using too much strong drink and wine. The wise and prudent monitor would dissuade rulers and kings to avoid such a habit, as undignified, and inconsistent with their station and usefulness. It is not believed, that the writer here meant to give an opinion to one who was a professor of religion. The exhortation then is, not to drink *much* wine, or strong drink, and not to refrain entirely, as though it was an immorality. How can the advice of St. Paul to Timothy be justified on any other supposition or qualification than the above: And yet we would certainly advise all to abstain from wine and strong drink, except recommended by an able physician, to be taken for sickness and infirmity. We shall be glad to publish the scripture arguments of our Correspondents against all use of wine.

THE HONEY BEE, OR DOMESTIC BEE.

[APIS MELLIFICA.]

It is brown, covered with yellowish gray hairs, thicker on the breast than on the other parts of the body. The female is much larger than the male, longer in the belly, wings shorter. The eyes of the male are very large, and occupy the whole upper part of the head. The working Bees are smaller than the others. This Bee is raised in hives, and furnishes us with honey and wax.

The Bees that we call domestic, live in a society which has been named a monarchy. We are ignorant what places they inhabit naturally. They are found wild in different parts of Asia, in Italy, and in the southern parts of France.

One hive is commonly inhabited by one single female; by males, to the number of from one to two hundred, and by five or six thousand working Bees, sometimes more. The females who have been honoured by many naturalists, with the names of kings and queens, have the belly much longer than those of the males; but these are more large. The sting of the female is longer than that of the working Bee, and a little bent under the belly. They live inclosed in the interiour of the hive, and do not go out but under two circumstances. They are occupied there in laying eggs. The working Bees are smaller than the male or female. They are those which are charged with the work. They construct the honey-comb, with which the hives are filled. These honey-combs are composed of hexagonal cells, situated one against the other; each side of the comb containing nearly an equal number of cells, of which some serve to contain the honey, others the eggs, that the female there deposits, and in which the larvæ have their growth, and undergo their changes. Cells of different sizes, are found in the hive. Those that are to contain the males are more spacious than those that are to contain the larvæ of the working Bees. The Bees usually place their combs parallel to one another, and leave between a passage of sufficient breadth for two Bees to pass at a time. Formerly, it was thought that the matter, which the Bees employed in the construction of the comb, was the dust that they are seen to collect on the stamens of flowers: that they transformed this dust, which is what we call pollen, into real wax. Some authors thought, that they mixed it with honey. Swammerdam thought, they moistened it with a poisonous liquor, that they had in *vessie*. Now it is known, by the experiments of M. Huber, that the wax is produced from the honey which has undergone an operation in the stomach of the bees.

The Bees must guard themselves from the insects

that seek their wax, their honey, and themselves, and make a shelter against the weather. Thus their first care, when established in a new hive, is to stop all the holes. They do not use wax for this; nature has taught them to serve themselves with a substance more proper, which spreads and attaches itself better. This is called propolis. They draw this matter from young buds of poplar, willow, and other trees. They do not content themselves with stopping the holes in the hive with this. They harden with it the supports that sustain the comb, and often extend it over the interiour walls.

The honey that they gather from the flowers in their trunk, is conducted by this organ into the mouth, where the tongue is, which pushes into the throat the honey that is brought there, and which, in its turn, passes it into the stomach. When a Bee has filled his stomach with honey, he returns to the hive, and then when he has entered, looks for a cell into which to deposit it. Often, one of these Bees is met on the way, by some of the working Bees who have not collected any honey. Then she is stopped, straightens and extends her trunk, and thrusts some honey to her mouth. The others put up the end of their trunk and draw it away. Often she does the same service to those who are at work in the hive.

The honey which the Bees collect, generally from the flowers, sometimes from the leaves, as well as other parts of trees and vegetables, is carefully put in reserve at the bottom of the hive, to be more easily guarded against foreign Bees. Hence the great difficulty of collecting it in the hives of the old form; that is to say, in the hives of a single piece, and the impossibility almost of effecting it without raising the brood, injuring many of the Bees, irritating them, and receiving their stings; and hence the utility, or to speak more correctly, the necessity of using the hives of several pieces.

The pollen is the matter which the Bees bring continually on their feet, and which serves, (after having undergone one change in the stomach of the artificers) for nourishment to the brood, which is deposited near it.

The brood is the progeny of the queen. It makes the pleasure and delight of the working Bees, and is the hope of the whole population. It is commonly in the centre of the hive, that the Bees may take care of it, feed it, and keep it warm more easily. The manner in which it is formed, is as follows:—The queen lays her eggs, where, at the end of several days, they hatch, and three small worms come forth. These worms, nourished by the working Bees, grow so large as to fill, in a very short time, the cells which contain them. At this time, the bees cover the cells with a roof of wax, slightly convex, and the worms thus enclosed, spin their shells, and are transformed to young bees, who after a certain period, thrust aside their covering, and come out. The cells containing the young worm are easily distinguished from those containing honey, in that, the wax roofs of the honey cells are flat and thin, while those of the brood are convex, thicker, and consequently less transparent, and more yellow.

The propolis is a red or yellow gum, which serves the Bees to harden the interiour of the hive and thereby to defend them from their enemies.

The fear of their stings is the principal cause that keeps away many persons from the culture of Bees. To avoid them, it is almost always sufficient to be fortified with smoking linen.

The Bees that have lost their queen, replace her; if they find in their hive eggs, or young worms of three days or less, giving them a different nourishment, more abundant and suited to their growth.

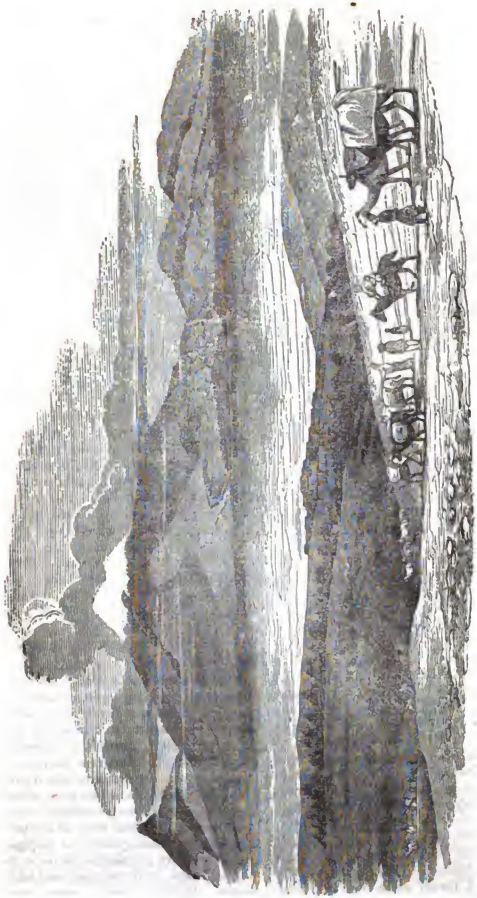
M. Huber has ascertained by certain experiments, that the honey is the basis of the wax, and that the pollen is indispensable to the nourishment of the brood.

Among the cells which are filled with honey, some contain that which is designed for daily consumption; the others, that which is to nourish the Bees, in times when they go in vain to seek it among the flowers. This last is contained in the small cells which have each a roof of wax, and the Bees do not touch it, but in case of necessity. The other remains uncovered.

The other cells of the hive are destined to contain the eggs. The first eggs that the female lays, are those that will produce the working Bees; and she continues during eleven months to lay almost wholly, eggs of this sort. It is not till the end of eleven months that she begins to make a considerable laying, producing eggs of drones. It is in spring that the laying of the drones takes place. There are about two thousand. She has a second laying less considerable of the same eggs, toward the middle of summer: and in the interval, between these two layings, she lays scarcely any thing else but eggs of the working Bee. She lays her eggs in the cells designed for the different individuals to come from them. Commonly, beside the eggs of the working bees and drones, the female lays some which are to produce females. These eggs are deposited in cells of a different form, and larger than the others. They are not hexagonal: their form is oblong. In the year the female lays fifteen or twenty eggs destined to produce queens; sometimes three or four; or none at all. In the last case the hive will not swarm.

If all history be not false, if there be any philosophy teaching by example, collected by faithful observation of the past, and recorded for the instruction of the future, this truth is certain, that the general and *eager pursuit of riches*, must bring on the downfall of republican liberty. The excessive selfishness and the laxity of moral principles, which it invariably induces, while they withdraw from the concerns of the Commonwealth, the affections and attentions of the great body of the people, will leave them to the management of intriguing, caballing, and mercenary politicians, at once rapacious, cunning and base, and pursuing wicked ends by worse means. Instead of public virtue, and a general regard for the Commonwealth, a spirit of avarice and corruption will increase, and eventually undermine the fair fabric of our freedom. GASTON.

Of $1,800,000 for repairs of forts, provided by a late act of Congress, $350,000 are appropriated to forts Independence and Warren, in Boston harbour.



MOUNT ARARAT.

MOUNT ARARAT.

This is the name of the mountain, on which the Ark of Noah rested, after the deluge, according to the tradition and belief of ancient nations in that part of Asia. There are, however, different opinions on the subject; and it is wholly a matter of conjecture, farther than that, there is evidence the early abode of the present race of men was in the vicinity of the group of mountains, of which this is one, and the most elevated. This mountain and this group are in the south of Armenia, and north of Mesopotamia. One of the range of Mount Taurus, which rises in the middle of Armenia, is also supposed to be that on which the ark rested, when the waters subsided. There is still another mountain in Armenia, standing alone, some distance from the range above mentioned, which the people of the country pretend is the Ararat of sacred history. This is so high, that it is generally covered with snow (lying in latitude N. 3°,) and has seldom if ever been fully explored. But a modern Dutch traveller says, he went five days' journey up into this mountain and saw a Roman Catholic hermit; that he passed three regions of clouds—and that he advanced five miles each day. The mountain last mentioned may be seen at the distance of five or six days' journey. Near this mountain are the remains of a very ancient settlement, which some pretend was made by Noah and his sons, before Babel was built, which was not till more than 100 years after the deluge, and probably by the grand children, chiefly of that patriarch. Some have supposed Noah remained in the vicinity of Ararat the residue of his life; for it is a fertile country; while others conjecture, that he removed far east to India. The stories of relics of the Ark, still found in the Mountain, are entitled to no credit. And the reports, made 2000 years, of their being seen, are no more authentic.

NOTE. The Ark is supposed to have been 450 or 500 feet long, 75 or 80 wide, and 50 high,—and the interiour capacity 360,000 cubits, of cubic measure.

ASTRONOMY.—THE PHYSICAL CONSTITUTION OF THE SUN.

When viewed with a telescope, the Sun is often found to have black spots on its disc, surrounded with a kind of border, less completely dark, called the *penumbra*. They are not stationary or permanent: they appear to enlarge or contract from day to day, and even from hour to hour, to change their forms, and at length to disappear altogether, or to break out anew in parts of the surface where none were seen before. In such cases of disappearances, the central dark spot always contracts into a point, and vanishes before the border. Sometimes they separate or divide into two or more, and offer every evidence of the extreme mobility which belongs only to fluids, and that very violent agitation which seems to indicate a gaseous or atmospheric state of matter. The scale is immense on which their movements take place. A single second of angular measure, as seen from the earth, corresponds with the Sun's disk to 465 miles; and a circle of this diameter, containing nearly 220,000 square miles, is the least space which can be distinctly discerned on the Sun as a visible area. Spots have been discovered, however, whose linear diameter has been upwards of 45,000 miles, and according to some, of still greater extent. That such a spot should close up in the space of six weeks, (and they seldom last a longer time,) its borders must approach at the rate of 1000 miles or more in a day.*

There are other circumstances which confirm this view of the subject. The part of the Sun's disc not occupied by spots, is far from uniform brightness. Its ground is finely mottled with an appearance of minute, dark spots, or pores, which, when attentively observed, are found to be in a constant state of change. There is nothing which so nearly represents this appearance as the slow subsidence of the flocculent chymical precipitates in a transparent fluid, when viewed perpendicularly from above; so nearly, indeed, that it is hardly possible not to be impressed with the idea of a luminous medium intermixed, but not confounded, with a transparent and non-luminous atmosphere, either floating as clouds in our air, or pervading it in vast sheets or columns like flame, or the streams of our northern lights.

"But what *are* the spots? Many fanciful notions have been broached on this subject, but only one seems to have any degree of physical probability, viz. that they are the dark, or at least comparatively dark, solid body of the Sun itself, laid bare to our view by those immense fluctuations in the luminous regions of its atmosphere, to which it appears to be subject. Respecting the manner in which this disclosure takes place, different ideas again have been advocated. Lalande suggests, that eminences in the nature of mountains are actually laid bare, and project above the luminous ocean, appearing black above it, while their shoaling declivities produce the penumbræ, where the luminous fluid is less deep. A fatal objection to this theory is the perfectly uniform shade of the penumbra and its sharp termination, both inwards, where it joins the spot, and outwards, where it borders on the bright surface. A more probable view has been taken by Sir William Herschel, who considers the luminous strata of the atmosphere to be sustained far above the level of the solid body by a transparent elastic medium, carrying on its upper surface (*or rather*, to avoid the former objection, *at some considerably lower level within its depth*,) a cloudy stratum which, being strongly illuminated from above, reflects a considerable portion of the light to our eyes, and forms a penumbra, while the solid body, shaded by the clouds, reflects none. The temporary removal of both the strata, but more of the upper than the lower, he supposes effected by powerful upward currents of the atmosphere, arising, perhaps, from spiracles in the body, or from local agitations.

"The region of the spots is confined within about 30° of the Sun's equator, and, from their motion on the surface, carefully measured with

* The diameter of the Sun is estimated to be 882,000 miles, while that of the earth is little more than 9,000. The Sun is supposed to revolve on its own axis in twenty-five days, and in the same direction as the earth, from west to east.

micrometers, is ascertained the position of the equator, which is a plane inclined 7° 20' to the ecliptic, and intersecting it in a line whose direction makes an angle of 80° 21' with that or the equinoxes. It has been also noticed (not, we think, without great need of further confirmation,) that extinct spots have again broken out, after long intervals of time, on the same identical points of the Sun's globe. Our knowledge of the period of its rotation (which, according to Delambre's calculations, is 25d. 01154, but, according to others, materially different,) can hardly be regarded as sufficiently precise to establish a point of so much nicety.

"That the temperature at the visible surface of the Sun cannot be otherwise than very elevated, much more so than any artificial heat produced in our furnaces, or by chemical or galvanic processes, we have indications of several distinct kinds: 1st, From the law of decrease of radiant heat and light, which, being inversely as the squares of the distances, it follows, that the heat received on a given area exposed at the distance of the earth, and on an equal area at the visible surface of the Sun, must be in the proportion of the area of the sky occupied by the Sun's apparent disc to the whole hemisphere, or as 1 to about 300000. A far less intensity of solar radiation, collected in the focus of a burning glass, suffices to dissipate gold and platina in vapour. 2dly, From the facility with which the calorific rays of the Sun traverse glass, a property which is found to belong to the heat of artificial fires in the direct proportion of their intensity. 3dly, From the fact, that the most vivid flames disappear, and the most intensely ignited solids appear only as black spots on the disc of the Sun when held between it and the eye. From this last remark it follows, that the body of the Sun, however dark it may appear when seen through its spots, *may*, nevertheless, be in a state of most intense ignition. It does not, however, follow of necessity that it *must* be so. The contrary is at least physically possible. A *perfectly reflective* canopy would effectually defend it from the radiation of the luminous regions above its atmosphere, and no heat would be conducted downwards through a gaseous medium increasing rapidly in density. That the penumbral clouds *are* highly reflective, the fact of their visibility in such a situation can leave no doubt.

"This immense escape of heat by radiation, we may also remark, will fully explain the constant state of tumultuous agitation in which the fluids composing the visible surface are maintained, and the continual generation and filling in of *the pores*, without having recourse to internal causes. The mode of action here alluded to is perfectly represented to the eye in the disturbed subsidence of a precipitate, when the fluid from which it subsides is warm, and losing heat from its surface.

"The Sun's rays are the ultimate source of almost every motion which takes place on the surface of the earth. By its heat are produced all winds, and those disturbances in the electric equilibrium of the atmosphere which give rise to the phenomena of terrestrial magnetism. By their vivifying action vegetables are elaborated from inorganic matter, and become, in their turn, the support of animals and of man, and the sources of those great deposites of dinamical efficiency which are laid up for human use in our coal strata. By them the waters of the sea are made to circulate in vapour through the air, and irrigate the land, producing springs and rivers. By them are produced all disturbances of the chymical equilibrium of the elements of nature, which, by a series of compositions and decompositions, give rise to new products, and originate a transfer of materials. Even the slow degradation of the solid constituents of the surface, in which its chief geological changes consist, and their diffusion among the waters of the ocean, are entirely due to the abrasion of the wind and rain, and the alternate action of the seasons; and when we consider the immense transfer of matter so produced, the increase of pressure over large spaces in the bed of the ocean, and diminution over corresponding portions of the land, we are not at a loss to perceive how the elastic power of subterranean fires, thus repressed on the one hand and relieved on the other, may break forth in points when the resistance is barely adequate to their retention, and thus bring the phenomena of even volcanic activity under the general law of solar influence.

"The great mystery, however, is to conceive how so enormous a conflagration (if such it be) can be kept up. Every discovery in chymical science here leaves us completely at a loss, or rather, seems to remove farther the prospect of probable explanation. If conjecture might be hazarded, we should look rather to the known possibility of an indefinite generation of heat by friction, or to its excitement by the electric discharge, than to any actual combustion of ponderable fuel, whether solid or gaseous, for the origin of the solar radiation.*"

* "Electricity traversing excessively rarefied air or vapours, gives out light, and, doubtless, also heat. May not a continual current of electric matter be constantly circulating in the Sun's immediate neighbourhood, or traversing the planetary space, and exciting, in the upper regions of its atmosphere, those phenomena of which, on however diminutive a scale, we have yet an unequivocal manifestation in our aurora borealis? The possible analogy of the solar light to that of the aurora has been distinctly insisted on by my father, in his paper already cited. It would be a highly curious subject of experimental inquiry, how far a mere reduplication of sheets of flame, at a distance one behind the other (by which their *light* might be brought to any required intensity,) would communicate to the *heat* of the resulting compound ray the *penetrating* character which distinguishes the solar calorific rays. We may also observe, that the tranquillity of the Sun's polar, as compared with its equatorial regions (if its spots be really atmospheric,) cannot be accounted for by its rotation on its axis only, but *must* arise from some cause external to the Sun, as we see the belts of Jupiter and Saturn, and our trade-winds, arise from a cause, external to these planets, combining itself with their rotation, which *alone* can produce no motions when once the form of equilibrium is attained."

Mr. Lindsay, late lecturer in the Watt Institution, Scotland, has succeeded in obtaining a constant *electric* light. It surpasses all other in beauty, has no smell, emits no smoke, is incapable of explosion; and as it does not require air for combustion can be kept in sealed glass jars. It ignites without the aid of a taper. It can be sent to a distance, and the apparatus for producing it may be kept in a common chest.

SILK MANUFACTURE, IN ENGLAND.

In 1785, the increased use of cotton cloths lessened the demand for silk fabrics; and the Spitalfield weavers, being forbidden to work at reduced wages, were thrown entirely out of employment. In 1793, more than 4000 looms were quite idle. In 1798, the trade again revived, and improved slowly till 1815, when the weavers were plunged in greater distress than before.

It began about this time to be evident that the legislative protection afforded to the manufacture had almost wholly checked the progress of improvement; that the art continued stationary in England, while on the Continent it was steadily advancing. In 1826, it was stated in the House of Commons, that the looms were of the worst possible construction; that the improved loom in France, would, in a given time, produce five times as much riband as the English, with the same labour, and that in Germany forty-seven times as much velvet could be made in the same time as in England. At length the principal manufacturers themselves addressed petitions to Parliament for a change of the system. At this time (1824) the duty on foreign thrown silk amounted to 14s. 17 1-2d per lb.; that on raw silk from Bengal to 4s., and from other places to 5s. 7 1-2d. Through the exertions of Mr. Huskisson, the former duty was reduced to 7s. 6d. and subsequently to 5s, and both the latter to 3d. At the same time, the restriction of the foreign manufacture was lessened to a duty of 30 per cent. ad valorem. These laws passed in 1824, were to take effect two years after. As might have been expected, active preparations were made in France for the approaching change, and a large stock of silk goods accumulated. To avoid the threatened *inundation*, another act was passed, prohibiting silks of certain lengths, known to be the dimensions of the French fabrics! This illiberal proceeding caused a great loss on the accumulated stock, but failed wholly of its ultimate purpose. Before the ports were opened a new supply had been raised to meet the new conditions; while the goods thus rendered unsaleable were purchased at a low rate by smugglers, and almost without exception found their way into the English market.

It is not the least evil of the restrictive system, that when once established, however injurious in itself, it cannot be abandoned for a more liberal policy without producing much individual suffering. The operation of this principle was shown in the effects of the regulation just quoted. Some branches of the silk manufacture, which had been pursued in the face of great natural disadvantages, were broken up by the influx of foreign competition. This was particularly the case with the riband manufacture, in which the French, principally from their superiority in dyeing, maintain the ascendancy. With this exception the operation of the law was every way salutary. Between 1823, when the monopoly was in its vigour, and 1828, the amount of raw silk imported into England was doubled. The processes of the manufacture were rapidly improved. The best foreign machines were adopted, and in many instances improved upon. It was found that in many descriptions of goods, the English, under the reduced duty on the material, could compete with their rivals in foreign markets. From 1823 to 1830, the exports of English silks increased from £140,320 to £437,880, and since that time the augmentation has continued. The condition of the artisans, with the exceptions above mentioned, has decidedly improved; and of course, the number of persons maintained by the trade has greatly augmented. Mean while it is a fact worth observing, that the quantity of French goods imported under the new system was scarcely greater than the amount smuggled into the country while the prohibition continued! It is generally admitted that a gradual reduction of the duty, from its present rate to 12 or 15 per cent, would be attended with the best effects.*

* The advocates for a restrictive system, relating to the manufactures, will find some judicious remarks of a practical bearing in the above.

CAPTAIN DALE, OF THE AMERICAN NAVY.

Richard Dale was a native of Virginia, and was born in the year 1756. He entered the sea faring life at an early age, and before he was twenty, had command of a merchant ship. The second year of the revolutionary war, he was an officer in the naval service, under Capt. Barry. In 1777, the ship he was in, was captured by the British, and he was kept a prisoner more than a year. He escaped from his imprisonment and entered the *Bon Homme Richard*, commanded by Paul Jones. He was first Lieutenant of that ship, in the desperate engagement with the British frigate Serapis. His bravery was conspicuous, among the many brave men and officers of the American ship, and he was the first to board the English frigate. In 1781, Dale was transferred to the frigate Trumbull, under the command of James Nicholson. In 1795, he received a Captain's commission in the navy of the United States. In 1801, he commanded a squadron to the Mediterranean, for the protection of American vessels in that sea; and his services were highly useful. Courage was not his only good quality; he discovered good judgment on many difficult occasions, and was much esteemed in private life. Those who best knew him, gave him the character of an honest and honourable man. Most of those who engaged in the war of the revolution, were patriotic as well as brave. He retired from the naval service in 1802, and died in 1826.

The Tent of Alexander the Great contained a hundred couches, and was supported by eight columns of solid gold. A cloth of gold was stretched overhead, wrought with various devices, and expanded so as to cover the whole ceiling. Within, in a semi-circle, stood five hundred Persians bearing lances; their dress was purple and orange. Next were drawn up a thousand archers, clothed in scarlet and flame-coloured dresses. In front of these were five hundred soldiers (*argyraspides*) with silver shields. In the middle was the golden throne, on which Alexander sat and gave audience. The tent on the outside was encircled by elephants, drawn up in order, and a thousand Macedonians in their native dress. Beyond, were the Persian guard of ten thousand men, and five hundred courtiers allowed to wear purple robes.—This surpasses the parade of all modern Princes or Conquerors.

A VIEW OF ALBANY, N. Y.

ALBANY, N. Y.

We present a view of the Capital of New York, as it now appears:—What it will be in years, it is difficult to say, or to estimate. But if it increases as it has done for years past, it will rank as the fifth, for population and trade and elegance, in the United States. The number of inhabitants at present is about thirty thousand, and ten years ago, it was but about half that amount. If it should be contrasted with the settlement fifty years ago, it would be found to have increased almost as much as any in the country. It is a very ancient settlement; second only to Jamestown in Virginia; and ten or twelve years before Plymouth, which is the oldest town in Massachusetts, or New England. Albany was early inhabited by the Dutch, who were always an industrious and thriving people. The local situation is favourable, being on the land as it rises moderately from the North River; and the streets generally lying either parallel with or perpendicular to it. The country on both sides of the river, and at a great distance, presents a pleasant view; for it is generally highly cultivated, and containing many handsome houses and villas. In the city of Albany, the private and public buildings are very numerous. The public buildings are the Capitol or State House, State Hall, City Hall, Albany Academy, Female Academy, Female Seminary, Lancaster School House, Orphan Asylum, Museum, Theatre, Alms-house, several Banks, and eleven Churches or Houses for religious worship. In the Albany Directory for 1834, it is said, that the charter to incorporate the city was granted in 1686, and that it is the oldest city incorporation in the United States. But if we mistake not, New York was endowed with city privileges in 1665, by the Commissioners of Charles II., and Thomas Willet, (who had lived some time before at Plymouth) was appointed the Mayor. In all respects, Albany takes a high rank among the cities of the United States. Its literary, charitable and religious institutions are well supported: and no one, who knew the place thirty years ago, and now visits it, and is so happy as to become well acquainted with the people and their manners, and with the police and government of the city, but must be astonished to witness the great and favourable changes which have been made.

LEAP YEAR.

The period of the seasons, or the year according to civil computation, is not precisely the same as the *apparent* revolution of the Sun. It is also found, that the year of the seasons does not consist of a certain number of complete days, but of 365 days, 5 hours, 48 minutes, and 50 seconds: and this fact has caused some difficulty in defining or fixing the number of days of which the year consists. To approach very nearly to the truth, it has been assumed that the year was 365 days and six hours, thus allowing more time for a year, or a complete revolution of the earth, by eleven minutes and ten seconds, than in truth it is. The object was to allow for the fraction of a day, and yet keep the months to the same season. It is also important, in civil reckoning, to have the year consist of a certain number of whole days. The *Julian* period, settled by Julius Cæsar, Emperour of Rome, a short time before our era, was on the supposition that 365 days and six hours were necessary to constitute the year; and it was ordered, that three years in succession should be composed of 365 days; and that the fourth year should consist of 366 days. This theory was a near approximation to the truth, and sufficient for civil reckonings for a great number of years, and yet not strictly accurate. The year was thus made too long by eleven minutes and ten seconds, and in one hundred and twenty-five years would amount to a whole day. And this last errour long remained, while the other was corrected, by making every fourth year to be 366 days, (which was called *Leap-year*;) and has been so calculated, by adding a day to the month of February accordingly. The other errour, which made the year too long by eleven minutes, and ten seconds, was not corrected till near the close of the 16th century, when the excess (from the time of Cæsar) of the year as usually calculated, at 365 days and six hours, over the true year, amounted to ten days. The correction was made by the Pope of Rome, on account of the change of the day of some festivals of the church. On inquiry, it was found that the vernal equinox was on the 11th of March, which should be on the 21st. A correction of ten days was accordingly made, and adopted in Roman Catholic countries; but it was not introduced into Great Britain, nor the British Colonies in America, till 1752.

It has been stated, that the ancient errour (in excess) amounted to a day in about one hundred and twenty-five years; but instead of suppressing a day for that period of years, (whether common or leap year) it was concluded to make the correction only in leap-year, thus always having 365 days in each year. Besides, as the centurial years 1600, 1700, &c. would be leap-years, it was concluded that the errour of a day should be omitted in those years, and thus reduce them to the number of days in a common year. It may be further observed, that the errour of a day in 125 or 30 years, is nearly equivalent to three days in 400 years; and thus omitting a day every centurial year for three such periods successively, and retaining the fourth centurial year as a leap-year (with 366 days) the desired effect would be produced, and the civil year, by a simple process, would be very nearly equal to the year of the seasons, or the tropical year. By this reckoning or theory, the errour would not be more than a day in four thousand years.

'Vain end of human strength, of human skill,
Conquests, and triumph, and domain, and pomp,
And ease and luxury! O luxury,
Bane of elated life, of affluent states,
What dreary change, what ruin is not thine?
How doth thy bowl intoxicate the mind
To the soft entrance of thy rosy cave
How dost thou lure the fortunate and great!
Dreadful attraction! while behind thee gapes
Th' unfathomable gulf where Ashur lies
O'erwhelm'd, forgotten; and high boasting Cham;
And Elam's haughty pomp; and beauteous Greece,
And the great queen of earth, imperial *Rome*.

MINERALS MENTIONED IN THE BIBLE.

[From Moore's Ancient Mineralogy.]

The design of the sacred Scriptures was not to teach us Natural Science; but to make us wise unto salvation. Accordingly, and in consistence with the simplicity of those early times to which the books of the Old Testament relate, we find in them few indications of any acquaintance with minerals, other than six metals, and various precious stones.

Besides these, indeed, the mineral substances mentioned in the Bible amount in number to no more than nine; which are marble, alabaster, lime, flint, brimstone, amber, vermilion, nitre, and salt. To these we should perhaps add two others, the one *bdellium;* mention of which twice occurs;* and as to the nature of which interpreters are wholly at a loss: the other *bitumen;* for a word in the sixteenth chapter of Genesis, translated *pitch*, and twice afterwards, in the same book, *slime*, is thought by the learned to signify, not the *vegetable* substance, but *mineral* pitch, a species of bitumen.

The only metals spoken of in Scripture as known previous to the Deluge, are copper and iron. Besides which, we find mentioned in the Bible, gold, silver, tin and lead. Ores of two other metals appear to have been employed as pigments from the earliest times; the one a sulphuret of mercury, which furnished a native vermilion; the other a sulphuret of antimony, from which was prepared a black paint, very generally used by women in the East, even at this day, to improve the beauty of the eye, by heightening its lustre, and increasing its apparent size.

In the short list just now given of mineral substances mentioned in the Bible, there are three only that require at present further notice. These are alabaster, salt, and nitre. The alabaster of the ancients was not the substance now usually designated by that name, and used to form small figures, vases, and other ornaments, which is a granular or compact gypsum; that of the ancients was more commonly a stalagmitic carbonate of lime. The name was applied both to the material and to the vessels made of it, for the purpose commonly of preserving unguents and odoriferous liquids. This is the purpose to which Pliny speaks of it as peculiarly adapted. We find it mentioned in the New-Testament as applied to this use, and so it continues to be in Egypt, even to the present day.

Table salt is a mineral with which all are familiarly acquainted; but a knowledge of the character of that spoken of in the New Testament may throw light upon the text in which our Lord's disciples are compared to the salt of the earth; which, if it lose its savor, is cast out and trodden under foot. The salt alluded to was probably fossil salt, which containing, as such salt generally does, a large proportion of ochrey clay or other earthy matter, was liable by exposure to become insipid. Accordingly Maundrell, in his journey to Jerusalem, tell us that in the valley of Salt, on the side towards Gibul, from a small precipice formed by the continual taking away of the salt, he broke out a piece, of which the part that had been exposed to the sun, rain, and air, though it contained sparks and particles of salt, had entirely *lost its savor*, while that part next the rock still retained, as he found, its saltness. Salt which had thus become insipid might be used for the purpose of repairing roads; or *cast out to be trodden under foot.*

The *nitre* repeatedly mentioned in Scripture was not our nitre, or salt petre; but an impure carbonate of soda, procured from certain lakes in Egypt, which appear from recent accounts to furnish it still in great abundance. These lakes, six in number, lie west of the Delta of the Nile, and are called the Lakes of Natron. Hence the Greeks and Romans derived the names *nitron, nitrum*; which the Latins, as we shall hereafter see, applied, not to natron only, but to a considerable variety of substances containing more or less alkaline salts; and, according to the opinion of some mineralogists, to two other wholly different compounds, muriate of ammonia, or sal ammoniac, and nitrate of potash, or salt petre; to which last only is the name now confined.

The natron, or ancient nitre, was used for the purpose to which we continue to apply the same alkali when combined with oils, in the form of soap. The prophet Jeremiah, therefore, speaks of one washing himself with nitre. And the violent action which ensues the pouring of an acid on an alkali suggested to Solomon his comparison between one "that singeth songs to a heavy heart," and vinegar upon nitre.* When vinegar and the salt which *we* call nitre are brought together, there is no apparent discrepance between them; but pour vinegar on the nitre of Scripture, and there follows an effervescence, that shows the propriety of the royal penman's simile.

Let us now turn our attention to those valued productions of the mineral kingdom, which furnish the sacred writers with so many images to express beauty, magnificence, purity, solidity, and strength. As when Isaiah, foretelling the future greatness of Jerusalem, says, "Behold, I will lay thy stones with fair colours, and lay thy foundation with sapphires; and I will make thy windows of agates, and thy gates of carbuncles, and all thy borders of pleasant stones." The gems mentioned here and elsewhere in the Bible, we have every reason to believe were, collectively taken, the same which the East continues still to furnish in their highest perfection; but it is impossible at this day to ascertain the species of each individual stone. In the case of some, as of the agate, the onyx, and the beryl; where the name is evidently the same in the *ancient* languages and *now*; while the characters ascribed by ancients and moderns to the stone agree, we cannot be in doubt; but as to others, again, a comparison of circumstances makes it evident that the ancient name, retained by us, is no longer applied to the same substance. Thus it may be inferred that the ancient chrysolite was either a deep coloured variety of the oriental topaz, or the gem called hyacinth by us; while the topaz of the ancients was the stone which we call chrysolite. Learned critics generally agree that the *diamond* was not known in the time of Moses. The word translated diamond in the description of the breast-plate signifies, as is thought,

* Gen. 2, 12. Numb. 11, 7.

* Prov. 25, 20.

a stone hard to break; or used in breaking others; a description applicable to many oriental gems. The diamond was known at a later period among the ancients, and possessed a high value, but derived chiefly from its extreme rarity and unrivalled hardness. It was a gem of no extraordinary brilliancy nor beauty, since to display these qualities it must be cut and polished, and that art was not discovered until near the end of the fifteenth century.

The frequent allusion made by the sacred writers to precious stones, as objects of comparison, or otherwise, may have been owing in part to their dwelling in countries near to those whence, chiefly, the most precious gems have always been obtained, and in which we may suppose them to have been less rare in those early ages than at the present day; and therefore to have furnished more familiar images of those natural qualities for which they are admired. And it is for this purpose only, of ornament and illustration, as learned commentators think, that their names are introduced. For although pagan antiquity ascribed various mystical virtues to certain precious stones, it is not intended that those mentioned in Scripture should be "strictly scrutinized, or minutely and particularly explained as if they had each of them some precise and spiritual meaning."

It ought not to escape our notice while upon this subject, that at the early period of the Exodus, the art of polishing, setting, and even engraving precious stones was, as we learn from the description of the ephod and breast-plate, already known and practised. It is true, that to engrave merely the names of the children of Israel, there was not required the same degree of skill that we find afterwards displayed amongst the Greeks; but the principles of the art, and the means of execution were probably the same. And this may suggest an illustration of the difference between ancients and moderns, both as to *arts* and *sciences;* for in regard to gems, as to other matters, it may be said, that the ancients possessed less *science;* but very superior *art*. They were wholly ignorant of the chemical composition of these stones; but engraved them with a consummate taste and skill that have been rarely, if ever, equalled in modern times.

The ancients, regarding the external characters alone, and especially the colour, distinguished, as was natural, by different names, the sapphire, the ruby, the emerald, the topaz, and other oriental stones, which now the mineralogist, determined by the results of analysis, classes together, as belonging all of them to a single species. One who in ancient times possessed a colourless sapphire and a polished diamond (if the ancients had been acquainted with any such) might, from their resemblance in transparency, lustre, superiour weight, and hardness, have been led to place them among his treasures side by side; while the modern, in arranging his cabinet according to the true composition of minerals, would degrade the diamond from the brilliant society in which it has been used to shine, to take its place with plumbago, anthracite, and coal.

FREDERICTON, N. B.

Fredericton, the capital of the British Province of New-Brunswick, lies on the river St. John's, ninety miles from its mouth, and in north latitude 46° 10'. It is but a short distance (about fifty miles) from the eastern line of Maine; but seventy miles above it, the river is within that State, according to the claim and the opinion of the people of the United States. Fredericton is only an inconsiderable village, but vessels of fifty tons can approach it; St. John's, near the mouth of the river, is the largest town in the province, and has 12,000 inhabitants. The St. John's is a noble river; more extensive than Penobscot or Kennebec, in Maine. What are now the British Provinces of Nova Scotia and New Brunswick, was the ancient Acadie of the French, and included the country westward, as far even as Penobscot. The territory in dispute between the United States and the British government is of great extent, nearly 120 miles square. According to the most obvious construction of the terms of the treaty of 1783, and the actual position of the river and high-lands, the claims of our government are well founded; but what the decision will be, is matter of conjecture at present. The British want a large slice of the north part of Maine, so as to give them a straight road from Fredericton to Quebec; and will probably consent to give up to the United States, a strip between the river St. John's, and our present eastern line, lower down on that river, and to have the river the bounds for more distance. In some respects, it would be convenient if Maine could bound on that river for a great distance, and lower down. As the line now is, it crosses the St. John's, at about 150 or 160 miles from its mouth; and the upper part is within Maine.

Toronto.—This is the present name of the capital of Upper Canada. It was formerly called York, (or little York;) and the name has been changed, because of several other cities and towns bearing the same. *Toronto* is situated on the north-west coast of Lake Ontario. The first officer of the Province of Upper Canada resides here; and there is part of a regiment of British regulars stationed at the place. Some companies belonging to the regiment are stationed in other and more western parts of the Province. *Toronto* is increasing, and the population is now about 9,000.

MUSINGS.

Mortal! when thy heart is riven,
By the shaft of earthly pain,
Grieve not—for the hand of heaven,
While it bruises, will sustain.
Mourner! when thy home is dreary,
By a friend estranged, or dead,
Weep not—for the lone and weary,
Find a heavenly friend instead.
When the raging thunder crashes—
When the lightning stroke is near—
Start not—Him that guides the flashes
We can *trust* as well as *fear*.
When, in justice, he appals us,
By the threat of endless pain,
Sink not—soon his mercy calls us
To his pard'ning arms again.
Father! oh, with patience bless us,
Till each seeming ill be past—
For whatever gloom oppress us,
All must end in light at last. [*N. Y. American.*]

WIDOWS' AND ORPHANS' ASYLUMS, IN PHILADELPHIA.

One of the distinguished characteristics of the present age, is attention to charitable institutions and to the interests of humanity. This benevolent spirit is not indeed to be recorded to the exclusive honour of those now on the stage of action. It is to be traced to the influence of Christianity; and has, more or less, always marked christian societies. But far more institutions for the relief of the poor, the destitute and unfortunate, have been formed within forty or fifty years, than in any former similar period. Philadelphia has been often mentioned as taking the lead of these institutions in our country. But other cities can now perhaps, justly claim equal merit in providing establishments for the relief of the poor: And rivalry in this respect can produce no evil. As Christians and friends of humanity, we ought to provoke one another to good works and deeds of charity.

The Asylum for the relief of *Indigent Widows and single Women, in Philadelphia*, was established in 1820. The building erected for this purpose is designed and constructed with a special view to the comfort of its venerable occupants. Upwards of one hundred females have been received into the Asylum since it was opened; and lately, at one time, there were forty. 'The design of this Asylum is to protect the unprotected, and to minister to the wants of those, whom Providence has permitted to fall into a destitute condition.'

The Philadelphia Orphan's Asylum was instituted in 1814, but was not fitted to receive children till 1817; and the first building was burnt in 1822, when twenty-three of the little inmates perished in the flames! No event is recollected which excited so deep and general sympathy, as the sudden and awful death of these children. The loss of the building was soon made up, by the donations of liberal individuals, many of whom were ladies, amounting to nearly 30,000 dollars; and the Legislature of Pennsylvania, made a grant of $5000. The present Asylum is so constructed as to prevent fire communicating from one apartment to another. The number of orphans belonging to this institution, at a very recent period, was ninety-six. Both these charitable institutions are managed with great prudence and good judgment; and the fruits of benevolence here displayed are cheering to the hearts of those who have been donors, as well as to those who are the recipients of their bounty. We believe we may add here, without the charge of partiality, that no place exceeds Boston, at present, in its charitable societies, and institutions; and that in no other city, is there greater or more judicious attention given, in providing for the relief of the virtuous poor. In bestowing charity, great judgment is necessary, that the idle, the extravagant, or the improvident be not encouraged: And due caution, we can truly say, is now exercised in this respect.

Prairies west of the Mississippi, which are extensive tracts of low land and destitute of trees, it is generally supposed were caused by great fires, which destroyed even the roots. This may be true as to some tracts where there were repeated fires in dry seasons. The great flocks of Buffalo are also mentioned as a cause of destroying some plants. A geologist who has lately visited the western parts of the United States, where the prairies are found, has started a new idea as to the cause. He conjectures they were, at some former period, the floors of the ocean. When the waters subsided and left the land bare, it was in his opinion without plants or trees, and has not since been covered by any vegetable of more importance than the gramina. It is further said, that trees transplanted in some of the prairie lands have flourished well.

THE LYNX.

This animal is of the cat (or felis) genus, of which there is as great a variety as of any family in zoology. Several species of the Lynx have been mentioned, and yet the most correct accounts go to prove but one; the other animals resembling it, being a different species of the cat kind: One peculiarity of the Lynx is a short tail. The ancients had some fabulous stories about this animal, and represented it as very ferocious; which seems not to be true; and it is considered rather timid than fierce, as its sharp eyes would indicate. It however preys on small animals, while it declines to attack the larger ones. It is from two and a half to three feet in length. The Lynx is found in Europe, Asia, and North America. The largest are in Russia and the north of Asia. They are now uncommon in Europe, except in Russia and in the Pyrenees. They are known in great numbers in the vast regions of Canada; and it is a question whether they are of the same species as those found in Europe. Some are larger, and some more beautiful or less ugly than others; but the difference is not sufficient to form a distinct species. The Canadians generally give it the name of cat or wolf. It makes a show of resistance when attacked, by spitting and raising the hair on its back; but is easily subdued. The fur is valuable; but differs in length and fineness: The difference of the latitudes they inhabit, produces this effect. Some years, eight or nine thousand are exported from different parts of Hudson's bay. With large paws, slender loins, and thick and long hind legs, it has quite a clumsy appearance; and is thus unlike the common cat in its form and shape. It swims across lakes and rivers of two miles; but is not swift on the land. Its gait is by bounds, strait forward, with the back somewhat arched, and lighting on all the feet at once. The drawings we have seen, represent the Lynx more like the tiger or hyena in its head and countenance, though in miniature. These are all of one genus, *felis;* but the Lynx is now considered less ferocious than most of the species, when in their wild and natural state.

Cleopatra's Needle has been recently transported from Alexandria, (in Egypt,) where it rested on its original pedestal upwards of eighteen centuries, to England. It is sixty feet in height, and is composed of a single shaft of Thebaic stone: and at the base it is seven feet square. There were originally, two of these, shafts or needles; one has been thrown down and broken to pieces. They were both wholly covered with hieroglyphics; and were among the wonders and curiosities of the far-famed and ancient country of Egypt.

Religious Speculation.—'We cannot sink too low in humility, nor yet rise too high in heavenly-mindedness; but we may soon be lost in the wilderness of needless speculations. Such as are sober minded will keep within their depth and when the Lord directs us to launch forth, we may do it with safety. If we are wise according as it is written, we shall be profitably wise; but if we want to be wise beyond what is written, we shall smart for our folly.'—*Rowland Hill.*

THE ENTERPRISE AND GEOGRAPHICAL KNOWLEDGE OF THE ANCIENTS.

When we speak of the enterprise of the ancients, we refer to those 800 or 1000 years before our era. Before that period little is known of ancient nations, except from the Bible. Some nations were populous and powerful before that time; but the record of them is lost, or greatly mixed with fable; and their advances in either science or commerce, were comparatively insignificant. The seige of Troy, which happened about the beginning of the period above-mentioned, was a small affair compared with expeditions and battles 300 years later. And the expedition of the Argonauts, a little earlier, was far from being formidable, otherwise than that the adventurers were a daring and hardy set of men.

The citizens of Tyre were the first to engage in commerce and navigation. Trade on land was pursued long before. In the time of *Solomon*, about 1000 years before our era, Tyre flourished from an extended commerce. It was pursued with many ports on the Mediterranean, probably as far as *Spain*, and also to the coasts of Africa. But the facilities for navigation were very small and limited. The voyages required much time, as the vessels (or boats) were small, and generally kept near the land. Tyre and Sidon were places of extensive trade, both by land and water. Goods were first brought there chiefly over land from India; but afterwards by aid of navigation from the Red Sea. Tyre was in a very flourishing state nearly 500 years; and during that period, some improvements were made in navigation. Carthage was settled; and nautical expeditions fitted thence for the western and southwestern coasts of Africa, and from the Red Sea, to India and the eastern shores of Africa. Whether they sailed round that quarter of the globe, or as far as the Cape of Good Hope, is uncertain, though believed by some respectable writers. *Tarshish* was probably Tarsetus of Spain, as tin, &c. were found in that country. And Ophir was probably on the eastern coast of Africa, several degrees south of the mouth of the Red Sea. It has been suggested, however, that by Tarshish was intended any foreign port; and that going to a distant country by water was going to Tarshish. But this would be a loose way of writing. Sicily has also been supposed to be the Tarshish of the early times.

According to Homer, who describes nations and events 900 or 1000 years before Christ, the habitable earth was bounded south by Ethiopia, and the northern parts of Africa, near the Mediterranean, by hither India, by the Black sea on the north, and by Italy on the west. Herodotus, the father of profane history, was more correct in his views of geography; he had read and travelled more than Homer; and a great increase had also been made before his time, in the settlements of distant parts of the earth. He visited Thrace, Scythia, and other very distant countries, as well as Persia, Assyria, Syria and Egypt. But even he was mistaken in some of his statements, as well as in his geographical knowledge and his astronomy. He supposed that Europe was larger than Asia and Africa united. According to Herodotus, however, Scythia was the extremity of Europe, of which he had any knowledge. The shores of the Euxine sea, were settled in his day and long before; and he describes, with a good deal of accuracy, the Danube, the Don, the Volga, and the Dnieper. Of the northern parts of Europe, he knew very little. The inhabitants were then neither civilized nor very numerous. When he speaks of Asia, it is evident also that he knew only the western parts of that extensive quarter of the globe. In speaking of Africa, it is clear also, that Herodotus knew little of that part of the world except Egypt, Lybia, and the northern portion (towards the Atlantic) between the Mediterranean and the range of the Atlas mountains. The interior and more southern parts of Africa, were then no doubt, inhabited; for it was 14 or 15 centuries after the deluge; but the people were unknown, and the climate too sultry to invite strangers from curiosity or for trade.

RIVERS AND MOUNTAINS OF NORTH AMERICA.

The most remarkable physical features of North America, are the large rivers, and the ranges of mountains. Of the rivers, it is well known that the Mississippi is of the greatest extent; being about four thousand and five hundred miles. The *Columbia*, or Oregon, which rises in the Rocky Mountains, is very circuitous, has numerous branches coming from an extent of nine hundred miles, and before it mixes with the Pacific ocean, in Lat. 46, becomes equal in magnitude to any in North America. The *Saskatchewan* or Nelson river, which falls into Hudson's bay, is usually ranked the third. The original branches which unite and form this river, take their rise from the Rocky mountain ridge, between 47 and 54 North Lat. It is 1600 miles in length. Thus by means of short portages, one may pass from Hudson's bay, by the Nelson and its branches, to the Columbia and the Pacific ocean; from the branches of the Nelson, in another course, to the Missouri and Mississippi, and thence into the Atlantic by the Gulf of Mexico: by the lakes, and St. Lawrence into the Atlantic in Lat. about 50. And by the Mackenzie or Elk river, whose sources are near the Nelson or Saskatchewan, to the Arctic or North sea.—The Elk or Mackenzie (as it is now usually called) may be ranked next, though it is only the third as to size. It is indeed more spacious than the Nelson or St. Lawrence, and longer than the Oregon. This also rises in the Rocky mountains: and its two largest branches are the Elk and Peace rivers. One of the branches of the Elk rises near the sources of the Oregon and the Saskatchewan. And the branch called the Peace river rises near the river Frazer or Tacootchtesse. The river Mackenzie is enlarged by other great streams; and flows into the Arctic sea, through an extensive delta, composed of alluvial deposits and mud, in North Lat. 69. This soil is rich, and the growth of pines and firs is quite luxuriant; currants and gooseberries are also found here. And the Moose deer and the hare frequent this cold region. The Hayes river, which falls into the Hudson bay, and the Copper-mine river, which empties its waters in

the Arctic sea, are perhaps the next largest in North America.

The Mountains.—The most remarkable is the extensive range, running nearly north by west, and south by east, from Mexico to the vicinity of the Arctic sea, a distance of three thousand miles; and known by the name of the Rocky or Chippewayan mountains. Indeed, the range continues through Mexico and the Isthmus, connecting North and South America; though far less elevated in the latter territory. Some parts of the Chippewayan range are 12,000 feet high; while those of the Appalachian do not equal half that elevation. This range, now usually called the *Alleghany*, is altogether within the United States, and east of the Ohio and Mississippi, running northeast, and southwest, about 500 miles from the centre or northern part of Pennsylvania to Georgia. It is generally about equi-distant from the Ohio and the Atlantic ocean, in its more northern parts, and the same between the Atlantic and the Mississippi, in the southern part.

CREDIT.

The question is sometimes raised, whether giving credit to the poor, be on the whole a benefit? Or, whether the evils do not exceed the advantages, to those who borrow? Like most other practices introduced into society, credit may be for good or for evil, according to the extent in which it is used. It may be abused by excess, like food or pleasure. In some conditions, the honest, the industrious and the frugal, may be greatly benefited by credit. Their means of wealth are thus increased: And without such aid, they might have plodded and struggled forever, and acquired no estate. And yet without prudence and great caution, they may make an improper use of their good credit; and obtain loans which they are unable afterwards to return. The best plans will sometimes fail; and he who calculates on making fifty per cent. with a loan of one or two thousand dollars, may lose by his speculation. Many an honest and frugal man has been ruined in his estate, by his facilities for borrowing. In this, as in all things else, moderation and prudence are excellent guides. To a man fond of show, and without habits of industry and economy, the credit system is still more dangerous. So long as he can borrow, he will indulge in his expensive living, and in the parade of which he is so fond. At first, he means to pay; and that in a few months, when his rents and dues come in. But when they come, they are not enough to meet the demands of his creditors; and he must borrow again. He cannot think of retrenchments; his mode of living has become necessary to his happiness, and his standing in society; and he finds it necessary still to live on credit. He now merely hopes to pay; for on calculation he cannot justly expect to do it. His expenses are greater than his income; and his only way to keep on in the style he has lived, is to obtain more credit and loans. The system to such a man and his family, is full of mischief. He must soon fall; and the longer it is kept off, the greater will it be.

In a new country like ours, the credit system may be beneficial to the enterprising, the sober and industrious. And it is happy for them, perhaps, that such facilities are afforded them, as to help them forward more rapidly in life: but even they will do well to remember that the day of payment will soon arrive; and that, if they should be led to extravagance or idleness by the extension of credit to them, their condition will soon be far less desirable than that of poverty, with sobriety and economy.

GOD PROVIDETH.—BY BISHOP HEBER.

Lo! the lilies of the field,
How their leaves instruction yield!
Hark to nature's lesson given,
By the blessed birds of Heaven!
Every bush and tufted tree
Warbles sweet philosophy;
Mortal, fly from doubt and sorrow;
God provideth for the morrow.

Say, with richer crimson glows
The kingly mantle or the rose?
Say, have kings more wholesome fare,
Than we poor citizens of air?
Barns nor hoarded grain have we,
Yet we carol merrily.
Mortal! fly from doubt and sorrow,
God provideth for the morrow.

One there lives, whose guardian eye
Guides our humble destiny;
One there lives, who Lord of all,
Keeps our feathers lest they fall—
Pass we blythely, then, the time,
Fearless of the snare and lime,
Free from doubt and faithless sorrow
God provideth for the morrow.

A launch of a seventy-four gun ship has lately taken place at Constantinople. The Grand Signior was present at the show, which was a *novelty* in that place; as the vessels built there are hauled from the stocks into the water very gradually and slowly. The master builder of this ship is an American; and received great applause from the Sultan and his prime minister. When the ship started, the sultan was alarmed, and thought there was danger of destruction to every one near. But the ship moved rapidly and without accident, into the water, amidst the shouts and plaudits of an immense concourse assembled to witness the novel scene.

The late Mr. Roscoe of Liverpool, England, stated in a pamphlet, published twelve years ago, on the criminal laws of that country, "that, during the first seven years of the present century, there were 1782 cases of theft in houses and stores, (which by the laws were punishable with death) and that only *one* was convicted and executed. The people consider the penalty too severe, and therefore either do not complain, or jurors do not convict: And thus the criminals escape all punishment." There is something wrong in this. Where does the error lie?

THE DRUNKARD NOT A MAN.—A drunken man went into a school and frightened the children and was noisy and rude. A child told its mother that a *man* had been in the school and frightened the children. No, said the mother; he *was not a man*, but a drunkard.

MANUFACTURES.

If the thought should cross any mind, that after all, the so much vaunted genius of our mechanics has been expended in the insignificant object of enabling men better to pick out, arrange, and twist together the fibres of a vegetable wool—that it is for the performance of this minute operation that so many energies have been exhausted, so much capital employed, such stupendous structures reared, and so vast a population trained up—we reply, an object is not insignificant, because the operation by which it is effected is *minute*; the first want of men in this life, after food, is clothing, and as this art enables them to supply it far more easily and cheaply than the old methods of manufacturing, and to bring cloths of great elegance and durability within the use of the humble classes, it is an art whose utility is inferior only to that of agriculture. It contributes directly to the comforts of life among all nations where manufactories exist, or to which the products of manufacturing industry are conveyed; it administers more to the comfort and decency of the poor as well as to the taste and luxury of the rich. By supplying one of the great wants of life, with a much less expenditure of labour than was formerly needed, it sets at liberty a large proportion of the population, to cultivate literature, science and the fine arts. To this country, the new inventions have brought a material accession of wealth and power. When it is also remembered, that the inventions, whose origin I have endeavoured carefully to trace, are not confined in their application to one manufacture, however extensive, but that they have given nearly the same facilities to the woollen, the worsted, the linen, the stocking, and the lace manufactures, as to the cotton, and that they have spread from England to the whole of Europe, to America, and to parts of Africa, and Asia, it must be admitted that the mechanical improvements in the art of spinning, have an importance which it is difficult to over-estimate. By the Greeks, their authors would have been thought worthy of deification; nor will the enlightened judgment of moderns deny that the men to whom we owe such inventions, deserve to rank among the chief benefactors of mankind.—*Baines on Cotton Manufactures.*

Mr. Brooks of Portland, dates a late letter from Amsterdam, and pays the following well-merited eulogy on the character of the people in Holland.

'No man can go through even a single city of Holland without being impressed with the greatest respect for the Dutch character. As yet, I have not seen a beggar in Holland. I do not believe I shall see one. Nothing that is said of their neatness, is exaggerated. They are undoubtedly the neatest people on earth,—and the women scrub from morning to night, scrubbing every thing—post, pillar, floor, door, street, brass, yes, every thing that can be scrubbed;—and the consequence is, that even the streets are as neat as a parlor. In Leyden, they never permit the dirt to rest in peace between the crevices of the rocky pavements! Water in the morning, flies about in all directions. It is really unsafe, *then* to venture into the streets, for little cataracts from engines prepared to wash the windows, are hissing about you in all directions. Scrub scrub, scrub! you see in the morning, and at noon, and at night too,—but more particularly in the morning, whole battalions of women scrubbing, scrubbing. They do it, with the air of people, who know how to scrub. They seem to love to do it. I have seen them scrub where there was no dirt at all. Amateur scrubbers they are, playing with a broom as the young lady plays with the strings of a harp. Is all this so well? What can a poor Hollandtz husband do, whom, when he comes home for peace, his wife begins to scrub? I have a horror of an American washing day,—and my heart aches for their afflicted husbands,—and therefore, I do not wonder at all that they smoke, puffing off their afflictions in clouds of tobacco, and thus enveloping themselves in an atmosphere that even scrubbing cannot touch. But smoking and scrubbing aside, and scrubbing is only a VIRTUE carried to excess,—the Dutch are a most interesting and wonderful people.

You hardly see a miserable house. I do not remember one. Though the country houses have not so many flowers as the English have, yet they are neat and attractive. All have gardens who have grounds to make them, and the prettiest gardens too. If I were called upon to point to the place where the industry of man has done the most to triumph over obstacles where nothing of soil or climate seems to have appalled him,—where, *not* the wilderness was made to blossom like the rose, but the morass and the bog,—I certainly should point to Holland. To say that such people, who have done all this, now so well off, so rich too, so happy in possessing all the necessaries and enjoyments of life, are a wonderful people, is but faint praise. It only illustrates the position, that the more nature does for a people, the less they are likely to do for themselves, for they are content in the profusion of its gifts,—but where labour is necessary, and the duty imperative, then man arouses himself, and every faculty of mind or body, is developed to its full extent. Thus Holland is what it is—and thus Italy is what it is.'

Consumption of Beer and Spirits in Great Britain.—According to an account lately laid before Parliament, it appears that there were consumed in the United Kingdom of Great Britain and Ireland, during the year ending on the 5th of July last, for the brewing of Beer, 32,139,650 bushels of Malt. Of this immense quantity, 28,969,963 bushels were consumed in England, it being equal to two bushels of malt for each person in the kingdom, or four bushels for each grown up person. The consumption in Scotland was 1,139,801 bushels, and in Ireland 2,055,326, being about half a bushel for each person grown up.

The consumption of home made spirits in the same period was 23,408,000 gallons, of which 7,644,000 were consumed in England, 9,707,000 in Ireland, and 6,036,000 in Scotland. Supposing one-third of the population to be consumers of spirits, this quantity gives a sixteenth of a gallon to each in Ireland, and seven gallons to each in Scotland.

The quantity of foreign spirits which paid duty in 1834, was 4,765,000 gallons, of which the greater part was consumed in England

A VIEW ON HUDSON RIVER.

Every one knows, or has heard, that there are many highly picturesque views presented, in passing the Hudson between New York and Albany. In several places, the lands are high, the banks precipitous, and the scenery wildly romantic. About eight miles above the city of New York is a range of rocks, called the Palisadoes, varying from twenty to 550 feet in height, and extending about twenty miles. In some places, these rocks or ledges are nearly perpendicular, and form a solid wall for several miles. Ten or twelve miles farther north, and about twenty-five miles from New York, the river widens into a bay; and a little higher, at the distance of forty-five miles from New York, where the river becomes narrow and turns to the northeast, commence the High lands, or a ridge of the Fishkill Mountains, so called. This range is nearly northeast and southwest, and extends on each side of the river. And such is the situation and formation of the lands here, that some have supposed it was the southern bounds of a great lake; and that, in some convulsion of nature, the waters made a passage through the mountains.

The High lands are objects of peculiar interest and curiosity. The natural view is grand and sublime; and they are interesting as being associated with important events of the war of the revolution. This range of High lands extends also on the river the distance of nearly twenty miles. The highest peak has been estimated to be 1570 feet. In the vicinity, on entering the High land tract from New York, are Verplanck's Point, Stony-Point, and a little higher up the river West Point, where the main American army was encamped for some time during the American war, and which General Arnold had treacherously agreed to deliver up to the enemy. The story has been too often told to be repeated here. It was a most critical moment; and had the traitor succeeded in his plans, the war would probably have been long protracted; and its issue might have been far less favourable to our country. A few miles above West Point is Newburg, a pleasant and flourishing village, in the south part of which, and nearest to West Point, were the head quarters of General Washington, for some time. Higher still on the river successively appear several towns and villages, in a flourishing state, which add much to the beauty of the scene. One of the most striking views is presented, after passing the wider part of the river, and on approaching or entering the narrows where the river turns to the northeast, and where the banks are very high, steep and rocky. When one feels safe, and is wafted along at the rate of twelve miles an hour in the wonderful steam-boat without sails, or is gliding more slowly in an old-fashioned sloop, the prospect is at once wild and agreeable. The sense of admiration of what is grand and sublime is fully excited: And it is also agreeable, where there is no danger, to look on those lofty and precipitous mountains, unless there should be included in the view some human beings clambering on their sides, and a fear arises, that they may plunge into the waters, or be dashed to pieces on the rocks below.

THE CHEROKEE ALPHABET.

The following 'facts relating to the invention of the Cherokee Alphabet,' are taken from the American Annals of Education. They were communicated by one of the Cherokee nation.

'*Guess* is what is generally termed a *half breed*, his father being a white man, and his mother a Cherokee. He is now about 72 years of age. In his natural appearance there is nothing very remarkable,—about the middle size, fair complexion, and upon the whole, a fine looking man, possessed of an ingenious and vigorous mind, and was an excellent worker of silver, (I speak of him now as he was when in our nation,) though he acquired the art entirely within himself. He was more particularly famed for the beauty and neatness with which he manufactured silver spurs. He had a fine talent and taste for painting; but for want of proper culture and materials, they were not allowed to expand. He was a man of steady and temperate habits,—peaceable with all around him, yet possessed somewhat of a morose disposition, as I have learned from those who knew him better.

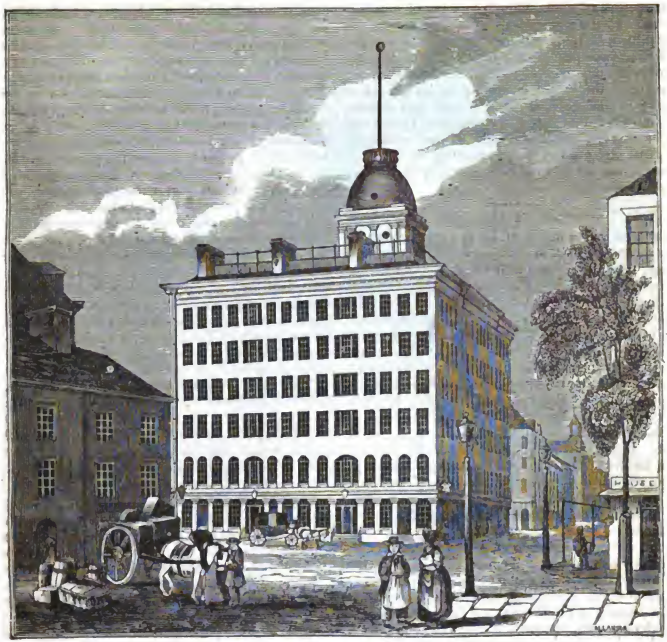
'His extraordinary invention for writing the Cherokee language, was made in 1821. He was at the time not only perfectly unacquainted with letters, but entirely so with any other language than his own. The first impression or idea of the practicability of such a project, was received by looking at an old piece of printed paper, and reflecting upon the very singular manner (to him) by which the white people could place their thoughts upon paper, and communicate them, precisely as they existed, to others at a distance. A thought struck him that there must surely be some mode by which the *Indians* could do the same, and he set about the work of discovery. He began first by marking upon a soft rock, (probably slate,) and afterwards obtained paper. He thus invented a single and distinct character for each word, but soon found the number so great, that it was impossible to retain them in memory. His friends ridiculed the strange idea he had imbibed of writing his language in some peculiar way unknown to educated men, skilled in the learning and literature of ages, and in striving to emulate a *Cadmus*; but he was not to be dissuaded, and continued inflexible and persevering in the visionary scheme, as all thought it, that his imagination had moulded. After several months' labour, he succeeded in reducing his first plan, so that in lieu of a separate character to denote every word in the language, he gave to each a syllabic sound, and ascertained that there were but eighty-six variations of sounds in the whole language; and when each of these was represented by some particular character or letter, the language was at once reduced to a system, and the extraordinary mode of writing it, now used, crowned his labours with the most happy success. Considerable improvement has been made in regard to the formation of the characters, in order that they might be written with more facility; and type cast for the printing of a paper, &c. One of the characters was found to be superfluous, and discarded; reducing the number to eighty-five.

'The Council of the Nation were about making him an appropriation of money on account of the invaluable service rendered by the invention, but were prevented by a declaration on his part, that he would not accept of any. A silver medal however was voted; and procured by the Cherokee delegation in this city, in 1824; the inscription I do not recollect. It has been much regretted that Guess did not remain with the nation east of the Mississippi, and witness the advantages and blessings enjoyed by his discovery. He left the nation in 1824, and emigrated to the West, and was one of the delegates who negotiated the treaty of 1828, with the government in this city, on behalf of the Arkansas Cherokees.

'The knowledge of this mode of writing is easily acquired. An apt scholar, one who understands the language, can learn to read in a day; and indeed, I have known circumstances where it has been learned in a single evening. It is only necessary to learn the different sounds of the characters to be enabled to read at once. In the English language, we must not only first learn the letters, but to spell, before reading; but in Cherokee, all that is required is to learn the letters, for they have *syllabic* sounds, and by connecting different ones together, a word is formed; in which there is no art. All who understand the language can do so, and both read and write, as soon as they can learn to trace with their fingers, the form of the characters. I suppose that more than one half of the Cherokees can read their own language, and are thereby enabled to acquire much valuable information, with which they otherwise would never have been blessed. Many portions of the Scriptures have been translated, and also hymns, which have been printed by their own press.'

Artesian Wells.—In a meeting of the French Academy, held on the 28th of Sept. it was stated that a Mr. Mulat, an Engineer, has been boring for water near the Chateau of Cange, situated on the right bank of the Cher, near Tours, at the depth of 210 feet in chalk, which he reached in 21 days: he obtained water to the amount of 600 litres. 576 gallons per minute. At 375 feet, he opened a fountain which gave 960 gallons per minute. At 390 feet a new sheet of water was reached which gave 2400 gallons per minute; and finally having penetrated still farther, he came to an actual torrent, which threw up more than 3840 gallons of water and green coloured gravel in a minute. This in 24 hours would amount to the enormous quantity of 5,529,600 gallons, as remarked by Mr. Arago a quantity greater than is furnished to Paris by the river Bievrein in the same time.—*Philad. Herald.*

'Madam Celeste—for her theatrical capers, during the year past, has received $50,000.' The greatest amount of this sum was received in New York, and the next highest in Boston. So say the public papers; and we are sorry for it. The money had better been given to the Asylum for the Blind, or to the Society for the relief of widows and orphans. The young, we know, must have amusement and recreation; but let it be more *rational* and less expensive, than attending such shows.



HOLT'S HOTEL, IN NEW YORK.

Among the various improvements in our country of recent date, for the accommodation of travellers, the newly built *Hotels* are not the least. Travelling has increased in the United States within ten years, in a most unexampled measure. The population is far greater indeed; but the business has increased still more. This is to be attributed chiefly to manufactories, as they give occasion to citizens of different parts of the country, to visit the places where the factories are established, or the large cities where the goods are sent for a market. Steam-boats and rail-roads are great inducements also for travelling; for less time is lost on the road. The houses of resort for board are therefore greatly multiplied. They have more than doubled within five or six years, in most of the large cities. New York, the great commercial Emporium, and a place visited also by travellers for pleasure from the South, on their way to the North and the East, has several new and spacious buildings designed for the accommodation of traders and other travellers. The Hotel erected by Mr. Holt is, we believe, one of the largest of these. It is said, 'to have been very carefully constructed,' and is considered 'both ornamental and useful to the city.' Its location is quite central, as regards the business part of the town; it is at the corner of Fulton and Pearl Streets. 'On Fulton Street, its front is one hundred feet; on Pearl Street seventy-six feet; and on Water Street it is eighty-five feet and an half. It has a basement, and six stories besides. The height of the main building, to the top of the cornice, is seventy-five feet; to the top of the promenade it is eighty feet. From the street to the top of the dome, which surmounts the building, are one hundred and twenty-five feet.' The interiour is conveniently and happily divided and arranged. There is a large dining-hall of one hundred feet, and on the sides two smaller ones of forty-five each; and twenty-five parlours; the whole number of rooms in the building are one hundred and sixty-five. It is sufficient to lodge three hundred persons; and to dine one thousand at once with convenience. The whole number of windows in the building, is 450. There is a good well connected with the establishment, sunk on the Artesian plan, to the depth of 370 feet, which constantly furnishes a sufficient quantity of pure rock water, and which is conveyed

to every part of the building by means of a steam-engine. In the garret there are large cisterns, and hose attached to them, for conveying the water freely and promptly, which must be a most valuable guard or remedy in case of fire. We have given the location of the Hotel according to an acount in 'Views in the City of New York;' but another account states, that it is at the corner of Fulton and Water Streets. Still one side of the building is on Pearl Street, but not extending so far as on either of the other two, as appears by the dimensions given above.

HISTORY OF ABRAHAM.

Abraham was a native of Ur in Chaldea, and his birth was about 300, or 350 years after the general deluge, which happened in the time of Noah. It is difficult to fix precisely the year in which Abraham was born, on two accounts. First, it is uncertain how old Terah was at the birth of his son Abraham. The historian says, that Terah lived seventy years and begat Abram, Nahor and Haran. And afterwards he says, that Terah died in Haran at the age of 205: again, that Abraham departed from Haran into Canaan, at the age of 75 — and Stephen observes that this departure was after the death of Terah. See Genesis xi. 26, 31. xii. 4, 5. Acts vii. 4. Either, then, Abraham was older than 75 when he went from Haran to the land of Canaan, or Terah was above seventy when Abraham was born, or Terah was only 145 at his death instead of 205. The other difficulty, (as to the year of Abraham's birth,) arises from the probability that there was another ancestor between Arphaxad and Selah; namely Cainan, as mentioned by St. Luke on the authority of the Greek version called the Septuagint: neither of these difficulties, however, are important in the biography of Abraham. The only effect is to render uncertain the particular period of his birth: Whether about the year 300 or 350 after the deluge, which is the greatest variance. If Arphaxad had a son Cainan, who was the father of Selah, then Abraham was of the tenth generation from Noah; if Selah was the son of Arphaxad, he was of the ninth generation. The time in which Abraham lived from the flood is important only as showing the state of mankind at that period. And in reference to this point, the period of fifty years is not very material. If indeed the patriarch Abraham was born within 300 years of the deluge, he was sometime contemporary with *Noah*, who survived that event 350 years; and if he was born 50 or even 70 years later, he was entirely a contemporary of *Shem*, who lived 500 years after that catastrophe; and from whom he might have had an account of events before the flood, as Shem was 100 years old when it occurred. From this ancestor, Abraham (and his children also) might have had an immediate statement respecting the deluge, and of the previous condition of the world.

In about 350 or 400 from the deluge, then, the greatest portion of mankind had become addicted to idolatry. No doubt there were exceptions; for it is hardly possible that the sons, or all the posterity of the earlier generations of Noah were worshippers of idols. Each successive generation however, removed to a distant place from their ancestor, for the sake of larger possessions; and in their worldly cares and labors might become ignorant; forgetful of the tradition of their fathers; superstitious; governed wholly by their senses; and thus naturally led to idolatry. The declension no doubt would be gradual; but in nine or ten generations, the delusion would be very general; and a few only who held personal intercourse with the older patriarchs would probably escape the prevailing degeneracy. As Terah departed from Chaldea with his son Abraham (who left that country on account of its idolatry) it is probable that he also was opposed to the false worship which had then become prevalent. The separation of Abraham from his native place and most of his family relations was evidently owing to a divine impulse or revelation; but it is also probable that the more correct religious doctrine of one true God, taught by Noah and Shem, was not wholly lost; and it is quite possible, that the true faith had been retained by Terah, though in danger of being wholly obscured by the prevailing idolatry (or fire worship) of the Chaldeans at that period. Terah and Abraham probably had not actually fallen into idolatrous practices, and yet the danger was so great, to their posterity, that it was necessary to retire from Chaldea to preserve the purity of their faith: and the wandering life of Abraham was calculated to teach him his dependence on God, and to lead him to trust in divine providence.

That the great mass of mankind were idolators in about 350 or 400 years after the deluge, is evident from both sacred and common history: and that a sense or belief of the true God was preserved among a few by means of supernatural interference or revelation, is also most reasonable to suppose. It was certainly important to preserve a knowledge of God in the world; but without inspiration, we see no cause to prevent the downward course of the human race in error and superstition. The same divine care, which raised up and assisted Moses to declare the true God to the Egyptians and other heathen nations, and at a far later period, sent Jesus of Nazareth to enlighten and instruct the world in the great truths of religion, led to the calling of Abraham, when most of the inhabitants of the earth were addicted to idolatry, and gross moral darkness would otherwise have soon covered all nations. The doctrine of the only true God was not *then* universally denied; but there was certainly danger that such would soon be the lamentable state of the world. By the call of Abraham and the interpositions in his favour from time to time in different countries, he was induced to maintain the worship of Jehovah among his own family and children, and to bear testimony to others in favour of the divine unity. [TO BE CONTINUED.]

The human mind has unlimited curiosity, and a natural disposition for knowledge and science. The earliest amusement of children, is imitation of the acts of their parents, and those much older than themselves, and of learning the causes and reasons of things. This disposition should be indulged and gratified.

STATE HOUSE IN CONCORD, N. H.

The Capitol of New Hampshire, situated in the town of Concord, has a fine appearance, and ranks among the neatest and most elegant public buildings in the United States. It was erected in the years 1818 and 1819; and in the latter, the Legislature of the State first held its meetings in it. It is situated near the west margin of the Merrimack river, between Main and State Streets, and about the centre of the village, which is two miles long, and consists chiefly of one street. This is a flourishing inland town, of about 4,500 inhabitants; and other buildings are increasing on the east side of the river. Concord is about seventy miles from Boston; and forty from Portsmouth, the commercial capital of New Hampshire. It is west by north from the latter, and from Boston nearly N.N.W. The Legislature of New Hampshire formerly convened in Portsmouth: But the present population of the State is such, that Concord is far more convenient for most of the members. There are two bridges over the Merrimack within the town.

The whole front of the Capitol is 126 feet; the main part is 56, and two wings, thirty-eight feet each; and forty-nine feet in width. It is two stories high, exclusive of the basement and cupola. The first is nineteen feet in height, the second eighteen feet; but in the centre, which is the Hall of the Representatives, it is thirty-one feet in height. This room is ornamented by pillars and stucco-work, which give to it an elegant appearance. The Senate Chamber is in the north wing; and the Council Chamber in the south. The outside walls of the building are of granite stone hammered, and the style is plain; having, however, a Tuscan frontispiece of stone, at each central door. It has two fronts, facing east and west. The roof and cupola are made of wooden materials: And the square part of the cupola is ornamented with twelve Ionic columns.

Concord contains the State Prison or Penitentiary, which is a large building; and a handsome Court House. Three weekly papers are now published in the place.

NATURAL LANGUAGE OF HORSES.

Both in the Ukraine and in South America, the wild Horses pursue an orderly system of political government among themselves; which clearly proves the existence of a natural language, by which they perfectly understand the commands and wishes of their superiours. A combination of voice and gesture, which in fact may be defined to be corporeal expression, is always understood by every individual in a troop of many thousands of these spirited animals. In South America, the election of a leader is certainly made by the whole body; and when chosen, he is promptly obeyed in all his orders for travelling. In the Ukraine, Dr. Good says that the chief horse in command seems, from all the observations of naturalists, to hold his office about four or five years, when a new election takes place, the old general submissively falling into the ranks, when the polls are opened. Sometimes he is re-elected, but not always. In those instances where

there are rival candidates, and the decision is not satisfactory to the parties, the heroes fight it out, and the conqueror then quietly assumes the command. There is not a single movement that does not show a degree of sagacity bordering upon that kind of intelligence characteristic of man. A large number of domestic horses, after being a few months together at pasture, begin to establish certain police regulations; and ultimately, one of them assumes dictatorial power. This, therefore, implies some sort of language; because without it, there would be constant disorder and vexation; but philosophy, as yet, has done nothing towards unraveling the mystery. The same natural language exists among elephants. The generalissimo of the wild herds shows his power fearlessly, and under his power the company readily submits.

What this language consists in—whether it be voice alone, gesture alone, or bodily expression, modified by stamping on the ground, will be difficult to decide. It is probable that by the whole of them the word of command is produced. While grazing, defending themselves against enemies, or securing their young, they display something more definite than mere instinct.—*Scientific Tracts.*

RELIGIOUS OPINIONS AND LAST MOMENTS OF SIR J. MACKINTOSH.

His nights were very wakeful, and spent in much uneasiness of body; he became very silent and thoughtful, had his Bible frequently open before him, spoke more than usual upon religious subjects —perhaps it would be more correct to say, upon God, and his disposition toward man. His mind seemed less occupied with speculations, and more with his own personal relationship to his Creator. Our Lord Jesus Christ was very frequently the subject of his thoughts; he seemed often perplexed, and unable to comprehend much of his history. He once said to me, 'It is a great mystery to me—I cannot understand it.' At another time he told me that, during the many sleepless nights he passed, the contemplation of the character of Jesus Christ, and thoughts concerning the Gospel, with prayers to God, was his chief occupation. He spoke of the delight he had in dwelling on his noble character. I have heard his voice falter as he repeated, 'He went about doing good;' but he added, 'There is much connected with him I cannot understand.' I cannot attempt to give his own words; but his difficulty lay in the account given of the manner in which Jesus becomes the Saviour of man. On Saturday, a great change took place. He became very silent, and had the appearance of one listening. Whenever a word from the Scriptures was repeated to him, he always manifested that he heard it; and I especially observed that, at every mention of the name of Jesus Christ, if his eyes were closed, he always opened them, and looked at the person who had spoken them. I said to him, at one time, 'Jesus Christ loves you.' He answered slowly, and pausing between each word—'Jesus Christ—love—the same thing.' After a long silence, he said, 'I believe'——we said in a low voice of inquiry 'in God?' He answered, 'in Jesus.' He spoke but once more after this. Upon our inquiry how he felt, he said he was 'happy.'

Gen. Newhall, of Lynnfield, Massachusetts, in a communication, published in the New England Farmer, vol. x. page 9, observes as follows:

'Having woodland from which I have cut annually, for several years past, from twenty to fifty cords of wood, it has been my practice to have it cut at the *time*, and in the *manner* that would best insure a strong and vigorous growth of sprouts. To effect this purpose, I never allow a tree to be cut till after the autumnal frosts have caused the leaves to fall, and the sap to descend into the roots, nor later in the vernal season than the middle of April. The *manner* of cutting is to leave the stumps nearly on a level with the surface of the ground, from which the suckers are much more strong and vigorous, and less liable to be injured by high winds, than a growth from stumps, cut ten or twelve inches high, as is the practice with some.

'Pursuing this course, I have never been disappointed, and have now on land, from which trees were cut in the midst of winter, a growth of sprouts of the most vigorous and promising appearance.

'Respecting large trees, the growth of centuries, cut them whatever season you please, there is scarcely one stump in a thousand that will produce suckers.'

Effect of Music on different Animals.—While a man was blowing on a conch-shell, one who had doubted whether beasts were touched with music, noticed a cat, a dog, a horse, an ass, a hind, cows, barn-door fowls, &c. in a yard near. He could not perceive that the cat was in the least affected; the horse stopped short from time to time, and raised up his head occasionally, as if listening: the dog continued long seated on his hind legs, looking stedfastly to the player; the ass did not appear to be touched by it at all; the hind lifted up her large ears and appeared attentive; the cows slept some, then grazed, and moved away; some small birds in the aviary and on the trees in the yard, almost tore their throats with singing; the cock, minding the hens, and the hens employed in scratching the dung-hill, did not discover that they took any pleasure in the music.

Solitude.—'When I look back forty years of my life, I remember I was perpetually in company, full of animal spirits, thoughtless, self-pleasing; and solitude would then have been the heaviest burden to my mind. Now, to be alone, to be looking on my bed as probably the spot on which I am to fight the last battle, before I win Christ and see him as he is—to consider, with the closest attention, the origin, and the nature, and the consequences of death, to the friends of Christ—this work invigorates my mind and nourishes my soul. I accept the privilege and power of doing thus, and the great opportunity I have for this exercise, with joyful gratitude.'

HINDOO FEMALE.

We give a drawing of a young woman of India, who belongs to a School in Calcutta, established by the English Church Missionary Society. She is represented in the costume of the pupils of the Seminary; which differs very little however, from that of the natives generally. It would be unwise to require them to deviate much from the common dress of the country; for it might excite a prejudice against the School. Her principal garment is called a *Sarrie*, and is a long piece of white muslin folded round the body, and thrown over the head and shoulders. The book in her right hand shows that she is a scholar. When the School was first opened, this sight, (a young woman with a book in her hand) was rare, and therefore a matter of great curiosity. The bag in her left hand was given her as a mark of distinction for diligence and improvement in the School; many similar articles being sent out by ladies in England, as rewards for the scholars who should excel in their studies. Several Schools for the natives of India, have been opened in different parts by the English government and Missionary Societies. There are enemies to the School among the natives, who are extremely attached to their own ancient customs and modes of worship. They apprehend that it is designed to draw off the children from their ancient faith to Christianity; or that the children who are in the Schools may be secretly sent to England. Still, in several places, the schools increase and flourish. And this appears to be the most sure way of introducing (gradually) the knowledge of our religion, as well as of the arts and sciences, which are subjects of study in Europe.

PHISIOGNOMY.—LAVATER.

Translated from the Courier Francais, of Sept. 19, for the National Intelligencer.

There is no man endowed with any moderate degree of reflection who has not felt in himself the truth of the observations, generalized and arranged into a system by Lavater. At the first glance on the features of a stranger, you receive an impression for or against; a spontaneous impression, sometimes deceptive, but which is much more frequently established by experience. Who does not desire to read in thought, and scan the soul on the human face? It is the sentiment which the most philosophical of the tragic poets, Euripides, has so well expressed, when another character addresses Theseus in his '*Hippolyte Crowned.*'

'Alas! it is necessary that men should have some certain sign to know other men—some witness of the heart to distinguish the false from the true friend.'

In the time of Euripides, the science of physiognomy had made but little progress. Every reader

knows that Zopine, the Lavater of his time, had decided, on an inspection of the features of Socrates, that the philosopher was naturally stupid, brutal, voluptuous, and a drunkard. The modern Lavater undertook to refute this judgment. He analysed with great ingenuity the physiognomy of the philosopher from ancient monuments, and found in his features the most eminent qualities. We must say he was but unravelling an enigma already solved.

Lavater was not the inventor of physiognomy, but he elevated it to the rank of a science, in stating its principles, deducing its consequences, and uniting an immense number of ideas and facts, which indeed only awaited a superior intelligence to place in order and form into a symmetrical body. One of the fundamental principles of his doctrine, a principle he was not, it is true, the first to discover, but which he developed with a powerful imagination, is, that it is in the solid parts that we ought to seek to recognise the distinctive signs of the intellectual faculties; and the characters and passions in the habitual expression of the flexible, and of course moveable parts. Lavater again contended that it was possible to determine mathematically, by the simple contour and configuration of the cranium, the measure of the intellectual faculties, or at least, the relative degrees of capacity and talent. This is not exactly the doctrine of Gall, but nevertheless, there is an analogy which deserves to be remarked.

The system of Lavater included the entire person, of which the countenance was regarded as a summary of the whole. The face down to the eyebrows was the mirror of intelligence; the nose and cheeks the mirror of the moral and sensitive life; and the mouth and chin the mirror of the animal life; whilst the eye was an epitome, a common centre to all.

It must be avowed that the science of physiognomy never can present a mathematical certainty, either from the uncertain or defectively known signs, or from the equally defective penetration of the observer. The disciples of Lavater are sometimes reduced to conjectures, when even they do not fall into positive error. Nature, it would seem, delights to tantalize those who desire to obtain her secrets.

When the translation of the *Essays on Physiognomy* appeared in France in 1771 and 1781, they excited very little attention, contrary to the ordinary reception of novelties. Grimm, in his correspondence observes, 'For three months since the translation of this work appeared in Paris, and whilst several public journals have announced its publication, I have not had the satisfaction to meet two persons who have had the curiosity to read it. * * * It is true, that in the countries of Europe, where they judge with most confidence, they read least every species of production—where all that is not song, theatrical piece, or pamphlet, need not pretend to make much noise.'

The next change was to ridicule the discoveries of Lavater, but here commenced their fame; they excited attention and were soon seriously read. After having encountered raillery they inspired enthusiasm, and these same essays, so disdainfully received amongst us, in their first appearance, rapidly obtained in France, as also over all Europe, an immense celebrity.

The learned and ingenious inventor of the science of physiognomy, was at the same time a minister of the holy Evangelist, a laborious writer and warm patriot. He ended his days almost like Archimedes, wounded by a soldier, the day the French took Zurich in 1799. He died sometime afterward, of his wound. It was to all France, a subject of sincere regret, that a French ball should abridge such a life.

Vanity and Pride.—*Passion* seizes man in youth, *ambition* in middle life, and *avarice* in old age: but pride and vanity are the besetting sins, which drive the angels from our cradle, pamper us with rich and even unwholesome food, ride our first stick with us, mount with us our first horse, wake with us in the morning, dream with us in the night, and accompany us ever. In this world, beginning with pride and vanity, we are delivered over from tormentor to tormentor, till the worst tormentor of all takes entire possession of us forever; seizing us at the mouth of the grave, enchaining us in his own dark dungeon, standing at the door and laughing at our cries. But God, in mercy, hath placed in the hands of every one a helm to steer his course by, pointing it out with his finger, and giving him strength as well as knowledge to pursue it. There is, O man, in moral straits, a current from right to wrong, but no reflux from wrong to right; for which destination we must hoist our sails aloft, and ply our oars incessantly, or night and the tempest will overtake us, and we shall shriek out in vain from the angry billows, and sink beyond recovery.

Tinned Cast Iron Hollow Ware.—Mr. M. H. Beecher, of this village, has invented a method of tinning Cast Iron Hollow Ware, in the same state in which it comes from the mould. This process, owing to the trifling additional expense, is decidedly superior to the British Composition Kettles, which have to be smoothly turned previous to the application of the Composition Tin, and which operation renders the price of the article too exorbitant in our market. Mr. Beecher's invention, while it combines beauty with durability—a durability double to that of the English—may be counted of great benefit to mankind, especially in the culinary department—no rust or canker being likely to accrue from the negligence of cooks. Messrs. Lee & Albee have gone into the manufacture of the article, under the direction of the inventor, and specimens of the work may be seen at the Hardware Store of Phillips & Brisbin, in this village, where any person may inspect the article. By the same process, wrought and malleable cast iron may be tinned, at a much less expense than by any other method.

Waterford, N. Y. Atlas.

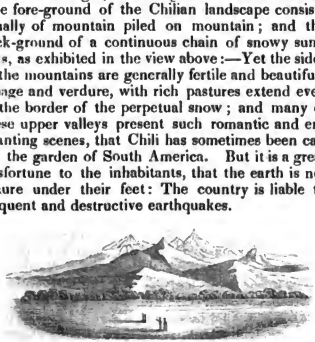
Frogs were first known in Ireland in 1796. Some spawn was carried there from England, and placed in a ditch in the Park of the University. A writer, in 820 says, 'that there were no serpents nor venomous reptiles, in the Island.'

SCENES IN SOUTH AMERICA.

ANDES OF CHILI.

The surface of Chili consists of portions, strikingly dissimilar, but passing into each other by regular and insensible gradations. Between its ocean and mountain limits, is a transition from the frozen to the torrid zone, similar to that which takes place in Mexico and Colombia, though not altogether so abrupt.

The range of the Chilian Andes seems peculiarly massive and unbroken; and the perpetual snow which covers it to a considerable depth, even at the points chosen as of most easy access, cannot well consist with a height of less than 14,000 or 15,000 feet. From these, three parallel chains descend towards the sea; or it may be more correct to say, that on this extended slope, rise many steep eminences and ranges, branching in various directions. The fore-ground of the Chilian landscape consists usually of mountain piled on mountain; and the back-ground of a continuous chain of snowy summits, as exhibited in the view above:—Yet the sides of the mountains are generally fertile and beautiful: foliage and verdure, with rich pastures extend even to the border of the perpetual snow; and many of these upper valleys present such romantic and enchanting scenes, that Chili has sometimes been called the garden of South America. But it is a great misfortune to the inhabitants, that the earth is not secure under their feet: The country is liable to frequent and destructive earthquakes.

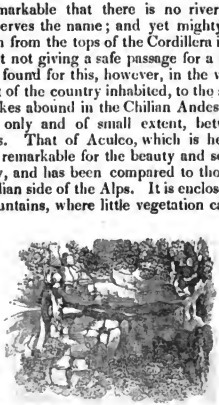


PINCHINCHA,—A GROUP OF MOUNTAINS IN QUITO.

Quito, which now assumes the character of a State, probably forms the finest table land in all America. Its breadth is about thirty miles, enclosed between two parallel ranges of the loftiest Andes: And in soil and climate, it is superiour or equal to any known. Vegetation never ceases; and even in the wet seasons, the mornings and evenings are clear and beautiful. It is sometimes called the *evergreen* Quito. Standing on an eminence, the spectator views the tints of spring, summer, and autumn, all blended. But the feature which renders the view from Quito the most enchanting, perhaps, ever beheld, is that, above this beautiful plain, and resting, as it were, on its verdant hills, there arise all the loftiest volcanic cones of the Andes. From one point of view eleven of these may be discovered, clad in perpetual snow. The highest of these is *Pinchincha*, and was selected by the French Academicians, for observations, by which they determined the figure of the earth: and by Humboldt, it is called the classic land of modern astronomy. The division of the department into provinces has been made with reference to them. The southern is called Chimborazo, the northern, Trubabura, and the middle, Pinchincha, which towers immediately above the city of Quito. The prospect is grand and sublime almost beyond description; and many monuments of the sway of the Incas are found in this delightful vale; it being one of their ancient and most valued provinces. Extensive ruins of buildings are still to be seen in this place; the original dimensions of which are easily discovered. The remains of the palace of Callo, present one of the most perfect examples of the ancient architecture of the Peruvians.

LAKE OF ACULEO.

It is remarkable that there is no river in Chili, which deserves the name; and yet mighty torrents rush down from the tops of the Cordillera in various places, but not giving a safe passage for a boat. A remedy is found for this, however, in the vicinity of every part of the country inhabited, to the sea coast. Nor do lakes abound in the Chilian Andes. There are a few only and of small extent, between the mountains. That of Aculeo, which is here represented, is remarkable for the beauty and softness of its scenery, and has been compared to those found on the Italian side of the Alps. It is enclosed within rocky mountains, where little vegetation can be discovered.



THE NATURAL BRIDGE OF ICONONTO, ON THE PLAIN OF BAGOTA.

This bridge is a natural arch across a chasm of nearly four hundred feet deep, at the bottom of which a rapid torrent flows, and which would be impassable without this work of nature. It appears to have been formed by *three masses of rocks*, detached from their original position, and thrown together by an earthquake. The length of the bridge is fifty feet, and its breadth nearly forty. At a particular spot on the bridge, a view may be obtained of the abyss below. The continual darkness which reigns there, and the birds of night, which raise

their mournful cries in the caverns, causing long and repeated echoes, the gloomy waters which fill the depth of the precipice, the thick foliage of the trees which partly conceal this scene of mystery; all these convey no faint idea of the abode of death.

FALL OF TEQUENDAMA, IN BAGOTA, COLOMBIA.

The scenery of the extensive plain of Bagota, New Grenada, in South America, is marked by many striking and picturesque features. The most conspicuous of these are the Fall of Tequendama, and the natural bridges of the vicinity. The first is formed by the river Bagota, as it descends precipitously from its native plain to mingle with the Magdalena. Its mass of waters, previously spread to a great breadth, are here contracted to about forty feet, and dashed down a precipice of 650 feet high into an almost fathomless abyss. The waters, as they beat against the rocks beneath, sometimes rise up in columns, sometimes in myriads of fleecy and fantastic shapes, like those formed by fireworks: And the immense clouds of rising vapour, when illuminated by the sun, form beautiful rainbows. Above the Fall, the extensive plain is covered with fields of grain; and at its foot grow the palms and sugar canes of the tropic. The plain is under and near the line; and yet its climate is like that of forty or forty-two degrees. The temperature is from 45° to 70°; but the wet seasons produce some deviations from that medium. This level is 8000 feet above the waters of the ocean.

ROPE BRIDGE.

It can hardly be said, that roads have any existence in the mountainous parts of Colombia, and in the ridges of the Andes. There are indeed, a few royal roads, but they are barely surveyed and laid out: Few are rendered convenient for travelling, and most of the paths or tracks are made by the tread of successive travellers. Sometimes the declivity is so abrupt, that it can be crossed only by a zigzag path cut into steps, which form a stair-way almost perpendicular. Men and baggage are generally conveyed on mules, which find their way over these frightful precipices with surprising dexterity. A traveller, who wishes to escape these hardships and perils, may be conveyed in a species of chair placed on the back of persons hired for the purpose, who being used to the country, carry one with surprising safety and comfort. The bridges, which are thrown over the torrents of the Andes, and from steep to steep, are of the most fragile and hazardous description. Stone is used only in a few rare cases; in general a few rough planks are laid across, and covered with earth and branches; the breadth not more than four feet, and without fence or railing. Where the distance is too great for this contrivance, a bridge of strong cable is constructed, and the Colombian passes over securely, though it rocks beneath his feet at every step. Sometimes beneath distant points, a single rope is stretched across, as in the view above given; and a hammock or basket is made to run from one to the other, for conveying persons, and a small quantity of goods.

A line of Rail Road from Philadelphia through Reading and Pottsville to Sunbury, is now in a state of forwardness, and when this and the one from Williamsport shall be completed, the trip from that city to the Niagara, can be easily made in three days! This assertion may occasion some surprise, but is nevertheless not to be doubted. Leaving Philadelphia in the morning, it will be an easy task to reach Sunbury in the evening. Here, getting into one of the canal boats, running up the West Branch, and obtaining as much repose as is wanted, the traveller may reach Williamsport in the morning, and passing over the Rail Road to Elmyra, soon finds himself in a steamboat at the southern extremity of Seneca Lake; by this he will be landed at Geneva in the morning, thus completing the second day. Then taking the mail or other last conveyance, the third day will suffice to complete the journey. When such an arrangement shall be finished, and that it soon will be, there is no doubt, the amount of travelling between the North and South, for business and pleasure, must be exceedingly great. Hundreds will go then for one at the present time. Who indeed will stay at home that can go to Niagara in three days, at a trifling expense, and be agreeably entertained the whole way?

TEXAS, AND ITS POPULATION AND RESOURCES.—The Telegraph and Texas Register is the title of a newspaper, quarto form, of elegant typography, just commenced at San Felipe du Austin. The prosperous condition of Texas is but little known, we believe—there are already 60,000 inhabitants in the province, nearly to a man American, and the exports of cotton this year amount to ten thousand bales.

A *religion* that is true, says the Poet Coleridge, must consist of ideas and facts both; not of ideas alone without facts, for then it would be mere philosophy; nor of facts alone without ideas, for then it would be mere history.

THE NEW YEAR.

From a sense of propriety as well as from regard to custom, the Editor of the American Magazine is induced to notice the coming in of a New Year. In the first place, we make our humble and grateful address to the subscribers and patrons of our undertaking, designed to spread 'Useful and Entertaining Knowledge.' To use the language of *great* men in former times, *we greet them well*, and salute them with our best wishes. If a *old*, it is a hearty salutation, and we can assure them it will be *warmer* in six months. There are many, some thousands, who have cheered us on our way, quiet as it has been, and without affording food for excited or morbid appetites, who covet party discussions, either in politics or religion, and continually seek for something new and startling. Whatever is useful as well as new, however, we have endeavoured to collect; and not seldom have ventured to give our own opinion of 'men and things.' And though it has been our aim to avoid *entangling* ourselves or readers with party politics and sectarian views, we have not hesitated, (as we felt disposed and considered it a duty) to advocate civil and religious liberty; to contend for the Constitution as first interpreted and understood, for equal rights and republican principles; and for the great truths of revelation, admitted by all intelligent and good men, and essential both as the guide of life and the hope of immortality. One great object of the Editor, is the improvement, both intellectual and moral, of the young; and he has wished to excite in them a desire for reading and study; for devoting a portion of time to useful books, and much of it to the forming habits of industry and self-controul. We do not expect to give so much information as to render other reading unnecessary; but to give hints, and refer to subjects, with a view to create a desire of knowledge, and to the study of systematic treatises in different branches of science. New inventions and recent discoveries, whenever made, which come to our knowledge, we are careful to notice. Facilities and means for acquiring knowledge, should be afforded to all; and the greater and more numerous the better; and yet study and application are necessary in every one, who would attain to distinction, or gain so much information as to be useful. There is no substitute for mental effort and industry. To be proficient in any one branch of science, a man must bestow much labour and self application. The numerous helps to learning now afforded, do not render this unnecessary. The benefit of them is, in giving us the means—after all they are only helps, and we must be active if we would derive advantage from them.

We are also aware of different tastes and characters in society, and we have endeavoured to present a variety in our pages. We wish to give biographical notices of wise and virtuous and industrious persons, which are worthy of imitation; and for those who occasionally want something more than humble prose, we have been desirous of furnishing such effusions of poetry, as appeared calculated to excite or strengthen good feelings, as well as to please or delight those of pure minds. But long stories formed merely by the imagination, have not been supposed appropriate to the general design of the Magazine.

We have also thought it would be acceptable to our subscribers and readers, occasionally to present statistical statements and geographical notices, especially of newly settled parts of the United States. Our country is rapidly increasing in population, in enterprise, and establishments for manufactures of different kinds; and some account and explanation of these may be useful, in stimulating and encouraging the efforts of others in similar works. It is the advantage of these publications, and therefore the object should be, to give the discoveries of other countries also, and to disseminate the knowledge of other times, so that the present generation may profit thereby; and availing ourselves of such helps, may make some farther advances in science and the arts. But without application, industry and perseverance, we cannot justly expect to improve ourselves, or those who are to come after. By the efforts and contributions of all, the sum of general information will be great, and the real improvement of society steadily increased.

THE WIDOW'S MITE.

BY MONTGOMERY.

Amid the pompous crowd
Of rich admirers, came a humble form;
A widow, meek as poverty could make
Her children! With a look of sad content
Her mite within the treasure-heap she cast—
Then timidly as bashful twilight, stole
From out the temple. But her lowly gift
Was witness'd by an eye whose mercy views
In *motive*, all that consecrates a deed
To goodness: so He blessed the widow's mite
Beyond the gifts abounding wealth bestow'd.
Thus is it, Lord! with thee; the *heart* is thine,
And all the world of hidden action there
Works in thy sight like waves beneath the sun
Conspicuous! and a thousand nameless acts
That lurk in lowly secrecy and die
Unnoticed, like the trodden flowers that fall
Beneath a proud man's foot, to thee are known
And written with a sunbean in the book
Of life, where MERCY fills the brightest page!

THE CURSED BOWL.

I gazed upon the tattered garb,
Of one who stood a list'ner by;
The hand of misery press'd him hard,
And tears of sorrow swell'd his eye.

I gazed upon his pallid cheek,
And asked him how his cares begun—
He sighed, and thus essay'd to speak
'The cause of all my griefs is RUM.'

I watched a maniac through the gate,
Whose ravings shock'd me to the soul;
I asked what seal'd his wretched fate,
The answer was—the cursed bowl.

I ask'd a convict in his chains,
While tears along his cheeks did roll,
What devil urged him on to crimes—
His answer was—*the cursed bowl.*

Cincinnati Journal.

THE FEATHERS OF BIRDS.

In the structure of birds' feathers there is much to surprise and instruct us. Feathers consist of two parts; the stem, terminating the quill, and the vane, or feathery appendages on each side the stem. The horny portion is tough and elastic; and is formed into a hollow cylinder, to combine the opposite qualities of lightness and strength. But it is in the construction of the vane, that the most singular skill is displayed; and there can be no hesitation in saying, that it exhibits the most striking proofs of design we have witnessed in any other fabric. The following account is from one of the Bridgewater Treatises, by Dr. Roget.

'The vane of the feather is still more artificially constructed; being composed of a number of flat threads, or filaments, so arranged as to oppose a much greater resistance to a force striking perpendicularly against their surface, than to one which is directed laterally; that is, in the plane of the stem. They derive this power of resistance from their flattened shape, which allows them to bend less easily in the direction of their flat surfaces than in any other; in the same way that a slip of card cannot easily be bent by a force acting in its own plane, though it easily yields to one at right angles to it. Now it is exactly in the direction in which they do not bend that the filaments of the feather have to encounter the resistance and impulse of the air. It is here that strength is wanted, and it is here that strength has been bestowed.

'On examining the assemblage of these laminated filaments still more minutely, we find that they appear to adhere to one another. As we cannot perceive that they are united by any glutinous matter, it is evident that their connexion must be effected by some mechanism invisible to the unassisted eye. By the aid of the microscope the mystery is unravelled, and we discover the presence of a number of minute fibrils, arranged along the margin of the laminæ, and fitted to catch upon and clasp one another, whenever the laminæ are brought within a certain distance. The fibrils of a feather from the wing of a goose are exceedingly numerous, above a thousand being contained in the space of an inch; and they are of two kinds, each kind having a different form and curvature. Those which arise from the side next to the extremity of the feather are branched or tufted, and bend downwards, while those proceeding from the other side of the laminæ, or that nearest the root of the feather, are shorter and firmer, and do not divide into branches, but are hooked at the extremities, and are directed upwards. When the two laminæ are brought close to one another, the long, curved fibrils of the one being carried over the short and straight fibrils of the other, both sets become entangled together; their crooked ends fastening into one another, just as the latch of a door falls into the cavity of the catch which is fixed in the door-post to receive it. The way in which this takes place will be readily perceived by making a section of the vane of a feather across the laminæ, and examining with a good microscope their cut edges, while they are gently separated from one another. This mechanism is repeated over every part of the feather, and constitutes a closely reticulated surface of great extent, admirably calculated to prevent the passage of the air through it, and to create by its motion that degree of resistance which it is intended the wing should encounter. In feathers not intended for flight, as in those of the ostrich, the fibrils are altogether wanting: in those of the peacock's tail, the fibrils, though large, have not the construction which fits them for clasping those of the contiguous laminæ; and in other instances they do so very imperfectly.'

Women.—The celebrated Fontenelle said, that women have a fibre more in the heart, and a cell less in the brain, than men.

Women, in the course of action, describe a smaller circle than men, but the perfection of a circle consists not in its dimensions, but in its correctness. There may be here and there a soaring female, who looks down with disdain upon the paltry affairs of 'this dim speck, called earth,' who despises order and regularity, as indications of a grovelling spirit. But a sound mind judges directly contrary. The larger the capacity, the wider is the sweep it takes in. A sensible woman loves to imitate that order which is stamped on the whole creation of God. All the operations of nature are uniform even in their changes, and regular in their infinite variety.

As the dew lies longest and produces most fertility in the shade, so woman in the shade of domestic retirement, sheds around her path richer and more permanent blessings than man, who is more exposed to the glare and observation of public life. Thus the humble and retired often yield more valuable benefits to society, than the noisy and bustling satellites of earth, whose very light of unconcealed enjoyment deteriorates and parches up the moral soil it flows over.

Peach Trees.—Mr. William Phillips, of Pennsylvania, has derived great benefit from the application of air-slaked, old effeted lime, to peach trees, the effects of which, according to his own account, have been very great. He puts about a peck of lime to each tree; he thinks it useful as a preservative against the insects so fatal to these trees. We have then two applications recommended, unleached ashes and lime, and from our own experience are able to recommend both. We are not sure which has the preference. The lime and ashes should both be dug every spring. A friend suggests that he killed his young peach trees by lime: caution is needed in the application.—*Agricul. Rep.*

Ancient Edifices in Mexico.—A late English traveller has discovered some very ancient buildings (probably temples or places of worship) in the interiour of Mexico, with a variety of ornaments, more rich and splendid than those at *Palenque.*

The passage in the prophet Daniel, 'to make an end of sins,' might be rendered to abolish sin-offerings, as the Hebrew word is the same for both. And it seems a preferable translation, for the Jewish ritual and sacrifices were abolished by Christ; especially in a national view, and in the Temple of Jerusalem, they soon after ceased forever.

THE WATER MOLE OF AUSTRALIA.

An account of this very singular animal, whose technical name is *Ornithorhynchus paradoxus*, (hard enough to be applied to so strange a creature!) has been lately published. It is so anomalous that writers on natural history have been puzzled in deciding its genus. It is aquatic in its habits, but seeks the tranquil streams and waters, and makes deep burrows in the banks. In its formation and limbs, it appears well fitted for such an abode, and such an element. Its common length is one foot and an half; and not unlike the Otter, in the shape of the body. Like other aquatic *mammalia*, it is covered with a double coat of fur, the inner one being soft and short, and almost waterproof. The tail is broad and flattened. The limbs are short, but appear of great strength, especially the fore feet. It has five toes on each foot, which terminate in strong blunt claws; there is a web between the toes of a tough, leathery consistence, which must be of an advantage in the water, but not in burrowing. But the head is the most wonderful part of the animal. It does not terminate in a snout, as in other animals of the kind, but is continued into a *beak*, resembling that of a duck, broad, compressed, and rounded at the lip: the mandibles of the beak are covered with a cartilaginous membrane, the edges of which are soft; and the lower, which is shorter and narrower than the upper, has the insides channelled with grooves like a duck, but larger. At the base of the beak, or the part nearest the head, there projects a loose flap from each mandible, which would seem designed to protect the eyes, when the animal is seeking food in the water and mud. The eyes are small, but bright and piercing: and the orifice of the ears is capable of being closed or opened at pleasure. It does not appear, whether the animal is oviparous or not. The natives eat them, though of a fishy and rank taste. Attempts have been made to convey them to Europe, but generally without success; they have mostly died on the passage. One or more, however, have been taken to England, and kept alive in a pond, for sometime.

EARTHQUAKE IN CAPPADOCIA.

A great earthquake occurred at Cæsarea and vicinity, in ancient Cappadocia, now called Karamania (in Asia Minor,) the last of August. It was more extensive, and more destructive of property and lives, than former similar calamities in that country. Earthquakes are not unusual in that part of our globe. Aleppo, and Antioch in Syria, and other parts of the territory, east of the Mediterranean, have often been visited with this heavy and appalling judgment. Sixty-six years ago, a tremendous earthquake took place in that country, near Antioch, by which 30,000 persons were destroyed: And a far more destructive one occurred there A. D. 526. The late earthquake, was preceded a few hours by a thick smoke arising from the foot of the

mountain, on the side of which Cæsarea (or *Kassariah*, as it is now pronounced) is situated; from which columns of flame soon burst forth, with a tremendous noise, like the violent eruption of a volcano. The earth was immediately perceived to rock, and a terrible quaking of the ground began. The shocks continued for *seven* hours, with little intermission, attended with most awful thunders. The motion of the earth was like that of the ocean in a violent storm. Two thousand buildings were prostrated. Confusion and terror seized the inhabitants. Many fled into the neighbouring country; but several were overtaken in their flight and destroyed, like the people of Sodom in the time of Lot. The six following days, the shocks were repeated, though with less violence than those on the first day. Meantime, all the inhabitants fled into the adjoining fields or neighbouring villages for safety. Most villages suffered, within the distance of one hundred and forty miles from Kassariah. Eighteen villages are mentioned as having suffered greatly; in some, half the buildings were thrown down, and many lives lost; in others, more than half were destroyed. Four or five hundred people were buried in the ruins: And the site of one village, (*Cumeizi*,) is now an entire lake. It is many years since so great an earthquake has occurred in this vicinity. The country is now inhabited by the Turks, who are Mahometans, and lies nearly midway, between the northeast point of the Mediterranean Sea and the Euxine.

IDUMEA, OR EDOM.

The young have a taste for geography; and in reading the sacred volume, they want information of the countries therein mentioned, and lying near the land of Judea. Idumea is in the west-southwest part of Arabia; north of the Red Sea, and south of the Dead Sea. Mount Seir, sometimes called Hor or Horeb, lies within the territory. This was the country of Esau, the brother of Jacob, and son of the patriarch Isaac. He was a hunter from his youth, and occupied a large tract of country for the purposes of his employment. His constant exposure to the weather, made him red and hairy. This is indicated by his name, *Edom*, by which he is often mentioned in the sacred volume. In 250 years his descendants were numerous, and opposed a formidable hindrance to the Israelites in their passage from Egypt to the promised land of Canaan, afterwards called Judea, or Palestine. It is reasonable to suppose, that the descendants of Esau, for two or three generations, were believers in the *one true* God; but afterwards they degenerated, like most other nations, into idolatry and polytheism. For many generations, there appears to have been no wars between them and the Jews, till the time of David, who brought them into subjection to that powerful nation. They revolted in the time of the wars of Israel with the Chaldeans; and took revenge for the oppressions of their former masters. But, at a subsequent period, they were induced to adopt and observe some of the religious ceremonies of the Jews.

The first Herod, who ruled over Galilee, when our Saviour was born, was the son of an Idumean prince. He professed Judaism; but like most politicians, he had little religion, and sought chiefly for temporal power and glory. 'The Herodians,' were his flatterers; and like him, without religion or moral principle. It was his son, who was in Jerusalem at the time Christ was condemned and crucified; and his grandson, mentioned in the twelfth chapter of Acts, who ordered the death of St. James, and persecuted the early Christians. The son of the last-named attended the Roman Governor *Festus*, before whom St. Paul made an able apology, for his faith in the resurrection of Christ.

Thus it appears, that the sceptre had departed from Judah, when the Messiah appeared. Foreigners were in authority, and the people were in subjection to the Roman Emperours. Temporal power and rule ceased from the house of David; but a spiritual Prince arose from his family, who was to rule all nations by a moral power.

Antipater, the Idumean, the father and ancestor of the Herods, was a selfish, irreligious man; and his son and grandsons were of the same character. The first Herod ordered the slaughter of all the young children of Bethlehem, to satiate his jealousy and ambition. He also caused the death of his wife, her brother and grandfather (the High Priest,) and two of his own sons; which induced the Emperour Augustus to say, 'it was better to be Herod's dog, than his child.' When on his death-bed, he gave orders, that when he expired, a number of distinguished Jews, whom he had imprisoned, should be slain, that there might be a general mourning: a lamentable proof, of the most depraved and cruel disposition! His son ordered the innocent Baptist to be beheaded; and joined in insulting the meek and holy Jesus. His grandson, who put the apostle James to death, was a bloodthirsty wretch, and in the judgment of heaven, was carried off by a loathsome disease.

Idumea is a rocky, barren country; and a passage through it has always been dangerous, on account of the lawless banditti which traverse it, and spend much time in this wild and desolate territory. The Jewish prophet declared 'that no one should pass through it forever.' But this is a strong, figurative expression, and not intended to be *strictly* construed. It is indeed, a wild and dangerous region; but it is a matter of fiction, that no one ever has or can pass through it. Edom borders in part on the Red Sea, and hence derives its peculiar name. Bozzah was its chief town.

A SKETCH OF MRS. SOMERVILLE, THE CELEBRATED FEMALE ASTRONOMER.

This lady is, we believe, a little over forty years of age. She was born in Scotland. When about fifteen years old, she happened to overhear her brother, repeating as a school exercise, the demonstration of a proposition in geometry. Her attention was arrested, and her genius then felt its first conscious impulse of its master-spring. She instantly procured a copy of Euclid, and found delight in exploring its pages.

Sometime afterwards she inquired of Professor Playfair, if there would be any harm in a young lady's

studying Latin. He asked her why she wished to study Latin. She replied, because I long to read Newton's 'Principia.'

He encouraged her to make the unusual, and as it was then thought, daring attempt. Besides the Latin she is now possessed of every modern scientific language, and is without doubt, one of the very first astronomers of this age. Her name shining over England, together with that of La Place on the continent of Europe, and Bowditch in America, constitutes the great constellation of astronomical science of the present day.

How inscrutable are workings of genius! Where it has not been kindled by nature, no art ignites it. It is beyond the power of circumstances to quench its flame. Astronomy and Mathematics have found their most illustrious votaries, in our times, not in the chairs of professorships with learned titles, and rich endowments—not in the silent retreats of academical leisure—but in the legislative halls of revolutionary France, on the deck of an American merchantman, and amid the cares of the nursery?

A friend of ours, when visiting Mrs. Somerville's family, happened to ask her husband what was contained in certain drawers he was opening, he replied, 'Mrs. Somerville's diplomas;' she has received them from literary and scientific societies in all parts of the world *except America!*

The following anecdote will show the opinion entertained of her by La Place, with whom she had long been in the habit of corresponding on scientific subjects. She has been twice married, first to a Mr. Glegg, and afterwards to Dr. Somerville, her present husband. These incidents of her domestic history were unknown to La Place, and he once told a friend that there were probably but two women in the world who could read his 'Mecanique Celeste,' one of them was Mrs. Glegg, the other Mrs. Somerville!

But besides her wonderful attainments in this department, Mrs. Somerville is an accomplished scientific and practical musician, a first rate painter in oils, a learned chemist, and a thorough mineralogist and botanist.

At the same time, this extraordinary woman is a pattern of social and domestic virtue, discharging in a most exemplary manner every duty to her friends and family. Her society is delightful, her manners engaging, and her heart evidently the abode of every amiable affection, and christian grace.

Torch Light.

AMERICAN CONTINENT.

The American Continent is one of the grand divisions of the earth, and is frequently called the Western Hemisphere. It is so only relatively to Europe and Africa. For it might, with equal propriety, be denominated the Eastern, compared to Asia, the largest part of the old Continent. Had the American coast been discovered by a civilized, and scientific nation of Asia, this continent would have been known and spoken of as the eastern. That it was first settled by the people from Asia, there is now very little doubt. But at how early a period, there is no evidence sufficient to determine: probably ten or twelve centuries before the discovery by Columbus, three hundred and forty-three years ago. It might have been twenty, or twenty-five centuries before: For Asia was extensively inhabited three thousand years before that event. The American Continent is nearly equal to half of the other, which includes Asia, Africa and Europe. The two largest oceans bound it on the eastern and western sides; and from one to the other of these oceans, in north latitude 60°, the distance is 3500 miles, or 100° degrees of longitude. Across South America, in latitude 6° south, the distance is 2450 miles. From the arctic bounds to the gulf of Mexico, are 3000 miles; and from the Isthmus of Darien to Cape Horn, are 4500 miles; making the whole extent of the Continent, south and north, 7,500 miles. If the most northern island, in latitude 74°, were included in this estimate, we might add nearly 1500 miles to the above. From north to south, the American Continent is of greater length than the other or old continent; but in breadth, from west to east, the latter is much more extended. Of the mountains, valleys and rivers, we have spoken before. The range of mountains, if we consider the Andes and the Rocky mountains as one continuous ridge, (excepting a depression in the Isthmus of Darien,) is more extensive than any on the other Continent; but some are more lofty in Asia, than in any part of America.

MASSACHUSETTS.

The efforts and expenses of Massachusetts, during the war of the revolution, which was commenced in self-defence, and in support of civil liberty as long enjoyed, were far greater than any other state in the Union. We would not make invidious comparisons; nor deny the claims of other States to patriotic and costly efforts for our political rights, at that critical period. All did well and all made sacrifices: especially Virginia and South Carolina. And at the close of the war, South Carolina could claim the greatest balance in her favour. Massachusetts was the next. But the claim of South Carolina arose in great measure, from the service of the militia in defending its own territory; while Massachusetts, with an extensive sea-coast to defend, did far more to support and keep up the Continental army under Washington, than any other state, speaking either as to its proportion of men or property. It often furnished a fourth and even a third part of the Continental army; and its advances, for the support of the men, were nearly in the same proportion. It bore a great part of the burdens of that trying time.

EDUCATION.—By Bowring.

A child is born—now take the germ, and make it
A bud of moral beauty. Let the dews
Of knowledge, and light of virtue, wake it
In richest fragrance, and in purest hues;
When passion's gust, and sorrow's tempests shake it,
The shelter of affection ne'er refuse;
For soon the gathering hand of death will break it
From its weak stem of life—and it shall lose
All power to charm; but if that lovely flower
Hath swelled one pleasure, or subdued one pain,
O, who shall say that it has lived in vain,
However fugitive its breathing hour?
For virtue leaves its sweets wherever tasted,
And scattered truth is never wasted.

NOTES OF A MODERN TRAVELLER, THROUGH EGYPT AND NUBIA.

'Ancient Alexandria was subject to so many revolutions, and was so often destroyed, that were it not for its ports, and other monuments of antiquity, we should scarce be able to ascertain the place it stood on. The ports of Alexandria, now called the Old and the New, were formerly named the ports of Africa, and of Asia. The former is appropriated to the Turks; the latter is free indiscriminately to all the nations of Europe. That which is used by the Turks, is cleaner and deeper than the other.

'The entrance of the new port is defended by two castles of a contemptible Turkish structure, and have nothing remarkable but their situation, and their being unworthy successors to edifices celebrated in history.

'That called the grand Pharillo,* bears on the middle of it a small tower, whose summit terminates in a lantern for a night light, but it is of no extensive service, the lamps being but poorly supplied. This castle has been built on the Isle of Pharos, which it so occupies, that if there yet be any remains of that wonder of the world, erected by Ptolemy, they are irrecoverably buried from the curious. I cannot speak more favourably of the other castle, called the little Pharillo, wherein there is not the least trace to be found of the celebrated library; which under the Ptolemies, was admired as the finest, not only then, but that had ever been in the world.

'Each of these two islands is joined to the main land, by a mole: that of the isle of Pharos is very long; it appeared to me to be three thousand feet in length, and to have been made partly of bricks, and partly of free-stone. It is vaulted all along, and the moulds of its arches are in the Gothic taste. —It is no way probable that either the Saracens, or the Turks, were the inventors; but that finding the mole in ruins, they have so disfigured it with their tasteless repairs, that there remains not a feature of beautiful antiquity.

'From hence opens a most beautiful prospect of antique and modern monuments, presenting themselves on every side. The little Pharillo being passed, a range of towers is discovered, connected one to the other, by the ruins of a thick wall. A single obelisk erect, is observed through a part where the wall is broken down; at another turning, the towers are perceived anew, but in a seemingly greater distance. The modern Alexandria, with her spires, next meet the view; and above the city, but afar off, soars the column of Pompey, a most aspiring and majestic monument.

'The obelisk that is standing, and called even now the obelisk of Cleopatra, intimates that this is the place where that queen's palace stood, known likewise by the name of Cæsar's Palace.—Its basis, of which a part is sunk, rises twenty feet higher than the level of the sea; between this monument and the port, runs a thick wall, flanked on each side of the obelisk by a great tower, but this wall has suffered so much, that it is not now higher than the basis of the obelisk. The interior side of the wall is but ten feet distant from the obelisk, the exterior but four or five from the sea. The front of it far into the port, is filled with a great number of wrecks of columns, friezes, and other pieces of architecture, that must have been part of some pompous edifice: They are of different sorts of marble.

'The fallen obelisk seems to have been broken; from what can be decyphered of its hieroglyphics, one would incline to think that it contained the same figures, and in the same order, with those of the standing one.

'Since the garrison forbids any curious visits to the little Pharillo, let us content ourselves with taking a view of those huge towers, joined together by such thick walls: They formed the circumference of ancient Alexandria. These towers which appear like bulwarks, are not all of equal dimensions, of a like figure, or of the same structure; some are round, others square, many are of an elliptic figure; some of the last are observed to be cut in one of their sides by a straight line; they differ also in their interior parts; some of them have a double wall, and at the entrance a winding staircase, which mounts to the top of the tower. There is no other way to get into the others, but through a hole on the top of them with the help of a ladder. In general, the entrances of these towers are very narrow, and lead to the inside of the wall that connects them one with the other; their different stories are so many vaults, supported in some by one column, in others by several.—The architecture of those towers which are built of free-stone, is very clumsy on the lowest part, all around at certain intervals are seen, shapes of columns of different sorts of marble, and so placed, that seen from far, they look like cannons, placed and pointed through their embrazures.

'Having made the tour of the old city, let us examine what it contains worthy of curiosity; scarce any thing, it being now a general heap of ruins, except a few mosques, churches, gardens, and some cisterns; the last are kept in pretty good order, to supply water to the new city.

'We have already taken a view of the obelisk of Cleopatra, and its situation; let us now see the two churches of St. Mark, and St. Catherine, which are in its neighbourhood; they both belong to Christians, and are served by Grecian and Coptic priests; they are so like each other, that one description will serve for the two; they have not an article respectable but their name; they are so gloomy, so filthy, and so full of lamps, that one would deem them to be rather places of Pagan worship, than temples where the true God is adored.

'I next continued my way through the gate of Rosetta, to view that master piece of art, commonly called the column of Pompey. It is placed on an eminence that commands two beautiful prospects; the one of Alexandria, the other of the low country, that stretches along the banks of the Nile, and surrounds the canal cut above the gate of Rosetta, in order to convey the water of the Nile to Alexandria. This column is probably the greatest, and most magnificent that has ever been executed in the Corinthian order.—The body is of one entire piece of

* From Pharos, which signifies a light-house.

granite marble, the capital is of another piece of marble, the pedestal is of a gray stone not unlike a flint for hardness and grain.—The foundation on which the pedestal and columns are raised, is open on one side, which happened according to the tradition of the country, in the following manner. An Arabian dug a hole under the foundation, in which he put a box of gun-powder, in order to blow up the column, and thereby to become master of the immense treasure he imagined was buried underneath. Unfortunately for him, but happily for the curious, he was a bad engineer; his enterprise failed him, for his mine being sprung, only displaced four stones, which making but one part of the foundation, the other three remained unhurt. The only advantage resulting thence is, that the curious have ever since had an opportunity of seeing what stones the foundation was made of; I observed there, one piece of white oriental marble, full of conspicuous hieroglyphics; another piece that has not started from its place, but is uncovered, is a yellow marble of Sicily, spotted with red, its hieroglyphics are effaced; a piece of a small column is also employed in this foundation, with other pieces of marble, that have nothing peculiarly remarkable; the part of the foundation that was carried away, leaves a void space of three feet at most under the pedestal. The middle, as well as the three other sides, enjoy their original solidity.

'Let us now take a turn to the old port, where we shall find some remains belonging to ancient Alexandria, or at least to its suburbs. The old port, *alias* the port of Africa, has on one side the great Pharillo, which is its defence there, as well as that of the new port. Opposite to the great Pharillo, and on the neck of land which forms the old port, there is a small castle which defends the port on that side; and in front, a part of the new city joins with the old.

'About thirty or forty paces from the shore, and opposite to the point of the peninsula which forms the port, is a subterraneous monument, which the people call a temple; the entrance to it is through a small opening, on the slope of a rising ground, that bounds the port on that side, we went in, having previously provided flambeaus to light us, and were obliged to walk stooping through a very low alley for twenty paces; then we reached a pretty large and square saloon; the upper part is a ceiling, and smooth, as are also the four sides; the floor is full of sand, of the ordure of bats, and animals that frequent it; this is not the temple, to which one must pass through another alley, where something more elegant recompenses our trouble; a round figure, whose top is cut in shape of a vault. It has four doors opposite one to the other, each of them is ornamented with an architrave, cornice, and a fronton with a crescent over it; but one of the doors is the entrance, the other three form each a kind of niche, that descend a great deal lower than this subterraneous temple, are thriftily scooped out of the rock, and large enough to contain a dead body; this miscalled temple must have been the burying place of some great lord, or perhaps some royal family; there is no inscription, engraving, or token of any kind, to give the least information.'

RAIL ROAD FROM CHARLESTON TO CINCINNATI.

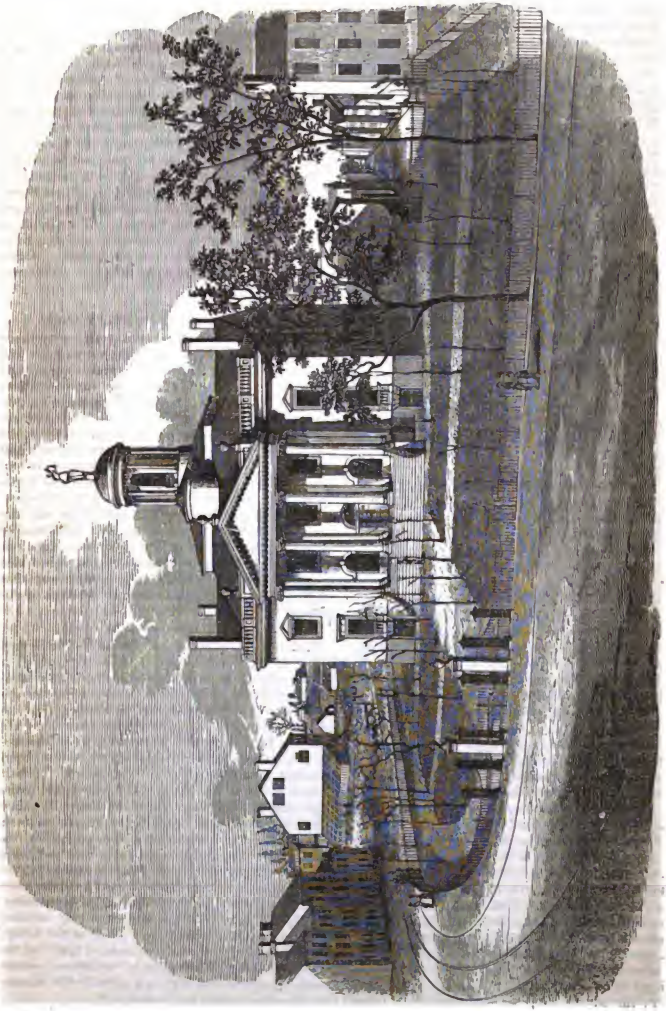
One of the greatest projects for internal improvements, perhaps, now before any portion of the citizens of the United States, is the proposition for a Rail Road from Charleston in South Carolina, to Cincinnati, in the State and on the river of Ohio, the distance of nearly five hundred miles. It will pass through the whole state of South Carolina, from Charleston on the Atlantic, to the northwest part of the State, then through the northeast section of Georgia, a part of East Tennessee, the whole breadth of Kentucky, from south to north, to Cincinnati on the Ohio River, in the southwest part of that State. The plan is encouraged and supported by the most eminent citizens of South Carolina. The people of East Tennessee are awake on the subject; Kentucky favours the project; and the people of Ohio, especially at Cincinnati and vicinity, no doubt will aid in the enterprise.

FROM WASHINGTON'S ORDERLY BOOK.

August 3, 1776.—'That the troops may have an opportunity of attending public worship, as well as to take some rest after the great fatigue they have gone through, the General in future excuses them from fatigue duty on Sundays, except at the shipyards, or on special occasions, until further orders. The General is sorry to be informed, that the foolish and wicked practice of profane cursing and swearing, a vice heretofore little known in an American army, is growing into fashion; he hopes the officers will, by example as well as influence, endeavour to check it, and that both they and the men will reflect, that we can have but little hope of the blessing of Heaven on our arms, if we insult it by our impiety and folly; added to this, it is a vice so mean and low, without any temptation, that every man of sense and character detests and despises it.'

The 'Spring of Eternal Youth.'—The Silvery Spring on the west side of Lake George, which is described by those who have seen it, as a very beautiful fountain of water, and well deserving the appellation by which it is known, has been resorted to during the past Summer by a large number of the Seminole Indians for the purpose of using the waters as a remedy for febrile diseases which have been prevalent among them the past season. Their method is to drink freely of the water, and bathe frequently in the spring. In about three days they complete a cure, and are able to return to their homes. Our informant states, that an Indian woman came to the Spring apparently very sick, and by the use of the water, she became enabled to resume her journey homewards on the fourth day after her arrival at the Spring, a distance of sixty miles. The Spring is not known to possess any medical quality, unless it be the extreme purity of the water; and perhaps it is only in the mode of applying the remedy, which has had such complete success among them, and which gives a virtue to the Spring, that in reality it does not possess.

New York Paper



The Capitol, at Albany

THE CAPITOL OF NEW YORK, IN ALBANY.

This spacious and elegant edifice is situated some distance from the North river, and near the height of land which rises moderately for the third of a mile or more. It is opposite the west termination of State Street, where is a large opening, or park, on each margin of which are handsome public buildings. City Hall, and State Hall, and an Academy, a very elegantly constructed edifice, are situated round the square. The Capitol is situated one hundred and thirty feet above the level of the river. The cost of the building was $120,000, of which the city Corporation paid $34,000. It is a substantial stone edifice, of one hundred and fifteen feet in length, ninety feet in breadth, fifty in height; consisting of two stories and a basement. It contains the Halls for the Senate and Representatives, the Common Council Chamber of the Corporation, the Supreme and Chancery Court Rooms of the State, the State Library, &c. The east front is adorned with a portico of the Ionic order, having four magnificent columns, three feet and eight inches in diameter, and thirty-three feet in height. The Hall of the Representatives and the Senate Chamber, each contain full length portraits of General Washington, and of several of the Governors of the State.

COAL.

Coal is becoming in the United States, as it has long been in Great Britain and other northern parts of Europe, of great value. In England, it has long been a great source, or material of wealth and power, as it is essential to the support of manufacturing industry; and without such an abundant supply of fuel, their iron, lead, tin and copper ores must have remained in their native beds.

Coal is now admitted to be of vegetable origin; formerly, it was considered a peculiar mineral product formed in the earth, at the same time, as the rocks which surround it. *Chemical analysis* has fully proved its vegetable nature. The vegetables grew on the surface now occupied by coal, as is evident from the perfect state in which the most delicate stems and leaves are preserved. By various experiments and observations in England, this theory has been fully established. In the state it is now found, it appears a compact, shining, stony body; but there are few fragments, even of a moderate size, in which we may not discover some parts like charcoal, and often with the distinct structure of wood or other vegetable matter. By an ingenious application of the microscope, it is found that there is a delicate cellular structure in fossil woods, which otherwise appears a compact stone—and the same has been discovered in Coal:—and it is asserted that in all the varieties of Coal at New Castle, England, more or less of the fine, distinct, net-like structure of the original vegetable texture can be always detected. The vegetable origin of Coal is also proved by the vast quantities of fossil plants found in the sand-stones which are mixed with, or in the vicinity of coal beds. These are often found in an extraordinary degree of preservation; the most delicate leaves being spread out on the stone like dried plants on paper in the herbarium of a botanist.

Coal is a compound substance, consisting of charcoal, bitumen, or mineral pitch, and earthy matter. Its various qualities depend on the manner in which these ingredients are combined; a large quantity of bitumen produces the fat quality, common in the New Castle Coal in England; and in all other places, indeed, it is this which constitutes bituminous Coal. Carbon or charcoal, forms the chief part of all Coals, being sixty or seventy per cent. It is a simple, elementary body; but bitumen, the other largest ingredient, is a compound substance, and yields a large quantity of hydrogen gas, or inflammable air; and oxygen gas, which is the pure part of the air and sustains life, is also found in Coal, but in a less proportion. The flame of Coal in a common fire, is occasioned by a distillation of the Coal going on slowly: gas is given out in the process, and is fired. Bituminous Coal has been lately found in large beds in the Ohio Valley, and will probably become of immense profit to the owners of the land where it is located. The extensive beds of bituminous Coal found in the Ohio Valley, fill the mind with wonder and surprise, as one reflects on the vast forests of arborescent plants necessary to their formation. Age after age, successive growths of plants springing up in the same region, were entombed beneath thick strata of sand-stone, &c. till the whole series had accumulated to a depth of more than a thousand feet; while beneath the whole lay the bed of an ancient ocean floored with fossil salt. The Anthracite Coal is confined, as far as known at present, to a comparatively small tract of territory in Pennsylvania; and yet the beds are so large and deep, that they will probably long yield sufficient for parlours or offices, and counting rooms. It is also used in stoves, for generating steam, and for cooking. The base of anthracite, as well as of bituminous Coal, is carbon, and the original formation of vegetable matter. Both kinds are found generally under a rocky soil. It is supposed that a long period of time is necessary for these substances, (pressed by the rocks above) to become mineralized; or partially so, as they are when in a coal state; and being impregnated with carbon are easily ignited. The bituminous is ignited with the greatest ease: The Anthracite requires a strong draft of air to keep it burning freely. Graphite, or Plumbago, which is almost pure carbon, is considered a semi-metal: Anthracite is sometimes changed into graphite. Plumbago is produced, artificially, in the furnaces of the arts, by the action of heat on carbon. Bituminous Coal requires less heat in its formation than the other two, and Graphite more than Anthracite. A strong or intense heat has excluded the bitumen: and it is supposed the bituminous Coal has been less heavily pressed down by rocks above them.

Anthracite, having its base, or chief part of carbon, as already observed, is mixed with a small portion of oxyde of iron, silex and alumine. It burns with difficulty, but without smoke or smell, and leaves an earthy residue. This Coal is found in some countries of Europe, but has been little used. In the United States, at the present time, its use

and consumption are very great. When first found and used, strong prejudices existed against it, on account of the difficulty of its burning. But with furnaces and grates, properly constructed, it has been found highly useful, and is now generally preferred for the parlour, to the other kind. It is a remarkable fact, that few Coal deposits, or beds, are found south of latitude 30°, where the climate requires little fuel; but to the north, where men could not live without artificial heat, a great part of the year, there Coal is *stored* in great quantities for their comfort and use, when the forests shall be cut down and destroyed. The great benefit of Coal in the United States, is already felt. In many of the large cities and towns, especially on the sea-coasts, it is the chief article for fuel; and except for its discovery and abundance, wood probably would have been ten dollars a cord before this day.

PARTICULAR PROVIDENCE ARGUED FROM THE FULFILMENT OF PROPHECY.

The peculiar value of the argument for the providence of God, which I shall deduce from this discussion, is derived from its allusion to facts and dates. The prophecies of the Bible demonstrate the truth of the religion of Jesus Christ: and those prophecies are not the general language of men who foretold future events at random, as events which might possibly take place; the prophecies refer to exact and precise dates. The prophets mentioned the very time when the facts, which they foretold, should happen. Thus the actual time was declared when the children of Israel should come out of Egypt, and when they were at length delivered, we read, in the emphatic language of Moses, on the self-same day it came to pass; on the self-same day which was prophecied—it is a case much to be observed, because the exact fulfilment of prophecy demonstrated the providence of God. So it was also with the Babylonish captivity. Seventy years were appointed: and when seventy years were over, the providence of God overthrew the kingdom of the Chaldeans and brought in other powers who had never before heard of the God of the Jews, and who restored the captive tribes at the very time which the prophets had predicted. So it was with respect to the seventy weeks of Daniel, that the Son of God was born at the very time and place, and under the very circumstances which had been foretold. Now the passage before us has reference to one of the most remarkable of these proofs of the superintending providence of God. The prophets had foretold that the seventy years of captivity should be ended, and the Jews should be restored; and they added also that Jerusalem, which had been destroyed by the Chaldeans should be built up again. The Jews were certainly restored at the appointed time, but when they proceeded to build the walls of the city they were opposed by the Samaritans and by other nations, and the work was suspended for many years. Every application which was made by the Jews to the Court of Persia, was made in vain, until about the time when this psalm was written; and Jerusalem was then permitted to be built for this very remarkable reason. The Persians, who were the masters over the Jews, had been for many years at war with the Greeks. After many battles by land and by sea, the Greeks became victorious. A treaty of peace was made between the two powers, and one article of that treaty was, that no Persian army should come within three days march of the coast. Now the city of Jerusalem was precisely that distance from the sea-coast, and the king of Persia, therefore, to strengthen the boundary of his empire, and to secure the general safety, gave the Jews the long desired permission to build the walls of Jerusalem at the very time that the prophets had predicted. The Persians did not consider the God of the Jews—the Greeks did not know Jehovah. Both nations pursued their own objects; their ambition, their hatred, their revenge, and their enterprises. Neither of them knew, nor taught, nor cared about the God who telleth the number of the stars, and calleth them all by their names—the God of prophecy, the God of Christianity. Neither were remembering him; yet both were accomplishing his will—both were fulfilling his prophecies—both were effecting the designs of the Almighty.—*Eclectic Review.*

WINTER HYMN.

BY MRS. SIGOURNEY.

Oh Thou who bid'st the Sun,
The glittering landscape light,
While mountains, vallies and hillocks shine
In Winter's frost-work bright.

The imploring trees stretch forth
Their trusting arms to Thee,
Who shield'st the naked in their hour
Of cold adversity.

Thou, o'er the tender germ
The curtaining snow doth spread,
And give it slumber like a babe
Deep in its cradle bed.

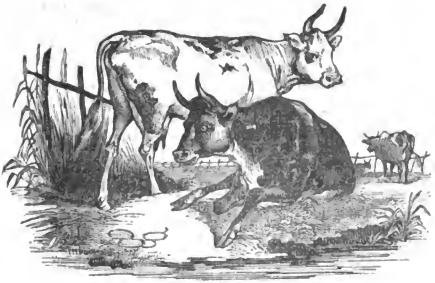
A chain is on the streams,
And on the summer flood,
Yet still their sparkling eyes look up,
And beam with gratitude.

The bee hath left her toil,
Within herself to sleep,
The warbling tenants of the cloud
A silent Sabbath keep.

Thou mark'st the lengthened eve,
The friend of Wisdom prove,
And bid'st us bind confiding hearts
In closer links of love.

Oh Thou, the God of Hope,
Blest Author of our days,
Forbid that winter chill our hearts,
Or check the lay of praise.

INTEMPERANCE.—Scarcely a paper is received at our office, and we receive about fifteen daily, from various parts of the United States, which does not record a crime or calamity occasioned by drunkenness. Murders, fires, falls, larcenies, assaults, &c. are noticed, and said to be owing to intemperance—committed when the agents were bereaved of reason, and under the influence of strong drink. What an impressive lesson! What a solemn warning! Why will not rational beings reflect on these evils, and refrain from a practice pregnant with such astounding and appalling mischiefs? We feel compelled to appeal to our fellow citizens, and to say, in the words of the prophet, '*Shew yourselves men.*'



FRENCH COWS.

The Cow is one of the most valuable of domestic animals; and in all countries has received attention and care, for its great profit to the farmer. They differ however, like other animals, whether wild or domestic, according to the difference of climate where they are reared and kept; but more perhaps, according to the care taken to provide a rich and proper food for them. We are told of different breeds of cows in England; but they are not in fact a different species; the breed is chiefly improved by the attention of the owner: and yet it may be rendered more valuable by selecting the large or superior individuals for breeders; and mixing the original breed with those from the continent, (from Poland and Holstein) has served to improve the race in some parts of Great Britain. In England, the cows are generally better, or more profitable from the care bestowed upon them by the owners of extensive farms. They are better fed—and they thrive there in a remarkable manner, as the grass is high and abundant. They feed indiscriminately on almost every kind of herbage. They are much superior to those in France. In the latter country, they are large indeed, but of a lean appearance. One reason assigned has been, that they are not used for beef; or if sometimes devoted to this purpose, they are never made to afford the rich beef of Old England. The French people care less for good beef than the English. But it is also said, that they are stinted in their food, and excluded from the most flourishing pastures; and this is assigned as one cause of their degenerating.

A friend has furnished us with the annexed drawing of a group of cows, and at his request we have prepared a cut for it. We take no pleasure in depreciating the products of France, and in many instances they are superior to those of Great Britain; but no one will dispute that the claim of superiority must be granted to the latter in the breed, or the management of cows. And every landholder in the United States prefers having the English rather than the French breed of cows to stock his farm. Several have been brought into the country; and by proper attention are found to be far more profitable than the former common breed. When General Lafayette was last in the United States, he was presented with several different animals which he took to France with him on his return. But he found, that the men on his farm could not be induced to take the care of them he required, and they soon deteriorated.

STAGES.

A semi-weekly line of Stages has been established from Point Levi, near Quebec, to the forks of the Kennebec river, where it is to meet a line already established leading to Hallowell and to Portland. The 'Forks of the Kennebec' are about fifty miles above Norridgewock, and sixty from the Canada line; and ninety miles above Hallowell, (which is only two miles below Augusta, the capital of *Maine*.) This route has been proposed for a road from Hallowell and Augusta to Quebec more than thirty years. Several gentlemen from Hallowell passed it at that time, when the distance from the upper settlements on the Kennebec, and the French Canadian settlements, was nearly ninety miles, and they encamped in the woods one night. Light wagons and chairs have been through within two years; and the settlements are now separated only by about thirty miles, and a tavern is situated at a spot nearly half that distance. Subscriptions have been made in Quebec to encourage the undertaking, and it will probably succeed. This is the nearest way from Boston to Quebec; the latter lies nearly north from the former. The route by Kennebec river is not indeed so direct as one would be from Boston west of Portland and that river, some thirty or forty miles; but when the form of the land is taken into the account and reference is had to Portland, Hallowell, &c. it will probably be admitted that the present route is the best. This is very near the path travelled by the American troops under General Arnold, in November 1775, who were sent from Cambridge, to join with General Montgomery, who commanded the northern army invading Canada by way of Lake Champlain and Montreal. The men, suffered extremely by the cold and want of provisions, and when they reached the vicinity of Quebec were so exhausted that an attack was postponed for several days—had it been made immediately, the result, no doubt, would have been very different. The delay gave the British time to prepare for defence.

INDIANS OF NORTH AMERICA.

We have been desirous of giving an account of the North American Indians, particularly as to their religious opinions, and their domestic customs and manners. Their origin is a matter of conjecture, and is involved in great obscurity; and their languages so various that it is difficult to decide which has claims to be the parent of all the others, or to show their close affinity with those of the nations of the old continent.

The last subject is attended with greater difficulties in the minds of most learned men, than the former. No strong affinity has been detected in the language of the American Indians, and that of any speech known in Asia or Europe. But there are circumstances in favour of the hypothesis, that the tribes in this country came chiefly from the northern parts of Asia.

Of their religious opinions, as they are without books or records, we must refer to traditions and to verbal statements made by their priests or pretended conjurers. In a lapse of many generations, it would naturally be expected that their speculations would be various and discordant. And the wandering tribes, (which was the character of most of them) being without much of the forms of religion, would have nothing to embody and preserve their opinions.

They all believe in the 'Great Spirit,' who made, and in some sense governed the world. Their faith recognised the difference between mind and matter: and all the operations, and changes in the universe they resolved into the power or will of an infinite Being, 'who was above all and in all, and over all.' And yet they understood very little of the mode of his operations, or of the laws by which the world was governed. They also recognised the doctrine of the accountability of mankind, and of a future retribution, though their notions of moral worth were crude and erroneous. 'He who questions whether there is a God,' says Roger Williams, 'the poor Indians will teach him. They believe that God is, and that he will reward those who diligently seek him." They also acknowledge an overruling Providence, directing and governing human affairs. They are not intolerant, nor disposed to disturb other people in their worship. But they laid far less stress on the spirituality and purity of the heart and affections, than Christianity or enlightened philosophy teaches; and had therefore less powerful motives to personal holiness. Their virtues were very different from those inculcated by the author of our faith; and they gave the highest place to personal courage, bold enterprise, firm endurance of pain, and a disposition to revenge evils. But in this respect they did not differ from other pagans, who had made great advances in civilisation.

Their tradition was that they came from the West; that there, their ancestors lived in remote times; that there, was the residence and court of their God, Cawtantowit; that there, rest their fathers' souls; and there, they should go when they died.

They are very inquisitive, and are fond of those who are disposed to give them information; such an one they call manittoo, a God. Yet few of them have patience to use the necessary means of knowledge.

The religious creed of the American Indians included the doctrine of an evil or malignant spirit of great power over the elements and the affairs of men, and of whom they stood in great fear: and this faith led to numerous sacrifices, similar to those offered in ancient times by the pagans of Asia. Their system of theology was as irrational as that of pagans of old; but not made so attractive and imposing by the spirit of poetry and a vivid imagination. Their outward forms of worship were few, and they had no stated instructions on religious doctrines or duties. Their devotion and prayers, so far as they practised any, were in private, or consisted chiefly in silent meditation, like the sect of Friends among Christians. They seem to have thought little of the efficacy or the duty of prayer, and were strangers to repentance for their faults; they patiently submitted to punishment and suffering, in the belief that it was their destiny, and could not be averted.

Every man or animal which was distinguished, or any object more excellent than ordinary, they supposed was the receptacle or manifestation of a God. Similar to this was the opinion or the language of the ancient Hebrews: a beautiful tree was the tree of God; a fair child was a child of God.

The manner of life which the American Indians followed was unfavourable to the piety and the milder virtues of individuals. A revengeful spirit which was strongly inculcated and represented as noble and manly, was certainly uncongenial alike to piety and benevolence: and their wandering mode of life, and frequent subjection to want, must make the observance of religious rites very inconvenient, and allow them little time or disposition to attend to them. They had a speculative faith in the doctrines of natural religion; but their faith produced little practical effect on their conduct and conversation. But in this respect, they are no exception to the rest of mankind.

The morals and character of a people are more or less affected by their religious opinions. The American Indians were revengeful, stern, indolent; and with little sympathy, compassion or tenderness. Nothing like chivalry or gentleness could be detected in their deportment; and the women, instead of attention, kindness and favour, which both Christianity and civilisation insure, were treated with cold indifference and even with harshness; and made to perform the most laborious and menial services. The occupation of the men was war or hunting, which was in a great measure a life of indolence; and all other work was required of the women. They were treated far more as servants than as equals.

Like other nations they had games and dancing; sometimes more private in their wigwams, and sometimes in public, in the open air, when great numbers were assembled. The latter were usually after harvest, hunting and war.

Roger Williams, who had frequent and friendly intercourse with the Indians in New England, says, he never discovered the excess of scandalous sins among them, which Europe abounded with. Murders, robberies and adulteries were rare among them. It was accounted a very heinous sin for a married person to be false.

When the English first made settlements in this

country, one object with them was to teach the gospel to the ignorant inhabitants. And efforts were accordingly made, at various times and places, for bringing them to the knowledge of Christianity. Some success attended these early efforts, but not so great or extensive as had been expected by the pious settlers. A portion of those who professed their belief of the gospel, never fully understood or cordially embraced it; and became again addicted to their savage and immoral courses. There were early endeavours also to give Indian youth a good literary education. A school was established at Cambridge, in Massachusetts, as early as 1660, where young Indians might be prepared for the college, or taught the rudiments of useful knowledge to fit them for the duties of civilized society. But little fruit was secured by this plan. The youth were not deficient in intellectual capacity; but few of them could be induced to pursue the life of the student. Restraint and steady labour of every kind seemed uncongenial to their natural disposition and bias.

The men generally paint in war, and sometimes from pride: the women paint solely for the sake of ornament. They use means for keeping the body of a child straight; and hence they are almost universally erect in their gait when they are adults. Little employment was required of children; and they were suffered to grow up in indolent habits. There was no proper care taken to discipline their passions or to improve their minds; and to supply their necessities and to revenge their enemies, was the chief occupation of life. *Gookin* says they were in a deplorable condition, on account of not using the means of knowledge and civilisation; they are, he says, like the wild ass's colt, and not much above the beasts which perish.

The separation, a great portion of time, from the women, and the degrading condition of the latter, prevented all civilisation and allowed no opportunity for the exercise of the gentler virtues, or the display of mild and gentle manners. With the mode of life pursued by the Indians generally in America, they would never improve in the social character and virtues. The benign influence of learning and of a more correct theology is indispensible to good morals and gentle manners. Every attempt to create such an influence, or to introduce a state of things which would produce it, has proved unsuccessful, and yet they are ready to return a salutation when one is offered them.

We have particular reference in these remarks to the Indian tribes found within the limits of the United States. The Mexicans and Peruvians who lived in large and populous cities, had made much greater advances to civilized societies. They had their costly temples, and various public works of great cost and some utility.

The government among most tribes was monarchical and arbitrary. The hereditary chief was not restrained in his conduct and measures by constitutional or legal provisions; and yet there were certain great first principles of Justice universally admitted to be obligatory. On great occasions generally, the sachem was wise enough to consult the brave and experienced men of the tribe; but often he was judge and executioner on charges of crime, without the interference or aid of any others.

An interesting inquiry is naturally suggested by viewing the character of the American Indians, as to the capacity or disposition of mankind for religion. Perhaps there is no question as to such a capacity in man, nor yet of his disposition to some religion. For it is now admitted that all nations have some religious system. The Indians in this country, as already observed, acknowledged the leading doctrines of natural religion; and yet were in great ignorance of the true character and design of religion; and it seems strange they should not have been anxious to receive the christian system, which would remove their ignorance and resolve their doubts. But they have manifested very little desire to understand or obey it. Their very nature seems opposed to its spirit; and they must cease to be savages in order to become Christians.

Perhaps sufficient efforts have not yet been made for bringing the American Indians to adopt the christian religion and the arts of civilized society, to justify a decided opinion on the subject. And yet it will hardly be doubted that the measures hitherto adopted have entirely failed to accomplish the object. We are aware of some objections however to such a conclusion; and that it will be said there have been some favourable results, where judicious and persevering efforts have been made, and that the vices and oppressions of professed Christians have prevented the success, which would probably, have otherwise been effected. Something is certainly due to this consideration: and discouraging as former exertions have been, we should rejoice if a more diligent and persevering plan could be adopted for attaining the object. Example must accompany precept, and if ever the savages are brought to embrace the gospel, it must be by those who possess and display its mild, pure and benevolent spirit. When our lives shall induce Pagans to say, 'behold how the Christians love one another!'—'how peaceable, virtuous and holy they are!'—then may we expect, and I fear not till then, that they will cordially embrace our sublime faith.

EXCRETORY FUNCTIONS, OR PROCESSES, OF VEGETABLES.

If noxious matter is thrown out by the roots of vegetables, as unfitted for the purposes of their growth, the soil where any plant has been long cultivated is less fitted for its continued growth than it was originally; but the excretory matter thus thrown out as useless for the nourishment of one plant may be excellent food for another. Hence we may account for the principle of rotation of crops in agriculture, and determine by experiment the precise plants which ought to be cultivated in succession; selecting those whose excretory matter becomes wholesome nutriment for its successor.—That plants are able to free themselves by this excretory process from noxious materials, which they may have imbibed by the roots, has been proved by experiments on the common cabbage, and other plants or vegetables. The roots of each kind being thoroughly washed and cleaned, were separated into two bunches, one of which was put into a diluted solution of acetate

of lead, and the other into pure water, and contained in a separate vessel. After some days, during which the plants continued to vegetate, the water in the latter vessel was examined and was found to contain a very perceptible quantity of the acetate of lead. The experiment was varied by first allowing the plant to remain with its roots immersed in a similar solution, and then removing it, after careful washing, in order to free the roots from any portion of the salt which might have adhered to their surface, into a vessel with rain water; after two days, distinct traces of the acetate of lead were afforded by the water. Similar experiments were made with lime water, and with a solution of common salt, instead of the acetate of lead, and were attended with the like results. It has been found that certain maritime plants, which yield soda, and which flourish in situations quite distant from the sea coast, provided they receive breezes occasionally from the sea, communicate a saline impregnation to the soil in their immediate vicinity, derived from the salt which they doubtless had imbibed by their leaves.

Although the materials which are thus excreted by the roots are noxious to the plant which rejects them, and would be injurious to other plants of the same kind, it does not follow, that they are incapable of supplying salutary nourishment to other kinds of plants. Thus it has been observed that the *salicaria* flourishes particularly in the vicinity of the willow, and the broomrape in that of hemp. This fact has also been established by experiment, it having been found, that the water in which certain plants had been kept was noxious to other specimens of the same species; while on the other hand, it produced a more luxuriant vegetation in plants of a different kind.

JEWISH HISTORY FROM NEHEMIAH TO CHRIST.

There is a desire with many persons to know what was the state and condition of the Jews from the time of Malachi, the last of their prophets, or indeed, even from the time of their captivity by the king of Babylon, and transportation by him into Chaldea, (as related in the second book of Chronicles) to the birth of our Saviour. The conquest of Judea and the removal of the Jews into Chaldea, by Nebuchadnezzar, was about six hundred years before the christian era. After seventy years, five hundred and thirty before Christ, the Jews were permitted by Cyrus, the king of the Medes and Persians, (who had taken and reigned in Babylon) to return to their own country, and to rebuild or repair their city and Holy Temple. The Jewish prophets who lived in this period of seventy years, were Jeremiah, Ezekiel, Daniel, Obadiah and Zechariah; and Malachi after their return, and in the time of Nehemiah, or even a little later; and this brings us down to about the year 400 before Christ. The period which follows, is noticed by Josephus, the celebrated Jewish historian, and by the writer of the apocryphal books of Maccabees. Tarquin, king of Rome, and Solon, of Athens, were cotemporaries with the king of Babylon above mentioned. Tyre had revived and was prosperous. The Chaldeans were in India. Pure theism, or monotheism, at this period, survived only in the more retired and mountainous parts of Europe and Asia. After Ezra and Nehemiah, the Jews generally adhered to the laws of Moses; and yet some of the inhabitants of Judea, being a mixture of heathens, did not strictly observe his peculiar ceremonies. The Samaritans were of this description of people, and opposed the citizens of Jerusalem in many of their religious rites: 'They had little or no dealings with them,' and usually joined with their invaders. About a century later, the expedition of Alexander the Great into Asia, took place, during which he threatened and alarmed the Jews; and on his death, his generals, who divided the countries he claimed to govern, invaded Judea, and there committed acts of great oppression and cruelty. The king of Egypt took Jerusalem, a few years later, and carried many Jews into that country. Civil wars succeeded, and unhappy divisions and parties arose among themselves, which served to invite foreign aggressions.

Antiochus, king of Syria, about 175 years before our era, was a great oppressor and persecutor of the Jews. He required all who were subject to his sway, among whom were the Jews, to conform to the pagan and idolatrous worship which he observed. Many of the Jews chose to suffer the most cruel torments, and death itself, rather than to sacrifice to heathen gods or idols. They manifested the greatest fidelity to the faith of their fathers, and to the worship of the true God: and the writer of the epistle to the Hebrews refers to their sufferings in the cause of religion as well as to the patriarchs of far more remote ages. The five sons of Mattathias, a pious priest, with their venerable father, opposed and slew many of those sent by Antiochus, to compel them to worship false gods—and then retired into the most unsettled part of the country, resolved to oppose their heathen oppressors, at every hazard. After the death of the patriotic Mattathias, his son Judas Maccabeus, led in defence of the country; and endeavoured to deliver it from idolatry. He and his followers performed prodigies of valour against the heathen, and exhibited feats of desperate courage. He defeated large armies of the pagan enemy with a few men; and purified the holy temple in Jerusalem, which had long been violated by reckless idolators. Afterwards he was slain (about 160 B. C.) by the Syrians, who invaded Judea with 20.000 men. His brother and successor made a treaty with Rome; which was the first known between the two countries; and afterwards he assumed the office of High Priest, being the first of the Asmonean family, who held that important station. This person, whose name was Jonathan, seems to have sought more for peace with the powerful Princes who threatened Judea than his brother had done; and was often so fortunate as to secure it, without any dishonourable compromise. He was treacherously slain by the enemy, and soon after succeeded by his brother Simon; who renewed treaties of amity with the Romans and Lacedæmonians. He also purified the holy temple, and relieved his countrymen from foreign tribute. But Simon was basely murdered by a relation when he professed friendship. John Hyrcanus, his son, succeeded him; and his eldest son, Judas Aristobulus assumed the name and power of King, as well as of High Priest; which was about

one hundred years before the birth of Christ. A few years later, Jerusalem was taken by Pompey, a celebrated Roman General, and the Jews were made tributary to Rome; and about forty years before the Saviour's advent, Herod, an Idumean, was made King of Judea, by the Roman government. Herod was a haughty and cruel Prince, as appears from his murder of all the young children of Bethlehem under two years of age: and Josephus has related many other instances of his injustice and barbarity. He took Jerusalem, at an early period of his reign, and, with his permission, the soldiers filled all parts of the city with blood, rapine and cruelty. Thus when Shiloh came, when the Prince of Peace appeared, the sceptre had departed from Judah. But Herod performed one public act acceptable to the Jews: he rebuilt and enlarged the temple of Jerusalem, forty-six years before the public ministry of Christ began.

CIRCULATION OF THE BLOOD.

The circulation of the blood in the animal frame is a striking evidence of the wisdom and power of God. The blood contains the nutriment for the body, and the heart is the engine which gives or supports its circulation to every part. The stomach, the organs of digestion, other functions and other faculties are necessary to carry on the process of nourishing and supporting the body; but the circulation of the blood is equally necessary; and when it ceases life is extinct, or the animal functions are suspended. The heart, with its machinery of arteries and veins is the immediate organ of giving circulation to the blood. 'It is as perfectly artificial as any machine whatever for conducting or forcing any fluid. The arteries are channels which convey the blood from the heart to every part of the body. The veins are the channels, by which it is returned; but the heart is the engine constantly throwing it out in one direction and receiving it in another. This organ is a hollow muscle, divided into several apartments, and, according to anatomists, is constructed on the principle of a fire-engine. For this requires a room to receive the water, which is conveyed to it by a leathern tube; whence it runs through a small aperture, into a second room called the forcing room, where it is forced out in a stream by applying a powerful pressure to it. The water cannot run back again from the forcing room into the receiving room, when the pressure is applied, because there is a little valve or door placed over the hole. The door, swinging inward into the forcing room, is immediately crowded to and shut by the water, when it would endeavour to escape, as the forcing commences, and the water is therefore compelled to fly out into the hose or pipe provided for it. But when the forcing ceases, the door opens and lets in more water; and so on continually. Such is a description of a fire-engine. There are two of these engines in the heart; each having its receiving and forcing rooms, with its little door between them: and each having its hoses to receive the blood and convey it where it is required; making four rooms in the whole, and the heart being divided off into four apartments for that purpose. With one engine, the blood is received from every part of the body by two hoses or veins which terminate each in a single pipe, where they enter the heart. By another hose, which is termed an artery, the same engine forces all this blood into the lungs, where it undergoes a certain change from the air.* The second engine, in its turn now receives the blood from the lungs by other hoses or veins, and again by another arterial hose distributes it over the whole system; whence it is returned to the heart, to go over the same process of being first received from the body and propelled into the lungs; and then received from the lungs and propelled into the body by two separate engines, as life shall last.'

The Lungs are two large spungy substances which fill the upper part of the chest, and are admirably fitted for the purpose they are designed for, viz. to ventilate the blood, or to give it the air, by which it is purified and rendered fit for the support of breathing and of life. By the function of breathing, the air is introduced for the benefit of the blood; for it is found that the blood derives some of its essential properties from the air which is inhaled by the lungs. All the blood in the body is, for this purpose, thrown up into the lungs by the heart, in the course of every circulation. And here we may perceive the curious mechanism of the lungs. They are full of air holes, running in every direction; and the blood is exposed to the air in innumerable vessels, which are spread over the sides of these air holes for this purpose. And, what we find in no other part of the body, these passages for the air are made of a hard substance like horn, which serves to preserve them open and free for the circulation of the air. Should any one ask, why they are not of the same substance as the veins, the only answer is that it is proof of intelligent design. The blood can force its way through a skin tube, but air might be obstructed. Another singular fact is, that there are two passages for breathing, viz. through the mouth and by the nostrils. Except for the latter, we could not breathe without difficulty when we were eating; and the infant would find it impossible.

* It is found that common air near the earth is composed of 27-100 of oxygen, and of 72-100 of nitrogen, and one of carbonic acid. The first only can sustain life. The others, if separate, are unpleasant in smell and injurious to life. Such is the composition of pure atmospheric air, when taken into the lungs—and if one is placed in a situation to consume by breathing all the oxygen, his respiration would cease, circulation stop, and death ensue.—When air is respired, it is found to have undergone a change—the portion of nitrogen remains as it was before inspired; but eight per cent. of the oxygen is lost, and an equal quantity of carbonic acid is added; and at the same time, the blood from the veins, in its passage to the lungs, is by contact with the air changed from the dark colour of the veins to red, and becomes the power of life to the frame through which it circulates. This change of the air has not been explained; but it is supposed that the lost oxygen is absorbed in the system, and carbonic acid derived from the veinous blood. It appears certain, however, that the conversion of the blood is affected by the oxygen; and that air is fit or unfit for respiration as its proportion of oxygen is according to the proportion already stated. See Magazine No. 5, Vol. I.

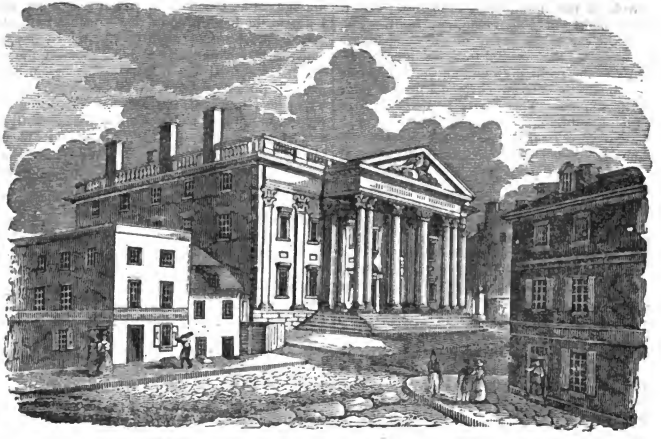
THE HAPPY MISS.

BY MRS. HEMANS.

A song of joy, a bridal song came swelling,
To blend with fragrance in those southern shades,
And told of feasts within the stately dwelling,
Bright lamps, and dancing steps, and gem-crowned maids;
And thus it flowed—yet something in the lay
Belonged to sadness, and it died away.

COMMODORE DECATUR.

The United States have furnished a great number of brave naval commanders. During the war of the Revolution, though our navy was small, many of our citizens were distinguished for intrepidity and skill in the naval service. Manly, Dale, Barry, Hopkins, Tucker, Jones, and others were highly useful in that period of trial and danger. In 1798 and 1800, Preble, Little, Truxton and others gave proof of ability and courage as naval officers. At that period also, Stephen Decatur, then only twenty years of age, signalized himself by his prompt and daring enterprise, as an officer in the American Navy. This gentleman was a native of that part of Maryland, called the Eastern Shore: His parents removed to that place from Philadelphia, during the revolutionary war. Decatur was appointed a Lieutenant in the navy at the age of twenty, and was attached to the squadron under Commodore Preble, in the Mediterranean. While at Syracuse, intelligence was received of the fate of the frigate Philadelphia, which had ran upon a rock near Tripoli; and was then taken by the Tripolitans and towed into the harbour. Lieutenant Decatur suggested the project of retaking or burning her, to prevent her being of use to the Tripolitans. 'For this purpose he selected a ketch and took with him seventy volunteers. He entered the harbour, boarded the frigate, though all her guns were mounted and charged, and she was lying within half-gun shot of the castle and principal battery of Tripoli. Two other armed vessels were lying near on one side, and several gun-boats on the other, and all the batteries on shore were opened upon them: Decatur fired the frigate, and remained along side till her destruction was certain.' Congress took particular notice of this heroic act, and presented him with a sword; and he was soon after promoted to a captaincy. In 1805, when an attack was ordered on Tripoli, (on account of its depredations on our commerce) Commodore Preble equipped six gun-boats and two bombards, formed them into two divisions, and gave the command of one to Captain Decatur. The gun-boats of the enemy were moored near the mouth of the harbour, under the batteries; but Decatur resolved to attack the eastern division; which he effected, and captured two of them. When he boarded the last, and attacked the commander of it, who was stouter, he broke his sword in the scuffle, and the Turk drew his dirk to stab him. Decatur had a small pistol in his pocket, and without being able to get it out, turned it as well as he was able, fired, and killed his antagonist. Preble being soon after superseded in the command of the squadron, Decatur took command of the Constitution; and in a short time was transferred to the frigate Congress. After the attack on the Chesapeake, and the removal of Captain Barron, he was appointed to the command of that ship; and shortly after to the frigate United States. During the war of 1812, he conducted with great spirit and courage, and was successful in several attacks on the British vessels. He captured the Macedonian, a very fine ship of fifty guns, after a severe battle of an hour and a half. Commodore Decatur, in 1814, had command of a squadron, with the Macedonian then equipped as an American frigate, and was blockaded at New London, by a far superiour British naval force. He challenged the British commander to meet him with any two of his ships, with the two American frigates; but the British admiral declined. In January, 1815, he fell in with a British squadron of four ships and was captured, as his vessel had been injured in passing a bar, and retarded in her sailing—before he surrendered however, he silenced one of the British ships, with which he had a running fight of two hours. In 1815, after the peace with England, it was found necessary to fit out a naval force against Algiers, for its unjust and cruel attacks on our vessels; and Captain Decatur was appointed to the command of it. Before he reached that coast, he captured one of the principal Algerine frigates, which had been the terror of the Mediterranean sea. On arriving at Algiers, the Commodore found the Dey ready to submit on such terms as he chose to dictate—which were, that no more tribute be required from vessels of the United States; that all the Americans then in slavery should be released without any ransom, and that compensation should be made for American property seized. On his return to the United States, Captain Decatur was appointed one of the Commissioners of the Navy Board. He continued in that office till 1820, when he fell in a duel at the age of forty-one, with Captain Barron. The latter gave the challenge, but Decatur had spoken of his conduct with great freedom and severity. It is truly a matter of regret, that honourable and brave men should deem it necessary to kill or be killed to prove their courage, which no one doubts, or to vindicate their moral character; if it need vindication, a duel is certainly a very strange measure to adopt.



GIRARD BANK, IN PHILADELPHIA.

This edifice, which is considered one of the finest specimens of architecture in Philadelphia, where are many elegant public buildings, stands on the west side of South Third Street. 'It is nearly facing Dock Street, from which the view annexed was taken. It occupies an oblong square, ninety-six feet in front, and seventy-two feet in depth. The front is constructed of white marble: the side walls are of brick. Including the lot, the whole cost was two hundred and fifty thousand dollars. Six Corinthian columns, with fluted shafts and richly sculptured capitals, support the entablature and pediment. And these pillars have corresponding pilasters. The portico is elevated on its three sides upon seven marble steps: the spaces between the portico and the angles of the main building have each two fluted pilasters, which extend from the basement to the cornice.' This building was erected in 1796—'98, and was constructed for the Bank of the United States: But on the expiration of the first charter, in 1810, and the refusal of Congress to renew it, *Stephen Girard* purchased the building, and it was long occupied for banking purposes under his sole direction. We have given a sketch of the active life and character of Mr. Girard in a former number. He was a rare instance of the power of resolute and persevering effort in man; a power almost approaching to a miracle. By industry, enterprise, calculation and economy, he amassed an estate of twelve or thirteen millions of dollars: and by his will, he devoted it to useful objects, chiefly for the relief of the poor and the improvement of the lower classes of people. The college established by his rich legacy will be a perpetual memento of his liberality; and if wisely conducted and governed, must prove an inestimable blessing to Pennsylvania, for ages to come.

THE EAR.

Who can examine the head and not be filled with admiration of the wise and benevolent design of our Creator. The eye with all its component parts, power and uses, is a subject of wonder to the intelligent and discriminating observer. The skill and the design displayed in this organ, baffle all efforts at imitation of so delicate and so wonderful a piece of mechanism. Nor is the mouth, or the organ of smell, less skilfully adapted to important uses, or less indicative, in their formation and power, of intelligence far above all human wisdom. The ear is as *curiously and wonderfully* formed as either of the organs now referred to. It is evident from its peculiar mechanism, that it is a most skilful contrivance for conveying a motion from the medium which surrounds it to the auditory nerve, and that this nerve receives every motion excited in the *tympanum*, at the interiour aperture of this organ. The ear is usually divided into the external and internal parts. The external part of the organ is called the *auricula*. It consists of a fibrous cartilage, which is elastic and pliable. On the projecting or external part, are certain muscular fibres; and it receives several nerves and vessels from the head and the body, which render it very sensitive, and cause it easily to become red. It is joined to the head chiefly by muscles, called *anteriour*, *superiour* and *posteriour*. In some animals, these muscles are much developed; in man they are simple vestiges. The auditory passage extends from the exteriour or front opening of the ear to the membrane of the *tympanum*: it is

not so wide in the middle as at the ends; and it presents a slight curve above and in front. The middle of the ear is the cavity of the tympanum; and this separates the external from the internal ear. The cavity of the tympanum and all the fine canals which terminate therein, are covered with a slender mucous membrane. This cavity is always full of air, (if the phrase be not a contradiction,) and contains several very small bones which connect the tympanum membrane with the more interiour parts. There are also some small muscles for moving this bony chain, and for stretching and slackening the membranes to which it is attached: thus the internal muscle of one of the bones (*malleus*) draws it forward, bends the chain in this direction, and stretches the membranes; the anteriour muscle produces the contrary effect.—The internal ear, or labyrinth, is composed of the cochlea, of the semicircular canals, and of the vestibule. The *cochlea* is a bony cavity in form of a spiral; and is divided into two others, called the external and internal. They are separated by a partition, or plate set edgeways, partly bony and partly membraneous. The semicircular canals are three cylindrical cavities, two of which are disposed horizontally and one vertically. They terminate in the vestibule, or the central cavity, the point of union of all the others. This communicates with the tympanum, the cochlea, the semicircular canals, and the internal auditory passage, by a number of small openings. The cavities of the internal ear are entirely hollowed out of the hardest part of the temporal bone; they are covered with a very thin membrane, and are full of a thin, limpid fluid; and they also contain the acoustic nerve. The internal and middle parts of the ear are traversed by several nervous threads, which no doubt are useful, though not easily shown. Air is essential to hearing as well as to breathing: and one of the important connexions of the intellect with external things is kept up by the sense of hearing; as it communicates to the mind by the ear. The form and size of the external ear serve to collect the sound, if one may so say, or to ensure hearing with greater facility. Hearing presupposes motion; and this produces excitability or sensation, which we call sound; a full analysis or explanation of which would lead to a treatise on the science of *acoustics*. This superficial notice or reference to the organ of hearing, is enough to show the wonderful and benevolent design of the Creator.

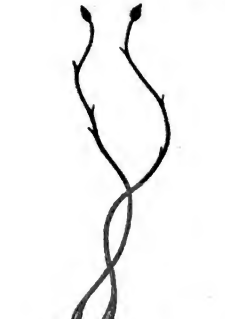
THE BEAVER.

Twenty-five years ago, in return for a piece of red worsted binding which I gave to an Arkansas squaw, she presented me with a young beaver about the size of a cat; I was pleased with the acquisition, intending eventually to present it to my old friend Peale, of the Philadelphia Museum.—It had been strictly secured from its birth, but, on all occasions, it showed the strongest inclination to approach the water and make its escape; it was not mischievous, and fed kindly on Indian corn, dried pumpkins and green twigs. I carried it with me for a considerable time while navigating on several of the Western rivers, and it became with me a favourite, and a source of frequent amusement. At all times guarding against an escape into running or deep water, I was in the habit of indulging it with a bath whenever I encamped at night or stopped by day, if a convenient stream or pool presented on the sand beach. I carried it in a barrel in my canoe, and to guard it from the intense heat of the sun, covered it with green branches; but these would not exclude the musquitoes, which tormented it incessantly, and to such an extent that I could not resist its plaintive moans, and at length, most reluctantly, determined to release it; I accordingly removed the leash by which it was held, and threw the beaver from me into the Mississippi, without the slightest expectation of seeing it again; judge then of my astonishment and delight, when in about ten minutes, having probably floated an half mile, I heard it whine at my elbow; I extended my hand and again restored it to the barrel; and subsequently, during a thousand miles of navigation, perhaps twenty times a day, I threw it into the river, when after it became tired of its gambols, in swimming, and diving, sometimes to great depths, and threshing the water with its tail, it would again come to my hand with an imploring look, to be again taken into the canoe. For near a month, after my arrival at New Orleans, I was confined to my bed by extreme illness, and did not see the beaver; when convalescent, a friend carried me to his country house many miles from New Orleans, and one day, when asleep, suspended in a hammock across the gallery, I was roused by the well known whine of my poor pet; it had that day been brought from the city by some of the plantation negroes, and turned loose, and in half an hour, had singled out his emaciated master, and appeared to show evident symptoms of pleasure and excitement on the occasion. This animal always appeared sensible to kindness, and exhibited an instinct so acute as indeed seemed like more than half reasoning—but not sufficiently acute however, to escape death from the rifle of a Kentucky boatman, who took it to be a straggler from some colony in the far distant West.—*Extract from a Journal.*

'An examination of the ancient orthography of the Jews, and of the original state of the text of the Hebrew Bible, has been lately published in England, in which the author endeavours to prove that alphabetic writing is not a human invention, but like speech, a divine inspiration or gift. And that Moses was taught it by God in the wilderness. He refers to Exodus, xxxi. 18, and Deut. ix. 10. Some other learned men have expressed the same opinion. *Eusebius* asserts that the use of alphabetic writing originated with the Jews. Moses had this knowledge. Did he receive it from Egypt? They had only hieroglyphic or symbolic writing in the time of Moses—where then did Moses obtain the art or knowledge but by special revelation?'

The *Polar Star*, as it is usually called, when observed by a good Telescope, appears to be double, or two stars blending their beams together.

Mehemet Ali has forbid all exportation in future of Egyptian Antiquities; and intends forming a museum at Cairo.



THE INSECT PLANT.

We are now able to present a view of the curious plant lately discovered in North Carolina, and we have thought it proper to repeat the short description of it contained in No. 2, Vol. II.

A *Thing* without a name, partaking both of the properties of a vegetable and an insect, has been lately discovered at Plymouth, North Carolina. When its entomological (or animal, insect) nature ceases, its vegetable nature commences. And when its vegetable character is matured, its character, as an animal or insect, is developed, and it no longer appears as a vegetable. In other words, it is alternately an insect and a plant. It is shaped like a wasp, when it assumes the insect or animal character, and is about one inch in length. When the insect has attained its growth, it disappears under the surface of the ground, and dies. Soon after, the two hind legs begin to sprout or vegetate. The shoots extend upwards, and the plant reaches the height of six inches in a short time. It has branches and leaves like the trefoil. At the extremities of the branches there is a bud which contains neither leaves nor flowers, but an insect; which, as it grows, falls to the ground, or remains on its parent plant, feeding on the leaves till the plant is exhausted, when the insect returns to the earth, and the plant shoots forth again.

CHEMISTRY.

Natural Philosophy (or Physics) is an examination of the reciprocal influence, or power of large masses of matter. Chemistry teaches the mutual action of the simple, integrant parts. In the former, the phenomena are produced by the general attraction or repulsion of bodies; in the latter, by minute combinations, or by decomposition. We are unable, with our present knowledge of nature and its laws, to separate physics entirely from chemistry; one science cannot be studied entirely distinct from the other. Those artisans, who first discovered the method of melting, combining and moulding the metals, and those physicians who first extracted vegetable substances from plants, and observed their properties, were really the first chemists. But instead of observing a philosophical method in their examinations, instead of passing from what was known to what was unknown, early inquirers were led astray by astrological dreams, and the fables of the philosopher's stone. We find little worthy of notice in the history of chemistry, till the middle of the seventeenth century. About that time, Bacon, Paracelsus and others, detected the properties of iron, quicksilver, antimony, and saltpetre. They also discovered sulphuric, nitric and other acids—the mode of rectifying spirits, and of purifying the alkalies. At a later day, Stahl taught that the greater part of chemical phenomena might depend on a general cause, or on a few general principles, to which all combinations must be referred. His theory was, that all bodies contained a combustible element, which inflammable bodies lost by being burned, and which they could regain from other more inflammable bodies, and this he called *phlogiston*. An hypothesis, which connected almost all phenomena with each other, was an important step. Boerhaave adopted Stahl's system, and assisted in its diffusion. He has been considered the founder of philosophical chemistry; which he enriched with numerous experiments, in regard to fire, the caloric of light, &c. But it was reserved for Black, Priestly and Lavoisier, to introduce a new and more correct theory in chemistry, usually called the pneumatic or antiphlogistic.

As soon as the *composition* of the atmospheric air was known, it was found that combustible bodies, burning in contact with it, instead of losing one of their elements, absorbed one of the component parts of the air, and were thus increased in weight. This component part is called *oxygen*, because many of the combustible bodies are changed by its absorption into acids. And oxygen, in the new theory took the place of phlogiston, and served to explain the difficulties attending that hypothesis. A new nomenclature was introduced in 1787, which shed much light on the science; for by the aid of it, all the facts may be retained in the memory, as the name of each body is expressive of its composition or of its peculiar property.—Farther improvements were made in chemistry, at the beginning of the present century. Sir Humphrey Davy, with a galvanic apparatus, made a series of researches, which resulted in a greater modification of the science than it had ever before experienced. He proved that the fixed alkalies were compounds of oxygen with metallic bases, and thus led the way to the discovery of an analagous constitution in the alkaline earths. To him also this science is indebted for proof of the simple nature of chlorine. And still another useful improvement was made by Davy, as to the nature of flame, which led to the invention of a safety-lamp for miners. Later investigations into the science of chemistry relate to the definite proportions in which bodies unite to form the various chemical compounds: and numerous analyses have been made to show the correctness of the conclusions which were drawn from the theory. This general truth has resulted or es-

tablished, that when bodies combine chemically and intimately with each other, they combine in determinate quantities; and that when one body unites with another in more than one proportion, the ratio of the increase may be expressed by some multiple of the first proportion.—The doctrine of definite proportions may be considered as giving to the science of chemistry that certainty which was thought peculiar to mathematics; and the science has been much advanced by the developement of these relations. More recent improvements in chemistry relate to the power of platinum (a newly discovered metal) in effecting the combination of oxygen and hydrogen; to the reducing of gases to a liquid form; to the discovery of new compounds of carbon and hydrogen; to the elucidation of the new compounds of chlorine with carbon, &c. The knowledge of light, of electricity, and of caloric, has also been enlarged; all which must add to improvements in chemistry, and serve to show that no limits can be placed on investigations of this science.

Chemistry makes us acquainted with the internal structure of bodies, by synthesis and analysis (combination and decomposition.) By the latter, it separates the component parts of a compound body; and by the former, it combines the separated elements so as to form anew the decomposed body. A knowledge of the two great powers to which all physical bodies are subject, attraction and repulsion, is requisite in pursuing or exemplifying these methods. Some philosophers have supposed that the attraction of *elementary* particles was different from planetary attraction, and have called the first chemical affinity: but nature has only one kind of attraction. The alternate play of attraction and repulsion produces a great number of sensible phenomena and a multitude of combinations, which change the nature and properties of bodies. The study of these phenomena, and the knowledge of these combinations belong peculiarly to chemical science.

Some definitions and classification of bodies, or matter, whether solids or fluids, may be useful to those who have not much attended to chemistry; and are here added. It is proposed to make farther remarks upon the subject in the next number.

Gas is a fluid capable of always existing in an aeriform state. Vapour is an elastic fluid, and in some respects resembles *gas:* there is a difference however, between them, and is supposed to depend on the action, or passiveness of the heat, to which they are united. Vapour or steam, owes its elasticity to a high temperature, equal to that of boiling water: When steam is cooled it returns to the form of water; but gas is not rendered liquid or solid by any degree of heat. In vapour, caloric or heat, is considered in a latent state, but in gas it is supposed to be chemically combined. There are numerous gases, (besides the air) as oxygen gas, nitrogen gas, hydrogen gas, carbonic acid gas, &c.

Carbon is a convertible term with *charcoal;* and strictly so, if charcoal be in a state of purity and unmixed with any foreign ingredients. And in order to produce charcoal in its purest state the application of heat is necessary, (which expels all the evaporable parts) and the exclusion of atmospheric air during the process. And yet what appears truly wonderful, a *diamond* is but carbon in a crystallized state. The deleterious nature of carbon or charcoal (or their gases) is well known. We have frequent instances of the fatal effects of burning charcoal in a room where the air is confined: and we recollect the story of *Cleopatra,* who dissolved a most precious diamond or ruby, for the purpose of preparing a poisonous drink.

Sulphur is a simple substance, and is found in great abundance, in the animal, vegetable and mineral kingdoms. It is converted into vapour at 300 degrees of heat. When heated a little above boiling water it melts; but if the heat is much more increased it becomes solid again; and becomes fluid as the temperature is reduced.

Oxygen is an invisible gas or fluid like air; but is a little heavier. It is slightly absorbed by water. It is necessary to life; and without a portion of it in the air we breathe, and in what we eat and drink, we could not survive. Oxygen may be truly said to be essential both to respiration and combustion.

Nitrogen air, or gas, in its simple or separate state, is the antagonist of Oxygen: It is destructive of life, whenever decomposed entirely of oxygen; but united with it, even to the degree of four-fifths, it is not destructive, nor injurious.

Hydrogen, when combined with oxygen, produces or forms water: It is obtained by the decomposition of water, and is not fitted to respiration. It is much lighter than air. Water is composed of *two* parts of hydrogen and *one* of oxygen. *Ammonia* has no oxygen, but is three parts hydrogen and one part nitrogen. *Carbonic* acid has one part carbon and one part oxygen. *Sulphurous* acid has one part sulphur and one part oxygen. Nitrous acid has three parts of oxygen, and two of nitrogen. Nitric acid has five of oxygen and two of nitrogen. Muriatic acid has one part of hydrogen and one of *chlorine,* a pungent gas and dangerous to breathe.

Of the *Earths.*—Though there appears almost an infinite variety of earthy substances on the surface of the globe, chemical analysis teaches, that all the earth, and stones, and rocks, are composed of a very few elementary (or distinct) substances: the *alkaline* earths are four, two of which are lime and magnesia; the other two are *Barytes,* (which is a strong poison, and has a sharp caustic taste, and some preparations of it are used as medicine; and the miniature painters use it in the form of white pigment) and *Strontites,* very much resembling the former. The simple earths are *Silex,* (the chief constituent of flints and flinty stones) *alumine,* (deriving its name from alum, of which it is the base) *Zircon,* (an earth in the form of a white powder, and is found in several precious stones;) *Glucine,* found in precious stones like the former, and resembling *alumine* in some of its properties, but when mixed with acids forms a compound that is sweet. *Ittria,* a substance found also in a precious stone, resembling *alumine,* but not attracted by the pure alkalies.

Of the *Alkalies.*—All of them have a caustic taste. They are soluble in water; they form soap, by rendering oil miscible with water; they also form glass with silex, by the aid of heat; they unite with

sulphur by fusion; and they dissolve animal substances. There are four alkalies known in chemistry: *potash, soda, lithia* and *ammonia*. The three first are called *fixed* alkalies, as they do not evaporate in air, nor by heat, except very intense. The other, ammonia, is called *volatile* alkali, since it flies off in the form of gas when exposed to the air. The uses of potash are well known; it is a compound body, and consists partly of oxygen or pure air. *Soda*, is made of the ashes of plants near the sea-coast; and particularly from a vegetable called *soda salsola*, which is found in great abundance in Spain. It is also found among some minerals, united with sulphuric and muriatic* acids. Sea salt is a muriate of soda; the ocean is impregnated with it. The article sold as soda is obtained by the decomposition of the sulphate of soda (or glauber salts,) or of the muriate* of soda (or sea salt.) The base both of soda and potash is considered to be a metal, and is easily obtained by chemical process. *Lithia* is an alkali lately discovered in Sweden. It has the peculiar property of other alkalies, but is capable of neutralizing more of the different acids, than potash or soda. Ammonia, in its pure state is a gas, and is obtained by the decomposition of sal ammoniac, or the muriate of ammonia: its elements are *hydrogen* and *nitrogen*. It has a strong and pungent smell; and immediately extinguishes flame.

The common atmospheric air, (which is an elastic fluid) is composed of oxygen and nitrogen gases: the nitrogen being about four-fifths, and the oxygen one-fifth—the oxygen being necessary to sustain life, while nitrogen (alone) would destroy it. No method however is known to decompose the air, so as to exclude nitrogen, and have the oxygen remain; but only to abstract the latter from the former: and this is done by combustibles; for during the burning of a candle, oxygen is separated from the nitrogen, and its combustion depends on this process.

No gas will maintain animal life but oxygen, or a compound which contains it. The composition (or synthesis) of the atmosphere consists in a mixture of proper proportions of gases of which it is composed, and then submitting the compound, or mixture, to the action of a burning body.

* Muriatic and Muriate imply salt a property.

EMINENT PERSONS DECEASED WITHIN THE YEAR 1835, IN THE UNITED STATES.

General Wade Hampton, a veteran of the Revolution, aged 81.

Thomas S. Grimke, of Charleston, (S. C.) aged 48; an active friend of literature and education.

Thomas Say, aged 47; distinguished for his attention to natural history.

Nathan Dane, of Beverly, (Mass.) aged 80; a celebrated patriot and jurist.

William McKendree, D. D. Bishop over Methodist Churches, in Tennessee, aged 77.

James Brown, aged 68, who died in Philadelphia; and who had been minister from the United States to France several years.

John Marshall, Chief Justice of the Federal Supreme Court for thirty-five years, and one of the greatest and purest characters of this or any other age or country, aged 80.

William T. Barry, late Postmaster General, in Liverpool, England, on his way as envoy to the court of Spain, aged about fifty.

James Whitfield, Roman Catholic Archbishop in the United States, aged 64; he died in Baltimore, the place of his usual residence.

Rev. Dr. James Freeman, of Boston, aged 76; senior pastor of the society in King's Chapel, as formerly called, now a Unitarian Society, with written forms of prayers.

Rev. Dr. B. B. Wisner, aged 40; Secretary to the Board of Commissioners for Foreign Missions.

Hon. B. Tallmadge, at Litchfield, in Connecticut, aged 81. He was a distinguished officer in the American Revolution.

Col. William Duane, in Philadelphia, aged 82; formerly an eminent printer.

Robert Thorndike, of Camden, in Maine, aged 104, a ship builder and a *temperate* man.

Andrew Wallace, aged 105, in New York, a soldier of the Revolution.

Hon. Daniel Davis, at Cambridge, aged 73, late Solicitor General of Massachusetts.

Hon. Timothy Fuller, at Groton, Mass. aged 58. Formerly a member of Congress, and Speaker of the House of Representatives in Massachusetts.

Hon. Samuel Dana, at Charlestown, aged 68. Formerly President of the Senate of Massachusetts, and member of Congress.

David Hosack, M. D. of the city of New York, aged 65 years. He was very eminent as a physician; he was also celebrated for his attention to botany and natural history: and by all who knew him, not less distinguished as a patron of literature and the arts, as a friend to the interests of humanity, and as possessing great benevolence of character.

Hon. Nathan Smith, Senator in Congress from Connecticut, aged 65.

Hon. Elias K. Kane, Senator of the United States from Illinois; died at Washington.

Rev. John Emory, D. D. a Bishop in the Society of Methodists in Maryland.

Benjamin Vaughan, LL. D. of Hallowell, (Me.) aged 84. Mr. V. was a native of England, and several years a member of the British Parliament—a distinguished friend of civil and religious freedom, and a man of various and useful learning; a profound but practical philosopher.

EMINENT MEN DECEASED IN EUROPE, IN 1835.

Marshal Motier, Duke of Treviso, aged 68. He was killed in Paris, when the attempt was made to take the king's life.

Baron Von Homboldt, aged 67, near Berlin. He left his numerous library of manuscripts to the public library at Berlin.

The Baroness De Montesquieu, aged 90.

Pigault Le Brun, aged 83; a distinguished novelist. He was called the Fielding of France.

Professor Renvens, of Leyden, aged 42; celebrated for his knowledge of Egyptian archeology and antiquities.

Rev. Dr. McCrie of Scotland, a very learned divine and celebrated historian, aged 64.

The Bishop of Ferns, in Ireland, Provost of Trinity College, Dublin, and a celebrated mathematician.

Lord Middleton, of Nottingham, (Eng.) aged 84.

Lord Suffield, in London, aged 54; a diplomatic character; and an active member of several literary and charitable societies; a pious and devout Christian.

Lieut. General Sir Andrew McDowall.

Lieut. General P. Powell, aged 80.

Admiral Sir Robert Moorson.

Dr. Gerard, a celebrated traveller in India and the East.

Dr. Rossenmuller, at Leipsic, a learned oriental scholar.

T. J. Matthias, in Italy, aged 61; the celebrated author of the Pursuits of Literature, a very popular work twenty-five years ago.

Dr. McCullock, in Scotland, a distinguished literary character and geologist.

G. S. Newton, aged 40, a distinguished portrait painter.

John Nash, in the Isle of Wight, an architect of the board of public works.

Matthew Lamsden, LL. D. professor of Persian and Arabic, in the College in Calcutta, aged 58.

M. T. Sadler, M. P. near Belfast, Ireland, aged 55. A Reformer but not a Radical; and a distinguished philanthropist; by some considered as one of the most eloquent in the House of Commons.

GREAT FIRE IN NEW YORK, DECEMBER 16 & 17.

It is not expected that a journal like our Magazine, should notice calamities of this kind; but the Great Fire in New York, being most remarkable for extent and loss in this country, seems to demand a particular record. It broke out at nine o'clock P. M. of Wednesday the 16th, and continued to rage and spread till four o'clock P. M. of the 17th. The estimated amount of property lost by this great calamity is seventeen millions of dollars; and the number of buildings or stores, 675. The cold on Wednesday night was most intense, being the greatest known for several years past: the wind was high; and the water was low and frozen. Had there been reservoirs of water, as it has been proposed to construct for some time past, the progress of the fire would probably have been arrested at an early hour after it began. The following is a statement, in a New York paper, of the principal property consumed. 20,000 chests of tea; 12,000 bags of coffee; 3000 boxes of sugar; 500 bags of saltpetre; 40,000 gallons of sperm oil; several thousand bags of pimento; a large proportion of the brandy in the market; and also of indigo; several large stocks of American goods—but a still greater quantity of foreign fabrics; the largest part of which were French. The Insurance Companies in Boston, and the Manufacturers in Massachusetts have lost by the fire, about 250,000 dollars.

FORE-FATHER'S DAY.

Fore-father's Day was celebrated at Plymouth, in Massachusetts, on the 22d of December, with a spirit as animated, and by a company as respectable as on any former occasion. This very interesting anniversary occurs at the coldest season, and the shortest days of the year; but the inclemency of the weather did not freeze up the zeal of the descendants of the pilgrims, nor prevent their having a *warm* and cheering celebration. They were rather glad of an opportunity to show that their manifestations of regard for the character and principles of their *Forefathers* were not to be restrained or lessened by ordinary obstacles. The consideration occurred that their ancestors suffered and laboured much for them; and they were ready to honour the memory of such worthies even at some personal cost or sacrifice. The address by Hon. Peleg Sprague was particularly appropriate to the day, abounding with judicious and useful reflections, and occasional passages of great animation and eloquence. Every one was instructed and gratified, and went away from the church probably with better feelings and better purposes than they entered. The character of our Puritan fathers was happily pourtrayed; their lofty principles ably illustrated and defended. And chaste and good feelings were displayed, and patriotic sentiments expressed at the dinner table, which could not fail to produce a salutary effect, as well as to contribute to the intellectual enjoyment of the moment. Long may the Puritan Forefathers be remembered, and their moral courage and singleness of purpose in the cause of humanity, and truth and liberty, be appreciated and imitated.

CONGRESS.

The Legislature of the United States, has entered on a new session. And it will probably be one of great importance and interest. The meetings of the great national council are indeed always important; but the present Congress may have the question of war presented to them for its decision, though we hope not. Should the question arise, the whole nation must feel a deep interest in the issue. War is always an evil; and by a christian people will not be undertaken, except in a case of most urgent necessity. With the majority however, it will probably be a question of profit and loss; or of national honour, so called. These considerations may be allowed some weight; and yet the mischiefs of war are so numerous and extensive, that it will be resorted to with great reluctance by the patriot, even if religious views were set aside, and not without long and repeated efforts to avoid it, and to obtain justice in other ways. The message of the President at the opening of the session is generally considered pacific and conciliatory. And in this case, after giving an account of his proceedings relating to the treaty with France, he has properly placed the responsibility to the representatives, where it ought to be. It is hoped by all true patriots, that he will not change his policy, nor urge war in any alternative. And it is also desired, that war should not be proclaimed by us against France, unless our national liberty and independence require it; and only, if ever, when the majority for it is large. We have seen a case where war was declared by a bare majority; and in a short time, peace sought and made without gaining the professed objects of the war, and an immense public debt created to burden the people.

It was said by respectable Grecian writers, several hundred years before the birth of Christ, that there were astronomical observations at Babylon, for nineteen hundred years prior to that event.

FEBRUARY.

BENJAMIN WEST, AND THE FINE ARTS.

Painting in all its branches, whether it be portrait, historical, or landscape, has always been reckoned one of the 'Fine Arts.' It is therefore allied to poetry and eloquence; as it requires peculiar talents and taste, and not only indicates great powers of imagination, but originality of mind. It is an effort of mind, and a proof of mental energy and discrimination, no less than eloquence and poesy. It may be much improved by culture; so may a talent for poetry and eloquence. But if there be no native inspiration fitting or inclining one to these high accomplishments, no art or study will supply the defect. By study, a man may be made an orator, or a versifier; but without peculiar natural talents, he will not be an eloquent man, nor a poet. And so, we believe, it is in painting and its sister art, sculpture. The history of distinguished painters will confirm these remarks. They have first and early shown a fondness for the art, and a native qualification for it, which subsequent encour-

agement and cultivation have served more fully to develope. An early acquaintance also, may have sometimes been the occasion of exciting an attention to the art, and an effort to imitate the works of former masters. Even the more humble work of copying shows original and peculiar talents; but the Portrait Painter deserves far higher praise. He has taste and discrimination and other mental powers, which those cannot justly claim, who are ignorant of the art, or have made efforts in this line, which were unsuccessful.

Many Italians have excelled in this proud art. There are also the Dutch and the Flemish Schools, which can boast of several able artists, and whose portraits have ranked with the best ever executed, for excellence of colours, and for just and strong expression. They have indeed, been more true to nature, in the peculiar features, and the indications of predominant character than any before them. Vandyke and Reubens, who lived two hundred years ago, were among the greatest of these. England too has claims to great merit in this respect. To go no farther than to the latter part of the last century, we find Sir Joshua Reynolds, from somewhat humble beginnings, pushing his way into notice, as a few great men have done in other departments; and by the careful and resolute exercise of his native talents and taste, attaining to the highest eminence of excellence and admiration.

Among the eminent portrait and historical painters of this country, Benjamin West deserves, perhaps, in most respects the highest place. Gilbert Stuart, in portrait painting, was equally able and happy. Some writers rank him even before West, in this branch of the art. But West was distinguished in that as well as in historical painting. The family of West was of the sect of Quakers in Pennsylvania; he was born in that State in 1738. He gave evidence of his taste in drawing and painting at the early age of seven years. He used such colours as he could procure in a country town, and such brushes as he could himself make of cat's hair. It soon happened that a relative, who witnessed his efforts and perceived his predilection and talent for drawing, furnished him with paints and pencils, and some engravings for copying. Young West was highly pleased, and devoted so much time to his favourite study, that he neglected his school. It was soon found that he was not a mere copyist. He composed a picture combining the beauties of each, but excelling them; thus proving his *creative* powers and peculiar taste. It was the opinion of West himself, 'that there were inventive touches, in his first and juvenile essay, which he was never able to surpass.' The powers of West were soon made known, in his native town and vicinity, while he was not more than fourteen years of age. He painted several portraits, which increased his fame about this time. But having as yet no able patron, he engaged for a short period in a military life, being only seventeen. He soon relinquished this employment, however, and the year after settled in Philadelphia, as a portrait painter. He was much employed in that city, and afterwards in New York, where he resided for some time. In 1760, he went to Europe, and soon repaired to Italy, by the advice and under the patronage of his friends. He derived great benefit from this visit; as he had opportunity to study the best models, and to become acquainted with the writings of the most eminent masters. He visited England in 1763, intending to return to his native country; but by the urgent advice of those who were sensible of his talents, especially as an historical painter, he concluded to remain longer in London. His success was very great, and his reputation was such, as to place him on a level with the first painters of that period. George III, king of England, heard of his fame, and often employed him. He continued painter to his majesty, till the mental infirmities of the latter disqualified him for public life. He appears to have been a personal friend of the American artist. On one occasion, when Mr. West manifested his attachment to his native country and its government, the king expressed his approbation both of his patriotism and his frankness. Mr. West succeeded Sir Joshua Reynolds, as President of the Royal Academy; and his address on the occasion was much applauded. One of the most celebrated of his paintings, is that of 'our Lord healing the Sick;' which was designed for the Friends' Hospital in Philadelphia. This he finished at the age of sixty-four. It was exhibited in London, and called forth unqualified applause for the gifted artist, and an offer of three thousand guineas was made for it, to be placed in the British Institution. He accepted the offer, but had liberty to make a copy for Philadelphia, as first intended: After this he executed several other historical paintings; and nothing seemed too arduous for his genius to endeavour to perform. 'The Christ Rejected,' is almost as much admired as the 'Healing of the Sick.' His biographer says, 'that he painted and sketched upwards of four hundred pictures, mostly of a historical and religious nature; and left more than two hundred drawings in his portfolio.' His picture of 'Death on a pale Horse,' is irresistibly terrific: Every creature and thing appears to wither and shrink before the awful phantom. 'His Death of General Wolf,' and the 'Indian Chief,' are among his happy efforts. And yet the critics have said, his figures were monotonous and uniform, and that he wanted the imagination and fire necessary for a perfect painter. Mr. West died in England in 1820, at the age of eighty-two. In private life, he was affectionate and kind; and has left a character for morality and piety highly honourable. He was buried in St. Paul's Church, near Sir Joshua Reynolds, and some other eminent men.

DO WE NOT BOAST TOO MUCH? OR, MORE THAN IS USEFUL?

It is well, both in individuals and societies, to cherish feelings of self-respect; to feel that there is an ability to accomplish something useful and praiseworthy; and even to claim a right to express an opinion, as well as the rest of the world. We may justly estimate our privileges and our means of improvement; and stand forth in defence of the favoured civil and social condition allotted us. But do we not boast too much? Are we aware of the privileges and blessings enjoyed in our *Father-land*, and in some other parts of Europe? Are we igno-

rant of the far greater advantages and improvements of some other portions of mankind? By reading some of the publications in the United States, one would conclude, that we thought wisdom and knowledge were peculiar to our country: And that all former generations were sunk in ignorance and barbarism. But what candid and well-informed man will pretend, that in learning and in scholarship, in philosophy and in the physical sciences, we are not far behind England, Scotland, France and Germany? In refinement of manners, too, and in courtesy, we cannot but believe, that in many respects Europeans are our superiours. If fairly tested, we fear the balance would be against us. That the common and lower classes of our people have greater advantages than in other countries, is readily admitted, with feelings of pride and gratitude. But the boast often is, that most individuals have more learning, and are better informed than any men of the last or any former generations; and that within twenty years in this country, there has been a great stride in the march of mind. But all this is more easily said than proved:—And as to manners and deportment,—those of the old school, we think, have been given up, for what is called more republican and independent, without any advantages, on the score of courtesy, or for the promotion of urbanity and politeness.—And what is the *benefit* of boasting, even if we might do it with truth? It is of no advantage, as to the improvement or temper of an individual, but the reverse. For it renders one self-sufficient and vain; and when he is ready to *claim* even what he merits, it creates a reluctance in others to acknowledge it. Such a trait of character is far from being conciliating, if it is not directly repulsive and offensive. Nor is it less unfavourable to self-improvement. Such a person, being already perfect in his own estimation, has no motive for becoming wiser or better. By boasting, we in effect say to others, we are your superiours, we neither ask your friendship nor seek for your esteem. A modest and really worthy and well-informed man never declares by words or actions, 'I am as good as I wish to be, or as the rest of the world:' but rather—'I desire to learn and to improve; I meet with others of more learning and virtue, than I can claim to possess; and I would not repulse them by assumption, nor offend them by arrogance: I would excite their good feelings, and collect from them some advice I need, and some knowledge of books or of men, of which I am now ignorant.' All this is quite consistent with due self-esteem, and with resisting the claims of the forward and superficial, by dignified reserve. A man may be courteous without stooping, and unassuming without meanness. The apostolic advice is worthy of remembrance, 'not to think more highly of ourselves than we ought to think:'—Still more the admonition of the Saviour;—'He that exalteth himself shall be abased; but he who humbleth himself shall be exalted.'

The deaths in Boston, during the year 1835, were 1900, being somewhat over five a day, on the average. Two hundred, it is mentioned, died with consumption; and 140, of lung fever.

SHIP BUILDING, IN DUXBURY.

This important line of business is pursued in several sea-ports of Massachusetts. But in no place, to such an extent, we believe, as in Duxbury, in the county of Plymouth, of the same population. Vessels are also built at Salisbury, Haverhill, Bradford, Newburyport, Salem, Beverly, Medford, South-Boston, Milton, Quincy, Hingham, Scituate, Hanover, Kingston, Plymouth, Wareham, Rochester, New-Bedford, Dartmouth and Somerset. It appears by a statement lately published, that within ten years last past, there have been built in Duxbury, thirty-three ships, forty-seven brigs, forty-three schooners, and several sloops; amounting in all to 28,400 tons. It is also stated, that in 1825, there were then owned by persons in that place, 5625 tons of shipping, which had been built there. It is also said, that one of the largest ship-owners in the United States, at this time, is an inhabitant and a native of that town. It is more important to mention, 'that the superiour models and workmanship of the vessels built there, show to what perfection they have carried this useful art.' No ships built in the country are allowed to be constructed more faithfully and thoroughly. The rate of insurance on them affords evidence of this. They generally are built of the pasture oak; and much of their timber is brought twenty miles on land by teams, from the interiour. The raising of oak should be more attended to, or it will be necessary to transport it a great distance. It is a fact, worthy of notice in this connexion, that, in that town, consisting of less than 3000 inhabitants, there are one hundred and ten ship-masters, and forty mates, with a large number of hardy, sober and brave seamen. For enterprise and fidelity, they are not surpassed by the citizens of any other place. In some others in New England, no doubt, they are equalled. Duxbury is one of the oldest settled places in the State. Though it was not formally incorporated till 1636–7, it had several inhabitants in 1624 and 1625: and among them were several of the chief characters of the Pilgrim Company which set down at Plymouth. Elder Brewster, Capt. Standish and John Alden, early removed across the Bay and there fixed their abode. Besides these, the other early inhabitants were Peabody, Nash, Basset, Collier, Mitchell, Delano, Weston, Church, Soule, Simmons, and Wadsworth. Some of their descendants are still there, a sober, industrious people; and there is one of the largest temperance societies in the State.

'WE SEEK A BETTER COUNTRY.'

HEBREWS xi, 14.

Pass on! the country thou seekest to win
Is unclouded by sorrow—unsullied by sin;
Pass onward through trial while yet there is day,
While light is around thee to point out the way:
Bright seraphs and martyrs whose victory is won,
Will welcome thy spirit, when its brief course is run.

The sands of the desert may gather in might,
And sweep from thy path all beauty and light—
Fear not to climb the perilous steep,
Angels are with thee to guide and to keep—
Pass lightly on! thou seekest to win
A country unclouded by sorrow and sin.

Christian Register.

View of St. Luke's Church, Rochester, N. Y.

ROCHESTER, N. Y.

The great central state of New York contains numerous large towns and villages, which have risen up within a few years, and which are now rapidly increasing. At the close of the war of the Revolution, a little more than half a century ago, the country was almost entirely an unsettled wilderness or forest, beyond the distance of thirty miles west of Hudson's river. Now, the whole interior of the State is settled, for three hundred and sixty miles to the lakes Erie and Ontario, the western and northwestern bounds. And there are not only good farming towns, but large cities scattered about in all directions, through the whole territory. One of these cities of the interiour, situated not far from lake Ontario, is Rochester, which has increased with unexampled rapidity, even in our young and growing country, for ten years past. It is nearly three hundred miles from Albany, and contains about 14.000 inhabitants. It carries on a spirited and extensive business in flour: and contains a number of fine mill-sites on the Genesee river. Nor is it backward in literary institutions. It has an Athenæum, and an Institute for advancing the interests of literature and science. These seminaries are under the management of active and intelligent men, and cannot fail to be useful to the place and vicinity. The buildings for religious worship are highly creditable to the citizens. There are two Episcopal Churches, three Presbyterian, one Baptist, two Methodist, and one Roman Catholic.

St. Luke's Church is a very elegant building; we are happy in having it in our power to give a view of it in the present number. It covers an area of 5,400 square feet. It is one hundred and two feet deep, exclusive of the tower, which projects five feet; and is fifty-three feet in width. It is built of hewn gray stone from Auburn. But the corners of the tower, and of the body of the building are red free stone. The windows in the tower are greatly ornamented. The interiour is arranged with convenience and elegance, and affords seats for more than one thousand persons.

NOTES OF A MODERN TRAVELLER, THROUGH EGYPT AND NUBIA.—Continued.

'Cairo is eastward of the Nile, a little above the place where the river parts to form the Delta. It is divided into two cities, the one called Old Cairo, the other Grand Cairo.

'There have been already so many descriptions published of this city, and its appendages, that I shall remark but on a few particulars, which perhaps may not be unworthy of attention.

'The first relates to the annual ceremony of cutting the dyke of the canal, which in the time of the swelling of the Nile, is to convey its waters to Grand Cairo. This canal, out in the country, looks like a neglected fosse; when it enters the city, it appears of more consequence, in flowing by houses that adorn its banks. It is not very broad either in country or city, and where the Nile runs into it, it has but from 15 to 20 feet in breadth.

'As soon as the waters of the Nile begin to rise, they close the mouth of the canal with a dyke of earth, on which is fixed a signal, that is to notify the opening of this and all other canals in the kingdom.

'On the appointed day, the bashaw and his beys, with a numerous retinue, assist at the ceremony of opening the dyke. They range themselves under a pavilion of no great elegance near the place. The Egyptians and the Jews are employed to cut the dyke, while some of the rabble in a paltry skiff, throw nuts, melons, &c. into the water as it enters the canal; the bashaw orders some parats to be thrown in, and a starved firework, consisting of about twenty rockets to be played off; those rejoicings so much exaggerated by travellers, can boast of little more than what may be seen at a village-wedding; the only object there to excite curiosity, is the retinue of the great, which in their way, has a kind of munificence. The people, on these occasions, commit a thousand follies, to witness their joy for the swelling of the Nile, which insures to them a plentiful harvest.

'The next observations I have to make, are on the famous well of Joseph; its mouth is eighteen feet broad, twenty-four long, its depth is 276, from the upper wheel to the bottom of the water; at 146 feet depth is a bason, up to which the water is brought from the bottom, by the means of a second wheel, with a chain of earthen pitchers; this repository is somewhat lower than the middle of the well, for downwards after there are but 130 feet; this well is elegantly cut in a rock, and with so much art, that the rock is a rampart to the descending path down its side. From space to space, there are windows contrived to let in light; by this path the oxen are led down, which put the second wheel in play; from whence, down to the very bottom, is a like descent, with this difference indeed, that it is not so wide as the upper one, having but four feet in breadth, and sixth in height, moreover there is no parapet on its side, it is covered all the way, which renders the going down very dangerous; at the end of the descent is a bason, or a spring of water, about nine or ten feet deep, the taste is brackish; it is never drunk but in a siege, or some other pressing necessity.

'Old Cairo is situated on the bank of the canal that divides the isle of Rhoda from the main land; its length, to reckon from the machine which raises the water of the aqueduct, unto the Basar, is a quarter of a French league; its breadth is five hundred common paces; the rest is very unequal, and its extremities terminate in single houses.

'The majority of its buildings (the abodes of working people excepted) are pleasure houses, whither repair the distinguished inhabitants of Cairo to divert themselves, when the waters of the Nile are at the highest pitch. There are many gardens, and the date trees and vines occupy a great deal of ground.

'At old Cairo there are half a dozen mosques, with minarets, or spires, with other places of worship for different believers; in one of the Coptic churches there is a grotto, in which, tradition reports the Virgin Mary rested from the labours of her retreat into Egypt: the fathers of the Holy-land pay annually a certain sum, for the privileges of saying mass whenever they please in the said grotto.

'The water-house is a work of the Saracens; there are in it four mills, with chains of earthen pots; oxen are used to put them in motion, in order to draw up water to the aqueduct, which conveys it to Grand Cairo.

'One of the most considerable buildings, is Joseph's granary; it covers a large space of ground, and is encircled by a wall; there, is deposited all the tributary corn paid to the grand Signior, by the different cantons of Egypt; there is nothing remarkable or antique, in it.

'The canal cut between Grand Cairo, and the isle of Rhoda, is of the greatest antiquity; it begins at the Basar, and ends near the water-house; it may be walked over without wetting one's foot, when the waters of the Nile are low; but when the river is full, it is navigable by small craft. It is two hundred common paces broad, and a quarter of a French league in length. It is a quarter of a league from Old to Grand Cairo; and half a league from Old Cairo to Boulac, which, by its vicinity to Grand Cairo, serves as a kind of magazine. It is situated eastward of the Nile, and northward of the canal, which, as before observed, conveys the water from the Nile to Grand Cairo.

'In the middle of the river, between Old Cairo and Gize, is the isle of Rhoda, which is near as long as Old Cairo, when its northern point is not overflowed; for during the inundation, it loses a quarter of its extent. It may be about five hundred paces broad in the middle, its northern extremity terminates in a point, and the front of the Mokkias stretches quite across its southern extremity; the island is almost entirely laid out in gardens; its only inhabitants are gardeners, and working men, necessary to assist them with their labours.

'The Mokkias, or Mikkias, is its chief ornament, and was erected by Saracens. It derives its name from its use, for Mokkias signifies measure; and one can effectively observe every day the rise or fall of the waters of the Nile, by means of its graduated column; by its guidance, the public criers proclaim the events in either sense, at different hours through the city. Its basin is in a square tower, surrounded by a gallery, has several windows, and is vaulted in the Arabian taste.

'Some pretend, that it was on this island Moses had been exposed by his mother, and saved by the daughter of Pharaoh.

'Let us now consider Gize, which I have already mentioned; it is a pretty large village, on the western banks of the Nile, opposite to Old Cairo, and the isle of Rhoda; it is built of bricks and mud; the only ornaments it can boast, are four or five minarets of mosques, and some date trees. The city of Memphis, as some suppose, formerly stood where the village of Gize now is; and I confess, this opinion is not devoid of probability, though in strictly examining this opinion, considerable abatements must be made of the grandeur of that ancient capital of Egypt; or we must greatly exaggerate the plains in its neighbourhood: for Gize now covers but half the space Old Cairo occupies; and the environing plains never escape the overflowings of the Nile. Is it then readily to be believed, that so great, so famous a city as Memphis, should have been built in a place subject to water for one half of the year; or if so, that the ancient authors would have omitted so particular a circumstance?

'I shall annex some other remarks I made, during my stay at Cairo, and in its environs.—To wit, their common manner of hatching chickens, is by the means of an oven artfully contrived for that purpose. They thresh their rice with a sledge drawn by oxen, in which kneels the man that drives them, while another carries off the straw, in order to separate it from the grain that remains underneath; before the rice undergoes this operation, it is spread circularly, and leaves an empty space in the middle of the layer. There come frequently to Cairo, a sort of barges on the Nile, carrying senna from Essenay: they are called by the country people Merkee. I embarked on board one of them to go up the Nile from Cairo.

'They have a particular kind of float-boat to ferry over the Nile, made of large earthen pitchers tied closely together, and covered with palmtree leaves; the man who steers, has commonly a cord hanging from his mouth, with which, as he sails, he fishes. There is also Adam's fig-tree, vulgarly called Bananas; the beautiful cypress of Old Cairo; and what is now called Pharaoh's hen, and believed to have been the ibis of the ancients.

'Inasmuch as rain falls but very rarely in Egypt, the author of nature hath in his infinite wisdom, so disposed things, that this defect of rain, is happily supplied by the river Nile's regularly overflowing every year. Though this effect be so generally known, it is strange how erroneously people have strove to account, not only for the cause, but the manner also of cultivating the earth in consequence.

'Authors, who have undertaken to give descriptions of Egypt, have thought these articles so universally known, that they have scarce entered into any detail about them; satisfied in having said, that the fertility of the country is derived solely from the annual inundation of the Nile, they advanced no farther. Hence many people have been induced to think, that Egypt is a terrestrial paradise, that needs not the trouble of ploughing, or even of sowing the earth; and where every thing springs up spontaneously, after the departure of the water. It is quite otherwise, and I would venture to assert, from what I have seen, that no country wants more the aid of agriculture, than Egypt does, which is evinced by their many hydraulic machines to water the earth; and the plough which is in use near Gamasis, in upper Egypt.

'The Delta part, which is the most frequented, and the most cultivated, stands less in need of mechanical assistance; for there they only employ a number of mills, to raise and distribute the water to the different canals, which in the French language, are commonly called *watering canals*.

In 1611, is the first notice to be found of *straw hats* worn by the ladies. In the time of Charles II, 1665, the women wore periwigs, and hats like those worn by the men. This fashion continued in the time of William III; but was abandoned in Queen Ann's reign.

JAMES F. COOPER.

Mr. Cooper, we believe, was born in the State of New Jersey, but his father and family early removed from that State, and settled in the interiour of New York, near the site of Fort William Henry. His education was chiefly under a respectable clergyman in Albany. He was, however, at an early age a midshipman in the Navy of the United States; and to this incident in his life we are probably indebted for the full and faithful description of the sailor, as given in his novels of the Pilot and Red Rover.

As a literary man, Mr. Cooper is principally distinguished by the novels which he has written. In this species of writing he has not perhaps, a superiour in the United States. His publications of this kind are more numerous than those of any other American. We recollect the following:—The Pioneers, The Spy, The Last of the Mohicans, The Pilot, The Red Rover, The Bravo, Lionel Lincoln, The Headsman, and Heidemaur. He early ventured on this kind of composition; and has generally been considered successful in his efforts. Most of his novels have been popular. But the first and second which he published excited the greatest interest: Perhaps, because, being then unknown, little was expected of him. There is a smartness as well as freshness, with some proofs of originality, in his first publications. His descriptions are graphic and spirited; his characters natural, and a good deal of discrimination and tact are displayed in their developement. He has faithfully described the situation and manners of the back woodsmen, and the settlers on wild lands in America. For in this, he speaks from personal knowledge and observation; and their sufferings and labours are justly represented.

'The Spy' was read with avidity, and had a great circulation; as it detailed some events of the war, not generally known. 'The Last of the Mohicans' gives the manners of the Indians, who once inhabited the middle States, and their treatment by the English settlers.* 'The Pilot' gives the history of the brave Paul Jones:—And 'The Red Rover' that of a Buccaneer, of the beginning of the last century. 'Lionel Lincoln' refers to the early period of the Revolution, and the scene is laid chiefly in Boston. Of the other and later novels of Mr. Cooper, we are unable to speak from a personal perusal. They have not been altogether so popular as the former ones. It has been objected to some of them, that the stories were so improbable, as to lose their interest. For however fictitious a relation is, it must be natural and probable, to be interesting. The style of Mr. Cooper's novels has been considered rather diffuse, if not verbose; and as abounding too much with epithets. These are some of the principal objections to his novels. But all acknowledge, that there is invention, and vivacity in his delineations of different characters. In describing those without education and of low life, he sometimes uses even vulgar phrases; but these are not entirely out of place. And taking all his writings together, the impartial and candid will readily acknowledge that he has genius; and if not to be compared to Scott, that he has in some cases been a successful imitator of that eminent writer. He is entitled to high praise in this department of literature, though not to the highest.

In justice to Mr. Cooper, and it is no small praise, for patriotism ought to be ranked among the highest of public virtues, we observe, that he has the feelings and spirit of an American. When in Europe, he was always found to be a warm apologist for the institutions and principles of our republican government.

* The story however, has little of probability to recommend it.

CHEMISTRY.—CONTINUED.

LIGHT AND HEAT.—The nature and cause of light are not fully known. There have been and still are different theories respecting its origin. Some maintain that light is emitted from the sun, and others, that it is to be attributed to motion: the former is the most common. Light is intimately, though not essentially connected with heat. And it is very difficult to examine light separately from heat. Both light and heat are emitted from the sun; but light is not always sensibly attended by heat, as our constant experience will show. The light produced by the Sun contains heat, but when the former is spread through the atmosphere, the latter is often not perceptible. It has been found also by experiment, that heat is less refrangible than light. Both these properties, no doubt, proceed from the Sun; and the medium, through which they pass, may check or lessen the heat, and not have a similar effect on light. The light is no less in latitude 60° or 70°, than in 10°, or at the equator; but the heat is far less. Light is also produced, or emitted, by some chemical changes, independently of heat, or when no heat is perceptible. There may indeed be *latent* heat, which certain changes or motions would cause to be put in operation and render perceptible. Light also may be

absorbed by certain bodies and so remain for some time, and then be extricated from them.

Heat, or caloric, may exist in two different states; in a state of freedom, when its effects are perceptible; and in a state of combination, called *latent* heat, when it produces no sensation or apparent effect. Caloric and heat are often used as convertible terms; but more accurately, caloric is the cause of the sensation of heat; or heat is the effect of the passage of caloric into the body. In a free state, caloric excites the *sensation* of heat, and also expands or enlarges bodies into which it penetrates. When in a latent or combined state, it produces no perceptible effects, and causes no sensation. As a chemical agent, or power, caloric is opposed to the principle or attribute of cohesion; and it also causes the elasticity of bodies. As the antagonist of cohesive attraction, the effects of caloric are to cause the particles of solids to repel each other, so as to overcome their natural attractions. Thus solids become fluids, as in melting of ore and fusion of metals. And when the caloric passes out of a fused substance, the particles approach and regain the state of mutual attraction. Caloric causes, or increases the elasticity of bodies, by combining with the particles of some substances, so as not only to destroy their cohesive power, but so as to separate them beyond the sphere of each other's attraction.

In general, all bodies are expanded by an increase of temperature, and contracted by its diminution. But the ratio of expansion differs in different substances. Liquids expand by the same degrees of heat more than solids, and aeriform bodies most of all. By the same increase, one solid, or one fluid, expands also more than another solid or fluid. Alcohol expands more than water, when exposed to the same degree of heat. Chemistry also shows, that, on the conversion of a solid into a fluid, or a fluid into the aeriform state, a quantity of caloric is absorbed, but which is not sensible to the touch, nor discovered by the thermometer; and hence the phrase, 'latent or combined heat.' When ice melts, caloric is absorbed, or combines with the water, and forms a part of it; and thus water is a compound of ice and caloric. But the caloric is so confined by its intimate union with the water, as not to be given out during its liquid state; and consequently, it cannot excite sensation. Steam is supposed to contain a large quantity of caloric in a latent state. But when liquids, or elastic fluids pass from a rarer to a denser state, caloric is evolved. When water congeals it gives out caloric, which kept it in a fluid state, otherwise it could not become a solid. It has been shown that ice, in becoming fluid, absorbs one hundred and forty degrees of caloric, which remains *latent* in the water. This quantity of caloric must then be evolved, (independently of what the thermometer indicates) before the liquid can become a solid.

THE BEE.—CONTINUED.

Scarcely are the wings of the young Bee capable of being moved, when she makes her way over the honey-comb, and seeks to enjoy the open air. Other Bees going out apprise her where are the doors. Like the rest she goes out of the common dwelling; and goes like them, to seek flowers. She goes alone, and has no embarrassment in finding the hive, when she returns the first time. When the Bees begin to be born in a hive, there is a certain day, when they leave more than a hundred of their cells. Otherwise the hive is daily increased, and in a short time, the number of its inhabitants becomes go great that it can hardly contain them. This gives occasion to the swarming.

We have seen with what admirable attention the Bees take care of the larvæ, which are to give working Bees and drones; but the larvæ from which the queens are to come are otherwise treated. The Bees do every thing for them most prodigally. We know already, that their cells are much larger than the others. The wax that is employed in the construction of each, will be sufficient to make thirty of ordinary size. The paste is given them with such profusion, that their cells are even filled, when they are not in want of it: which is never the case with the working Bees, or males. This paste is also different from that which the Bees give to the other larvæ. It is more seasoned. The position of these larvæ in the cells, differs from those of the working Bees. These are placed nearly horizontally; the head a little more elevated than the other extremity. The royal chrysales are placed vertically, the head down.

Many sure signs announce the near departure of a swarm. The drones that are in the hive are apprised, that they are about to be cast out. But one infallible sign is, when the number of Bees is so great, that the hive can no longer contain them, and that a part is left outside the whole extent of the walls. That which announces its coming on a particular day is, when we hear an extraordinary noise in the interiour of the hive. All seems to be in motion there. Finally, when the sun has warmed the air, and the Bees can no longer support the heat they experience in their habitation, they determine to abandon it. It is commonly after eleven o'clock in the morning, till toward four in the evening, that the swarms go out. If the queen is at the head of the first Bees that go out, or if she follows them closely; at the same moment the other Bees go with her, and rise into the air. In less than a minute, all those who are to make the swarm leave the hive, and are dispersed. All seem to rise, merely to examine in what place they shall collect again. It does not appear to be the queen who makes choice of the place. Many Bees place themselves on a branch, and are soon followed there by others. The mother places herself on a branch near to that, on which the Bees are collected; and it is only when they have formed a thick bed about this branch, that the mother joins herself to them. When she has joined them there, the platoon already formed thickens every instant: the Bees which are yet scattered in the air, press to place themselves where the others are.

REMEDY FOR DRUNKENNESS.—Drink cold water, and repeat the prescription, until you obtain relief.

RELIGION is the best armour, but the worst cloak.

GENUINENESS OF ANCIENT WRITINGS.

The last number of the North American Review, contains a long and able article on the genuineness and integrity of Ancient Writings. The author discovers great research and bibliographical learning. It shows unusual accuracy and discrimination, and it therefore entitles the author to great merit, even though it should be considered a compilation. But it is much more than this, as it presents the strong and numerous arguments in the case, in a small compass. No one, we think, after a careful perusal of the article, can have any doubt as to the genuineness of ancient Writings, whether sacred or common, which are now extant, and which are received as the productions of those persons whose names they bear. This is true of Homer, Xenophon, Tacitus, Livy, Cæsar, Josephus, &c. And it is equally true of the writings ascribed to Moses, to the histories of the New Testament, the epistles of St. Paul, &c. It is indeed, not to be denied, that there have been apocryphal books, which were received as genuine for a time, by a few persons deficient in learning or judgment, and which on proper scrutiny, were found to be forged. But it is not of such books or writings, that the question of genuineness arises; it is, whether those books quoted and regarded as authority, in matters of doctrine or history, for ages, were written by the reputed authors, or by persons who only assumed their names.

We think the writer of the article in the North American Review has fully established the genuineness and integrity of these ancient writings, so as to leave no doubt in the mind of any reasonable man. This he has done, both from external and internal evidence; including, in the latter, those various coincidences and incidental corroborations, by which such public facts and events are always attended. We quote the concluding paragraph of the article referred to.

'It will have been perceived, that in this discussion, reference has been chiefly had to the *classical* remains of antiquity. This course has been designedly pursued; because we have wished to state the general principles, on which investigations of this kind should be conducted. But we would observe, that these principles are as applicable to *sacred*, as to classical or common writings: and the advocates for the genuineness of the Christian Scriptures, only ask that the same course of investigation should be pursued in one case as in the other. Indeed, it is only when the inquiry is thus conducted, that the immense preponderance of proof in favour of the sacred records, can be duly appreciated. And we should be unfaithful, equally to our own convictions, principles and feelings, not distinctly to state, that, in point of fact, the genuineness and integrity of the Christian Scriptures is substantiated by evidence in a tenfold proportion, more various, copious and conclusive, than that which can be adduced in support of any other ancient writings whatever. In simple justice then, the genuineness of these records of our faith cannot so much as be questioned, until the whole body of ancient and classical literature shall be proved spurious or apocryphal.'

EXTRACT FROM LAMARTINE'S PILGRIMAGE TO THE HOLY LAND.

'I separated myself from the caravan which had lingered round the tomb of the Virgin; and seated myself for a moment on the roots of the most solitary and the oldest of the olive-trees. Its foliage hid the walls of Jerusalem from my sight; and its large trunk screened me from the observation of some shepherds, who were tending their sheep on the sides of the Mount of Olives. I had nothing in sight but the deep and rugged ravine of the brook Kedron, and the tops of the olive-trees, which, from this spot, cover the whole extent of the valley of Jehosaphat. No noise arose from the dry bed of the torrent; no leaf rustled on the trees:—I closed my eyes for a moment, and in thought reverted to that night, the eve of the redemption of man, when the Divine Messenger drank the chalice of agony to the dregs, before meeting his death at the hands of men, as the award of his celestial mission. I inquired of my heart, what part I had in the salvation offered the world at so great a price. I represented to myself the extreme anguish which must have filled the bosom of the Son of Man, when he saw at a glance all the darkness, the misery, the vanity, the iniquities of mankind,—when it was his lot alone to lift the burden of crimes and misfortunes, under which human nature, bowed down and groaning, passes through this valley of tears—when he perceived that a new consolation and truth could not be brought to man, but at the price of his life—when drawing back in terrour (or anguish, for a *moment*) before the shadow of death, which he already felt upon him, he said, 'Father, let this cup pass from me.'* And I, ignorant, feeble, miserable man, I also may cry, at the foot of the same tree, 'Lord, may my cup of bitterness pass from me; may it be poured by thee into the chalice already drank for us! He had strength to drink it to the dregs. He knew thee; he had seen thee: He knew wherefore he was about to drink it: He knew that immortal life awaited him beyond the tomb of three days:—But I, O Lord, what do I know, except the sufferings which rend the heart, and the hopes which they have taught me.'†

* But when this part of the prayer of our Saviour is quoted, the other part should in justice to him, always be added: 'Nevertheless, not my will, but thine be done.'

† We do know, that we are to follow and imitate him, as in our sorrows and sufferings, so also in our resignation to the will of God our Father:—And we should remember, that we also are required 'to lay aside every weight and the sins to which we are peculiarly exposed; looking unto Jesus, the teacher and leader of our faith, who for the joy set before him, endured the cross, and despised the shame, and has been exalted to the right hand of majesty in heaven.'

The Poor in Europe.—According to a late estimate, the population of poor, or those supported not by their own labour or property, but by other means, private or public, is nearly one in ten!

Lieutenant was formerly written Lievetenant; the *u* was then used instead of v, in all cases, and thus we still retain the former in this word, instead of v, as in the other words.

View of Mount Auburn.

MOUNT AUBURN,

Is, at present, a place of peculiar interest with the people of Boston and vicinity. And it must long be so, as it is a depository for the ashes of their departed friends. The purest and holiest associations are excited, on a visit to this hallowed spot. The tender feelings of friendship, and the solemn thoughts of the spiritual world are alike awakened, and render the place proper, not only for indulging personal recollections of a pure and soothing character, but for elevating the mind to things unseen and eternal. The wise man, of three thousand years ago, said, 'it was better to go to the house of mourning, than to the house of feasting:'—And a visit to the secluded cemetery cannot fail to chasten our earth-born and worldly views, and to communicate a salutary influence to the heart. It is not proper for man to be *always* gay, though he may be cheerful and indulge, at times in innocent recreation; it is not wise to look *always* on the tinsel, or be always seeking the pleasures of the world, which fade and pass away: but true philosophy, as well as religion, would teach us to extend our thoughts to the immortal state, to which we are hastening, and to discipline the mind and heart for that fast approaching and lasting abode. A visit to the Cemetery of Mount Auburn, may give an impression which in the hour of dissolution, would not be exchanged for the riches and honours of the world. Though we have before referred to this subject, we are induced to notice it again, and to present a view of the interiour of the Cemetery, near the centre of the grounds where the tombs are erected. The whole tract is covered with evergreens and other common forest trees; in some places quite thick, but in other parts more scattered. A variety of rose bushes have been planted here, and in Summer add much to the effect of the whole scene. The grounds abound with eminences and swells, but all are covered with trees. The view here presented, is a very happy and correct one, and will render any verbal explanation or description unnecessary.

CHATEAUBRIAND.

We have on our table, a volume of the Essays of this celebrated French nobleman, on Morals and Literature; and, looking over his critique on the moral system of Madame De Stael, were struck with the following passage:—

'Had I the honour of knowing her, I would venture to say to her: You are, Madam, undoubtedly a woman of very superiour talents; you have a strong understanding, your imagination is sometimes full of charms, as witness what you say of Erminia, disguised as a warrior; and your turns of expression are often at the same time brilliant and elevated. But notwithstanding these advantages, your work is far from being all that it might have been made. The style is monotonous, it wants rapidity, and it is too much mingled with metaphysical expressions. The sophism of the ideas is repulsive, the erudition does not satisfy, and the heart is too much sacrificed to the thoughts. Whence arise these defects?—from your philosophy. Eloquence is the quality in which your work fails the most essentially, and there is no eloquence without religion. Man has so much need of an eternity of hope, that you have been obliged to form one to yourself upon the earth, in your system of *perfectibility*, to replace that *infinite* hope which you refuse to see in heaven. If you be sensible to fame return to religious ideas. I am convinced that you have within you the germ of a much finer work than any you have hitherto given us. Your talents are not above half developed; philosophy stifles them, and if you remain in your opinions you will not arrive at the height you might attain by following the route which conducted Pascal, Bossuet, and Racine, to immortality.'

Thus would I address Madame de Stael, as far as glory is concerned. In adverting to the subject of happiness, that my sermon might be the less repulsive, I would vary my manner; I would borrow the language of the forests, as I may well be permitted to do in my quality of a savage, and would say to my neophite—

'You appear not to be happy, you often complain in your work of wanting hearts that can understand you. Know that there are certain souls who seek in vain in nature souls formed to assimilate with their own, who are condemned by the Supreme Mind to a sort of eternal widowhood. If this be your misfortune, it is by religion alone that it can be cured. The word *philosophy* in the language of Europe, appears to me synonymous with the word *solitude*, in the idiom of savages. How then can philosophy fill up the void of your days?—can the void of a desert be filled up by a desert?

'There was once a woman in the Apalachian mountains, who said: 'There are no such things as good genii, for I am unhappy, and all the inhabitants of our huts are unhappy. I have not met with a man, whatever was the air of happiness which he wore, that was not suffering under some concealed wound. The heart the most serene to appearance, resembled the natural well of the savannah of Alachua; the surface appears calm and pure, but when you look to the bosom of this tranquil bason you perceive a large crocodile which the well cherishes in its waters.'

'The woman went to consult a fortuneteller of the desert of Scambra, whether there were such things as good genii. The Sage answered her: 'Reed of the river; who would support thee if there were not good genii; thou oughtest to believe in them for the reason alone that thou art unhappy. What wouldst thou do with life, if being without happiness, thou wert also without *hope*. Occupy thyself, fill up in secret the solitude of thy days by acts of beneficence; be the polar star of the unfortunate, spread out thy modest lustre in the shade, be witness to the tears that flow in silence, and let all that are miserable turn their eyes to thee without being dazzled by it. These are the sole means of finding the happiness you want. The Great Mind has only struck thee to render thee sensible to the woes of thy brethren, and that thou mayest seek to soothe them. If thy heart be like to the well of the crocodile, it is also like those trees which only yield their balm to heal the wounds of others when wounded themselves by the steel.' Thus

spoke the fortuneteller of the desert of Scambra, to the woman of the Apalachian mountains, and retired again into his cavern in the rock.'

ANCIENT HISTORY OF PHŒNICIA.

Eusebius, a celebrated writer of Ecclesiastical History, A. D. 320–340, has given one book of the history of ancient Phœnicia by Philos of Byblus, (a city of that country;) and *nine* other books of that history have been lately discovered in a Convent in Portugal. Philos, however, was only the translator of that history into Greek; which was in the time of the Roman Emperour Adrian, at the beginning of the second century of our era. The original writer was Sanchoniathon, a Phœnician of Berytus, who is supposed to have written about the time of the siege of Troy, and of the reign of David or Solomon. It is very probable that these historical books will throw some light on the history of that period, and of ages still more ancient; and will furnish some statements highly gratifying to those desirous of learning the condition of that country from remote periods. The Phœnicians were no other than Canaanites, though in some respects separated by their government and occupation from the inhabitants of Palestine. They inhabited the sea-coast of the Mediterranean, or near it: and were neighbours of Tyre and Sidon. They were gross idolators in the time of David, and for a long period before. They worshipped Baal, or Belus, as their chief god, who is probably the Jove of the Greeks, and other ancient Europeans—and the Juno of the latter was perhaps, the 'Queen of Heaven,' of the Syrians, mentioned by Jeremiah. There is evidence, that as early as the time of Abraham, the ninth from Noah, these people, or some of them, were worshippers of the one true God. But after that period they degenerated, and adopted the most gross and corrupt forms of pagan worship. They offered their children sacrifices to their gods; and gave their daughters to prostitution, as acceptable service.

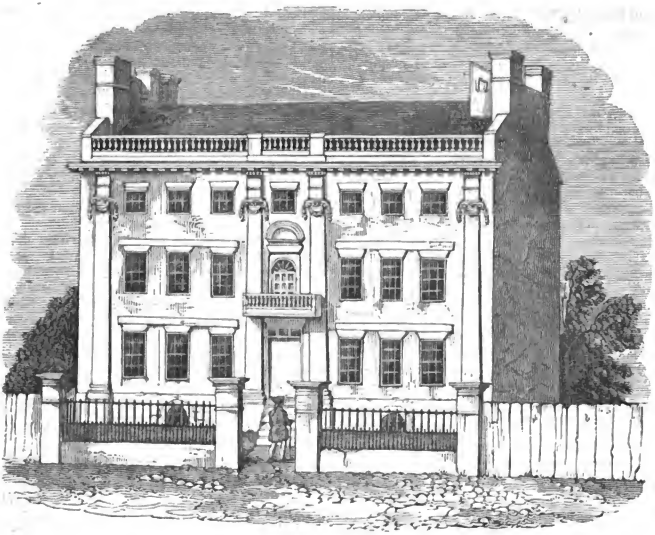
The people of Tyre and Sidon, and other parts of Phœnicia, were attentive to navigation and commerce at an early period: And colonies were settled by them on the western coasts of Africa, and in Greece; and thence probably in Italy and Spain; though the descendants of Japhet, probably, from Asia Minor, served to increase, or to form part of the first people of Europe.

The book of Sanchoniathon in the Greek translation of Philos, which has been preserved by Eusebius, is to be found in his 'Evangelical Preparation.' The other most valuable works of Eusebius, are 'Evangelical Demonstration,' and 'Chronicle,' which was written about A. D. 325. Eusebius was born in 267, and died in 339 or 340: and was highly esteemed for his learning, impartiality, and piety. He was sometime Bishop of Cæsarea in Palestine; and was a member of several celebrated ecclesiastical councils; as that of Antioch, Tyre, and one or two others. He was also a friend and eulogist of Constantine, the first christian Emperour; and delivered a panegyrick on that Prince, after his decease. There is a copy of the Chronicle of Eusebius in the Athenæum in Boston, which was printed in 1483. It is in Latin, and from the translation of Jerome. There is probably but one other copy of this edition in the United States.

For the knowledge of alphabetic writing, the Phœnicians were, no doubt, indebted to the Jews, who had it from the days of Moses; and he probably received it as an inspired gift, or by supernatural communication at Mount Sinai. From Phœnicia, letters, arts, commerce and navigation extended to the west.

MANURES.

The nutritive manures are those which contain juices or other substances, which, being dissolved in water, or divided to the most minute degree, are capable of being drawn into the organs of plants. All the vegetable and animal juices are of this description.—One of the most useful arts in agriculture, and that which requires the most care and attention, is the preparation of dungheaps. It requires the knowledge and application of chemical principles. But it is not necessary particularly to explain these; as it is sufficient to point out to the agriculturist the rules by which he should be governed in his proceedings, without requiring of him an extensive knowledge of the theory, upon which they are founded. Solid substances, whether animal, vegetable or mineral, do not enter into plants unless they are previously dissolved in water, or are drawn in with that fluid in a state of extreme division. Animal and vegetable substances, which are, by their nature, insoluble in water, may, by being decomposed, form new soluble compounds, capable of furnishing nourishment for plants. Animal and vegetable substances, deprived by the action of water, of their soluble particles, may, in the course of their decompositions, form new compounds susceptible of being dissolved. The clippings and parings of horns form an excellent manure, of which the effect is prolonged during a succession of years, owing to the difficulty with which water penetrates them, and the little tendency they have to ferment. Manure is also formed from wool. Hair, feathers, and wool are only particular combinations of *gelatine*, (glue) with a substance analogous to *albumen*, (white of an egg;) water can only dissolve them by means of fermentation, which takes place slowly, and after a long time. It has been found, that fields of corn, &c. were rendered very productive, by the manufacturer of woollens dressing the land with the sweepings of his workshops. It is well known, that the hairs of wool transpire a fluid which hardens on their surface, but which is easily soluble in water. This substance has received the name of animal sweat; and the water, in which wool has been washed, contains so much of it, as to make it very valuable as a manure. In the south of France, where they raise many silk-worms, they make great use of the larvas, after the silk has been spun from cocoons. They are spread at the foot of the mulberry and other trees, of which the vegetation is in a languishing condition; and this small quantity of manure reanimates them surprisingly. On distilling the larvas, it is found that there is a greater quantity of *ammonia (volatile alkalie,)* than in any other animal matter.



THE HUTCHINSON HOUSE.

The Hutchinson House, so called, was situated at the north part of Boston, which, in early times, was the court end of the town. It was between Hanover Street, one of the principal streets in that part of Boston, and North Square. It was an elegant and spacious building, for a dwelling-house, and most of the work of the interiour was of red cedar. Mr. Hutchinson occupied it in 1765, when the riot took place in Boston, on account of the arrival of the Stamped Paper from England, which was ordered by the British government to be used in all important and legal transactions. He was then the Lieutenant Governour of the Province; Governour Bernard was in the chair. But the Lieutenant Governour was very obnoxious, as he favoured this arbitrary act of the British ministry, and was an apologist for most of their oppressive measures. The mob attacked his house in the evening; and great damage was done it. The windows and doors were broken, much of the furniture and many pictures were destroyed. And some valuable papers relating to the early history of Massachusetts, were thrown into the streets: A few of these, however, were gathered up and preserved. The magistrates repaired to the spot, and by intreaties prevailed on the rioters to desist from their work of destruction, and retire; but not till after a good deal of mischief had been done.

Seventy years ago, this was one of the most elegant dwelling-houses in Boston; it was three stories, and the walls of each were high for that period: Its front was upwards of fifty feet, and its breadth forty.*

The Hutchinson family was very ancient, and highly respectable. And Governour Hutchinson himself, was one of the most learned men of his day. He was very early in public life; but after 1765, unfortunately took the side of the British ministry, in their arbitrary and oppressive measures toward the American Colonies; and he was plied so close and hard with arguments, by Otis, Samuel and John Adams, and other whigs of that time, that he went to England in 1774, and did not return.

*. This house was taken down in 1834.

On hearing the Messiah Performed, in the Gloucester Cathedral.—By Rev. W. L. Bowles.

Oh stay, harmonious and sweet sounds, that die
In the long vaultings of this ancient fane,
Stay! for I may not hear on earth again
Those holy airs—that glorious harmony,
Lifting the soul to brighter orbs on high,
Worlds without sin or sorrow!—Ah, the strain
Has died, e'en the last sounds that lingeringly,
Hung on the roof e'er they expired! And I—
Stand in the world of strife, amidst a throng—
A throng that recks not, or of death, or sin.
Oh jarring scenes! to cease indeed ere long:
The worm hears not the discord and the din.
But he whose heart thrills to this angel song,
Feels the pure joys of heaven on earth begin

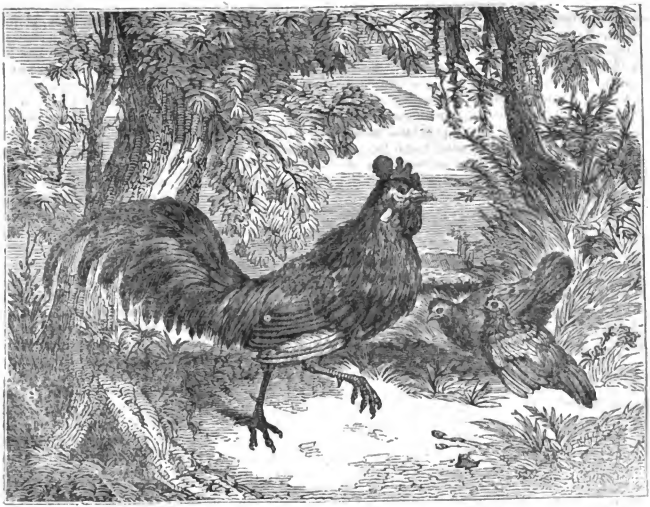
THE POETRY OF LIFE.—By Sarah Stickney.

In seasons of infirmity, misery or vice, who but woman, comes forward to support, to console, and to reclaim? From the disquietudes of puling infancy to the decrepitude and impatience of old age, it is woman alone who bears with all trials and vexations which the weaknesses of our nature throw on those around us. Through the monotony of ceaseless misery, it is woman alone who listens to the daily murmuring of fruitless anxiety, and offers again the cup of consolation, after it has been petulantly dashed at her feet. It is woman, who withdraws not her sweet companionship from that society, whose intercourse is in sighs and tears. What is it to her, that the brilliance of wit is extinguished, the favourite anecdotes untold, and silent all the flattering encomiums that flow from love and gratitude! It is enough for her that the lips now sealed by grief, the eye now dim with tears, and the heart now tortured with agony, are dear—dearer in their unutterable woe than the choicest pleasures of the world, did they centre in herself alone. No—woman will not leave the idol of her worship, because the multitude have turned away to bow before another shrine; because the wreaths have faded from the altar, or because the symbols of religion are no more:—As a mother, we next behold woman in her holiest character: as the nurse of innocence, as the cherisher of the first principles of mind; as the guardian of an immortal being, who will write upon the records of eternity how faithfully she has fulfilled her trust. And let it be remembered, that in assuming this new and important office, she does not necessarily lose any of the charms which have beautified her character before. She can still be tender, lovely, delicate, refined, and cheerful, as when a girl; devoted to the happiness of those around her; affectionate, judicious, dignified, and intellectual, as when a wife only—while this new love, deep as the very wells of life, mingles with the current of her thoughts and feelings, giving warmth and intensity to all, without impairing the force or the purity of any. Yet, while her attributes remain the same, her being is absorbed in the existence of her child. Now, more than ever, she forgets herself, deeming nothing impossible which has reference to her own devotedness and its good, —computing neither time, nor space, nor capability, in the single consideration of its happiness: regarding neither labour, watching, nor weariness, as worthy of a thought, in comparison with its slightest slumbers, or its minutest pain. If the situation of a wife, brings woman to a right understanding of her character, that of a mother leads to a strict knowledge of her principles. No one is so depraved as to teach her child what she believes to be wrong. And yet she must teach and instruct it; for its pure eyes are fixed upon hers, to learn their meaning; and its infant accents are inquiring out the first principles of good and evil. With such a picture before her, how can any woman dare to teach what she did not fully and rationally believe? In a few days, or hours, that child may be a cherub in the courts of heaven. What if a stain should have been upon its wings, and that stain the impress of a mother's hand! Or, if its earthly life should be prolonged, it is the foundation of the important future which the mother lays. Other governours, in after years, may take upon them the tuition of her child, and lead him through the paths of academic lore; but the early bias, the bent of the moral character, the first principles of spiritual life, will be hers; and hers the lasting glory, or the lasting shame.

Let then, the aged woman be no longer an object of contempt, or disregard. She may be helpless as a child; but as a child she may be learning the last awful lesson from her heavenly Father. Her feeble step is trembling on the brink of the grave; but her hopes may be planted on the better shore which lies beyond. Her eye is dim with suffering and tears; but her spiritual vision may be contemplating the gradual unfolding of the gates of eternal rest. Beauty has faded from her form; but angels, in the world of light, may be weaving a wreath of glory for her brow. Her lip is silent; but it may be only waiting to pour forth celestial strains of gratitude and praise. Lowly, and fallen, and sad, she sits among the living; but exalted, purified and happy, she may arise from the dead. Then turn, if thou wilt, from the aged female in her loneliness; but remember that she is not forsaken of her God.

ORIGIN OF SEVERAL PLANTS.

The Potatoe is a native of South America; and is still found wild in Peru, Chile, and Monte Video. The first notice of it by Europeans, was in 1588: It is now spread over a great part of the world. Wheat and rye originated in Siberia and Tartary, where they are now indigenous. Oats are found wild in Abyssinia, and may be justly considered natural to the country. Maize, or Indian corn, is a native of Mexico, and other parts of North America: It was not known in Europe, till after the discovery and possession of Mexico by the Spaniards. The bread-fruit tree was first found in Otaheite and other South-sea islands. Near the close of the last century, it was transplanted in the West Indies. Tea is found only in China and Japan. The cocoa-nut is found indigenous in the equinoxial regions. Coffee is a native of Arabia, and of that part called Arabia Felix: but is now grown in the East and West Indies. The apple is found in most parts of the globe. But in its wild or natural state, it is merely the *crab* apple; and has been varied and improved by cultivation. The peach is a native of Persia; but in its natural state, is small and bitter, or acid, and considered unwholesome. Tobacco is a native of South America, and of Mexico. A species of this plant has been lately found in New-Holland. Asparagus was brought from Asia: Cabbage and lettuce from Holland: Rice from Ethiopia, and from the East Indies; and onions from Africa, and some parts of Asia. The sugar-cane is a native of China, and the manufacture of sugar was known there from the remotest antiquity. It was thence carried to Arabia; thence to Egypt, and thence by the Moors into Spain; and thence to the West Indies and Brazil. Many flowers are from Java and Ceylon, from Cappadocia, from Syria and Italy.



THE JUNGLE FOWL.

This bird is described by M. Sonnerat, in his travels in the East Indies; and who supposes it formed the stock from which all the domesticated fowls proceeded. He maintains, with Buffon, that all or most of our varieties of this domestic fowl, are derived from a single type, and that the differences were owing to climate, accident, &c. But it seems now the prevailing opinion that these varieties proceed from mixtures of original species. The Jungle fowl, or the wild cock of India, was supposed by Sonnerat to be the primitive stock:—But it now appears, that the wild fowl in the Indian Archipelago, and in Java, approximate more nearly to our common fowl. In India, it is believed, that the English game cock originated from a mixture of the Jungle cock, with a wild species in Malaga.—This bird is nearly one-third less than our common village cock. The head is furnished with an indented comb, and the wattles resemble those of the domestic cock. The feathers of the head and neck grow longer as they approach the body; and in their form and substance differ from those which cover similar parts in other cocks.

The cry of the Jungle fowl is not precisely the same as that of the domestic species; but there is a great resemblance in their habits. The cock struts at the head of his hens, and keeps a strict watch for their safety. When they are attacked or disturbed, he flies to a high branch or spot near by, and crows as loud as possible, and the hens run into holes or hiding-places for shelter. The wild Jungle fowl is hunted by the natives in the following manner: 'A line of about forty yards is fastened to the ground at the ends, and elevated by props about eighteen inches—nooses of horse-hair are fastened to the props, about two feet apart, so that when the birds attempt to pass under the line they are caught by the neck. And sometimes a line is fastened to the ground, and left lying there with all the nooses spread, and as the birds pass over them, they are caught by the legs.'

THE HISTORY OF ABRAHAM.

[CONTINUED.]

The wandering life of Abraham was wisely ordered for this important purpose—viz: to remind him of his dependence on Providence, and to disseminate a knowledge of the one true God, among other nations. His father died in Mesopotamia, a country west of Chaldea, and between the Tigris and Euphrates: and after that event, the believing patriarch removed into Canaan, in obedience of the divine command. In a season of great dearth, he also visited Egypt, where no doubt, in his zeal for the true religion, he declared the doctrine of the one true God, and was a constant preacher of righteousness. Wherever he sojourned, he was treated with particular respect; not merely for his wealth, probably,* but for his wisdom and piety. For the ignorant and degraded, even, do not fail to honour the religious character, where it is marked, as it must be, if sincere, with a correct moral deportment. The distinguishing virtue of Abraham was faith; an active, obedient principle, by which he became

* That might be the cause with some; for it is said, that his cattle and gold and silver, were very great.

the devoted servant of the Most High. It was not faith alone, or the mere profession of faith, but a sincere conviction which led to good works; and like the blessed Saviour, of whom he as well as Moses, was in some sense a type, 'he committed himself to God *in well doing*.' Abraham readily submitted to all the discipline of Providence, endured many privations and trials, and prepared himself to do the whole will of God, made known to him; and therefore it was, that 'righteousness was imputed to him,' (that is, he was considered righteous,) 'and he was called the friend of God.'

The principle of faith in this holy patriarch was precisely the same in its nature and character, as that of the sincere and devoted Christian. For what is the faith of the followers of Christ, but a belief in one God, and in Jesus his anointed one, 'as the Messiah, the Saviour of the world.' It is a belief in his sublime doctrine of the character of God, as revealed in the gospel; of the spiritual nature and accountability of man,—of a future retribution, and of life everlasting. Faith is the same now, as ever; as in the time of Adam and Noah; of Abraham, Jacob and Joseph; of Moses, Samuel, and Daniel, Ezra, and John the Baptist; and of the apostles and primitive Christians:—'It is the substance of things hoped for, and the evidence of things not seen.' It is the foundation of what as immortal beings we hope for, and the foresight of things now unseen. In former times, as now, with our fathers and remote ancestors, as with us, it leads to holy trust and confidence in the promises of God; it persuades us of the realities of the future, spiritual world; and therefore is a powerful motive, or incentive to virtue and righteousness. It is the support of piety and moral goodness, in all the trials of life. It is indeed the vital principle of all true religion. And it matters not, comparatively speaking, what are the particular forms and minor tenets of different sects, if this vital, operative principle exists. 'The just,' (in all ages and places) 'live by faith;' such a faith as Abraham, and other holy men had; whether before Christ or after him; yea, whether living under the sound of the gospel, or in heathen countries; such men live by faith. 'They shall come from the east and the west, from the north and the south, and shall sit down with Abraham, Isaac and Jacob, in the kingdom of God.' The essential doctrines of religion must be simple and few, and be plain to all honestly disposed and sincere seekers for truth and duty. Eusebius, the faithful and early christian historian says, 'that Abraham and other virtuous patriarchs were Christians in spirit, though not in name. They knew not Jesus of Nazareth, but the spirit he inculcated, was manifested in their lives and conversation:' And thus it was 'that Abraham is said to have seen the day of Christ.' He anticipated it, by his faith in God and by a holy life, conformable to the divine will and commands, such as Jesus himself required. The religion of Abraham prompted him to deeds of kindness and benevolence. He pleaded in behalf of devoted Sodom; he was friendly and kind to Lot, and the defender of the invaded rights of his neighbouring chiefs.—But he has been charged with dissimulation. He was, indeed, through fear, betrayed into an act not entirely justifiable, perhaps; but an explanation may be given, which shows his conduct not to be liable to the charge of real falsehood. When he said, that Sarah was his sister, it was true, according to the common language of that day; for she was his near relative; a cousin or a niece. The celebrated author of the novel of Charles Grandison, expressed the opinion, that Abraham was a true gentleman: and that he possessed all the essential qualities to entitle him to that appellation, is evident from his great benevolence, kindness, and hospitality; his pacific deportment, and readiness to assist and defend his suffering neighbours. His name was long cherished in the East; and his bright example often commended for the imitation of other men of wealth and power. He was indeed esteemed by some as a prophet, and the Arabians, Persians, and the people of India had a high veneration for his character; and it was the opinion of a few learned men that he was the same as Zoroaster. It has been supposed that Abraham had some knowledge of astronomy; and it is generally admitted that the Chaldeans, to whom his family belonged, were devoted to the study of this science at a very early period. And it is supposed that Noah and Shem might have handed down some knowledge on the subject, from the Antediluvians. Job, who probably lived not far from the time of Abraham, appears to have been somewhat acquainted with astronomy; and yet it is not to be concluded that in his day there had been any accurate calculations made of the distances and revolutions of the planets, or a proper distinction recognised between them and the fixed stars. Yet at a period, not much later than that in which Abraham lived, the Chaldeans and Babylonians kept a record of eclipses.

It has long been a question, who was the priest of Salem, who blessed Abraham, and to whom the patriarch gave tithes. There have been various opinions given; but none of them entirely satisfactory. The most common is, that it was *Shem*, who was living in the time of Abraham, and probably survived him a few years. But there is no evidence that Shem ever removed from Chaldea or the vicinity into the land of Canaan. And tradition is not favourable to the supposition. It is enough to know that he was one of the few, who as late as the time of Abraham, (viz. three hundred and fifty, and four hundred years after the deluge,) were worshippers of the true God. Probably, several of the fourth and fifth generation from Noah, retained the faith which he professed. This priest and king of Salem, (by which we may understand the chief man, or patriarch of the place) was a believer in the divine unity. He blessed Abraham in the name of the Most High God, the Lord of heaven and earth: And he blessed, or praised, the Most High God, who had delivered the enemies of Abraham into his hands. The pedigree, or genealogy, of this pious man is not recorded by Moses, who has given some account of the descent of other eminent persons mentioned by him; and therefore, it is said, by the apostle, 'that he was without father, without mother, without pedigree.' (See Heb. vii. 3, and 6.) In writing for the Jews, who had an established

order of priesthood, and that confined to a particular family and tribe, the apostle says, he was without descent, (or of whose descent there was no recorded account) and was not a priest according to the order of Aaron. He was therefore a type of Christ, who was made a priest, though not of the tribe of Levi, but of Judah; and who is constituted such forever, having no successor:—'He is the Apostle and High Priest of our profession;' and none other is needed to intercede or offer sacrifices for us, 'seeing he ever liveth to be our *intercessor* at the right hand of God.'

CHILI.

Chili, or Chile, in South America, is singular in its form, as it extends nearly 1400 miles along the coast of the Pacific Ocean; viz: from 22° to 42 south latitude: but in width, from the range of the Andes to the sea, is only 180, or 200 miles. The Andes, on the east of Chili, extends the whole distance; and the territory, thence to the ocean, is almost a continuous slope. This country has been frequently visited by earthquakes; one occurred in 1835, which destroyed great property and many lives. This was near Conception, in about 37° degrees of south latitude. The Andes rise to the height of 15,000 feet, and the greater parts are covered with perpetual snows. This country is without large rivers, while on the east of the Andes, there are several very extensive, running from the mountains into the Atlantic. The lakes are also few in Chili. The mineral productions are numerous and valuable, as gold, silver, copper; and rock salt and marble are found there. Some extensive mines of nitre have also been discovered. The state of the country, for some years, has prevented the exploring and working of these mines. The copper mines are said to be the most extensive. Lead, iron, and tin, have likewise been found in the country.

On approaching the coast of Chili, the view of the Andes is truly sublime. 'When drawing near the land at day-break,' says a late traveller, 'the Andes burst upon our sight in surprising magnificence and sublimity. Starting, as it were from the ocean itself, their summits of eternal snow shone in all the majesty of light, long before the lower earth was illuminated; when, suddenly, the sun appeared from behind them, and they were lost; and we sailed on for hours before we descried the land.'

In the south of Chili, the rains are very heavy, and fall generally during six months of winter. But in the latitude of Valparaiso, (about 32° 50' south) it is seldom wet more than two successive days, after which, there is fine weather for a week or ten days. The gradual decrease of atmospheric moisture, from the south of Chili to the north of Peru, is a striking feature, and produces a remarkable effect on the vegetation. In Valdivia and Conception, where the rain is copious, forests of lofty trees abound, and the earth is generally covered with herbaceous plants, and produces large corn crops without irrigation. Most of the timber used in Chili and Peru, is derived from Conception; and consists of the roble, lingui, laurel, gueule, and litri. The Chili pine, *(araucaria)* is almost confined to the country south of the *Biobio*, where the natives subsist entirely on its seed, which they harvest and bury in the earth for winter use. Its wood is resinous, but brittle, and therefore not exported. In the middle provinces, vegetation is less luxuriant, and the woods thin. The myrtle is found here, and is sometimes of great growth: and with its fragrant white blossoms, is a most beautiful tree. The palm grows in the middle provinces, but not extensively; the leaves, sap and fruit of which, yield a large income to the proprietors. The sap decocted is a good substitute for honey; and the leaves are used for thatching the houses.—The birds of Chili are the Larks and Lark-warblers: But the Condor is the most celebrated bird of this region. There is also the Plant-cutter, and a singular species of Humming bird. The *Lama* is found in Chili, as well as in Peru; which is a wool-bearing animal, not very unlike a small Camel. The *Vicugna*, an animal resembling the Lama, is also a native of the country. There are several ports in Chili, which are visited by our whale ships, in the Pacific whale-fishery.

ANIMALS OF FORMER PERIODS, NOW EXTINCT.

In examining the crust of the earth, it has been found to be full of different organic substances, vegetable and animal (chiefly of the latter;) which have remained as the memorials of the revolutions and changes which have occurred on its surface, and the only proofs of animals long since passed away. The attention of naturalists has been drawn to this subject, especially of late years, and they have endeavoured to classify these relics. And it appears that some of these belonged to extinct species of still existing genera, and that others belong to a distinct genus, of which no type or species are now known. Such is the position of these organic remains in the earth, considered relatively as to their distance from the surface, that learned and experienced geologists are able to determine, with much plausibility and some probability, the relative periods when they existed. Among these remains there are some which are remarkable for their gigantic dimensions,—such are the Mammoth, or fossil Elephant; an extinct species of elephant found in North America and Asia; the Mastodon, found only (we believe) in the United States, of the enormous size of eighteen feet in length, and twelve in height: the gigantic Elk, an extinct species of deer, found in Europe, nine and a half feet in height: an extinct genus of the Sloth, of the size of the Rhinoceros, remains of which have been found in South and North America: A colossal monster of the Lizard family, ***seventy*** feet long.

Comprehensive Atlas.

The amount of Whale Oil brought into the United States during the year past, 1835, according to a statement in a New Bedford paper, was 172,683 barrels of spermaceti, and 120,649 barrels of common or right whale; being in the whole 293,332 barrels. There were brought into New Bedford 84,966 barrels of sperm and 49,764 barrels of whale, making a total of 134,730.—Nantucket is the next highest on the list, having about 44,000 in all. And New London is next highest, after Nantucket.

View of St. Paul's Church, Troy, N. Y.

ST. PAUL'S CHURCH, TROY, N. Y.

Troy has greatly increased in population and in public buildings, since the Hudson and Erie Canal was finished. The canal is united to the Hudson, nearly opposite this place, and has been the occasion of a great increase of business. Troy is on the east side of the river, about six miles north of Albany, and within the county of Rensellear. This city is celebrated for the Female Literary Seminary, which is one of the first for advantages, and discipline perhaps, in the United States. It has been opened about fifteen years, and usually has two hundred and fifty pupils. The teachers are of the highest character for intelligence and deportment.

St. Paul's Church, in Troy, of which we now give a representation, was erected about eight years ago, by a Society of Episcopalians, in that town, and is a remarkably good specimen of the Gothic style of architecture. It is one hundred and three feet by seventy; and the walls are of a dark coloured lime-stone, hummered and laid in mortar. At the west end of the building, a tower projects twelve feet, and is one hundred feet in height. There is a basement of nine feet, and the walls of the main building rise thirty-eight feet above it. The window over the altar is very large, being forty feet by twenty. On each side of the building there are five windows; and three on each end. The galleries and ceiling are supported by clustered columns: The wood-work is painted in imitation of oak. The cost of the Church and lot amounted to nearly $40,000. The Episcopalian Churches in our country are generally more costly and elegant, than the buildings for public worship among the Congregationalists. We certainly do not think elegant buildings necessary for a pure and spiritual worship; but we should like to see more taste displayed in the architecture of all public buildings in the United States.

MEN OF THE LAST GENERATION—OF THE REVOLUTION.

Most of the patriots of the Revolution have now departed from the stage of life. Of the few which remain, every year and almost every month will bring us the intelligence of their death. It is but a *few* which still linger about us. And they should not pass off the scene, where they acted so noble, and to us, so profitable a part, without the expression of our regret at their departure, and of our gratitude for their generous devotion to the cause of civil liberty. These patriotic men may be divided into two classes, as to their age at least.—The men who wielded the pen in defence of freedom, and who, as legislators, opposed the doctrines and measures of an arbitrary ministry, from 1763 to the close of the war, and the establishment of our Independence in 1783; and those who entered the military ranks and bore arms, from 1775 to the treaty of peace. Those of the first class or character, were generally, from thirty-five years of age to fifty: There might be a few exceptions. And those of the other class, the military, were between the ages of twenty and thirty-five or forty; with some exceptions also. For Washington was forty-four or five: Ward, Putnam, and Thomas were a few years older. All those of the first class have departed, (except Mr. Madison only; and he was not in public life till 1780 or 1781,) and few have been with us for twenty years past. If they had not all paid the debt of nature twenty years ago, they had retired from the cares of public life. Those of the second are now also almost extinct. The weekly chronicle does not appear, without a record of the death of some veteran of the Revolution. They tell of some brave man, who periled his life in the cause of freedom and his country, smitten by the cold hand of death, and laid low in the silent tomb. The last public papers inform us of the death of *General William North*, of New York, but a native of Massachusetts; a brave officer, an accomplished man, a sincere patriot. We believe he has not left a fellow-officer of a higher grade, or of a more elevated character.

But let us not indulge in vain regrets: rather let us seek to catch something of the spirit of our fathers, and imbibe the principles which animated them, in their opposition to tyranny, and in their sacrifices and efforts for the common weal. In the contest for power and in the struggles of party, there is danger of forgetting the generous principles of the patriots of the last generation, or of becoming less zealous for the liberties of the country, than for the triumph of political friends. Our fathers were sincere republicans or whigs; and they were not satisfied with the *name*. They were opposed to monopolies, and to exclusive privileges of every sort; and advocated equal rights and equal justice with regard to all classes of the people. Talents, virtue, and experience, were the only qualifications for places of public trust. The influence of party was scarcely known or exerted: and 'the spoils of party' never grated upon their ears, nor haunted their imaginations. They went forth in the hour of danger and of need, at the call of their country; and their object was not to serve their own, but her interests.

The doctrine of equal rights and privileges is essential to a true republican government; and constitutional provisions and barriers are necessary to the practical support of this doctrine. But when the citizens enlist under party leaders, or seek merely the triumph of party, the Constitution is forgotten or disregarded; or what is as great an evil, they pervert it to justify their conduct, however arbitrary or unjust it may be.

It is proper, it is highly important then, to look back to first principles—to principles and maxims, which governed the patriots of the Revolution, and of 1788, when the federal government was established. Rulers must have power—but no more than the people have given them by the Constitution, to be used for the general welfare. There will be parties in a free government; but they should have it in view only, to watch and guard those in power, lest undue authority be exercised by them: and not to form cabals to embarrass the government, merely because they themselves have not a share in administering it.

The library of a Clergyman lately deceased in England, was valued at £8, while his wine was estimated to be worth £300. Some one observed, he must have thought as an apostle did, 'that the letter killeth, but the spirit giveth life.'

THE SABBATH, OR DAY OF REST.

A stated time for religious worship and instruction, often recurring, must be considered highly important, and therefore, in some sense obligatory, by all who admit the benefit of piety and morality, either to individuals or society. The instructions of religion are important for man, as a citizen, and necessary for him, as an heir of immortality. And the worship, blended with such instructions, is necessary to cherish the feelings of gratitude, reverence and piety, which are due from man to the beneficent Creator. To maintain such worship and to enjoy such instructions, it becomes indispensable that particular days and seasons be set apart, that all may attend; and these times must often return, or the admonitions of religion will be forgotten, and piety and devotion will languish. And these seasons of religious worship and instruction, moreover, must be periods of rest from the common cares and labours of the world. A day of rest merely, which occurs as often as every seventh portion of time, so that there might be a suspension of labour for those required to work for the support of society, would be commendable. It would be not less a proof of good policy, than a dictate of humanity. But in proposing it merely as a day of rest, there would be danger of its becoming an occasion for recreation merely, and of its being thence changed into a season of excess, extravagance, and riot. While then it is a suspension of laborious employment, so as to recruit the exhausted frame of the working man and of beast, it should be a season for moral and religious improvement, for devout aspirations, and preparation of the soul for its spiritual and immortal welfare. Such, we believe, was the original design of the Sabbath; or the separation and consecration of the seventh day to religious purposes. 'God *rested* from the work of creation,' says the sacred historian, 'on the seventh day; and he blessed and hallowed it.' *He hallowed it.* He ordered that it should be hallowed and sanctified by man: Should be kept holy to the Lord; or employed in his worship, as well as being without worldly labour and occupation. It is not merely said, that Jehovah rested on the seventh day, or Sabbath—but that he blessed it, and appointed it to be hallowed. And truly the day is blessed to those who hallow it by worshipping their Creator, and seeking spiritual food from the instructions of his holy word. And when the ten commandments were given by Moses, on divine authority, to the people of Israel, after their exode from Egypt, and before their establishment as a nation in Canaan, they were directed to *remember* the Sabbath day. It was not then first appointed or set apart by God: but it had been long forgotten, or its due observance neglected in their bondage in Egypt; and perhaps, in the previous sojournings of their fathers. By all the generations and people (from a short period after the deluge,) it was disregarded. And hence their ignorance and forgetfulness of the true God, and their degeneracy into idolatry, polytheism and impiety. The long disuse and neglect of the Seventh day, for religious worship and instruction, was the occasion of gross ignorance, of licentiousness, violence and crimes. Mankind became sadly degenerate, depraved and brutalized, within four or five, especially within eight or ten hundred years from the deluge; and one great cause was the disregard of the holy Sabbath, and the neglect of stated and frequent religious worship and instruction.

That the Sabbath was not originally appointed by Moses, we may also refer to the fact, that before the ten commandments were given, the Israelites were reminded of it, (See Exodus xvi,) and ordered to gather food on the sixth day, for that and the seventh also. Moses, and the prophets, often exhorted the people of Israel to sanctify the Sabbath day, and to keep it holy to the Lord. In the time of our Saviour, we learn that it was strictly observed, and the synagogues were open on that day, for religious worship and instruction to all classes of the people. Our Lord corrected the abuses of the Sabbath, and probably directed the change of the day, from the seventh to the first. Every seventh day was observed by his disciples; and it cannot be important whether it be the same as the Jewish Sabbath, or not. But it is important that a stated season be set apart for religious worship; and it is plainly the direction of revelation, that it should be one day in seven. The keeping of this portion of time for holy purposes; not indeed as the Jews kept it, but for religious improvement; is necessary to the well-being of society, and the welfare of mankind in the present world. How important is its due observation and sanctification, to the spiritual progress and the cause of piety, every good man must be deeply conscious. B.

Artificial Stone.—This recent and wonderful invention was made by a Mr. Parker, of Onondaga, in the State of New York. If the account of the Stone and its uses be correct, it is certainly a very important discovery. It is a composition, but the materials or ingredients are not specified, originally prepared in a liquid state, like mortar; and which in the course of a few days becomes a solid stone or substance, as firm and impenetrable as granite, and capable of a beautiful polish. It is found, after exposure to the severest tests, that the changes of weather do not injure it, but affect it beneficially. It is not injured or weakened by the severest frosts. Blocks of it penetrated with frost and then exposed to the fire do not cause it to crumble, nor to lose its firm texture. Cisterns made of it are not affected by the congealing of the water in them, into solid ice: While reservoirs of other materials are liable to bursting. The cement or composition can be formed of any size, shape or colour, and is far more beautiful than brick or common stone: And buildings may be constructed of it, with great facility and strength. It has also been used for pavements, and is found to be uninjured by any changes of the weather.

A Stone Dressing Machine has been invented at the Ley-mill stone quarries, (England,) which reduces and dresses more blocks of stone in thirty minutes, at thirty-seven and a half cents cost, than a first rate mason can do in five days and a half.

A VIEW ON THE HUDSON RIVER.

The Highlands bordering on the Hudson River for the distance of upwards of twenty miles, present some of the most interesting scenes in the United States; and the variety is such as to justify *repeated* notices of the views which this majestic river and its margin present. A little above Stony Point, at the distance of forty miles from the city of New York, the Highlands begin, and though all may justly be pronounced interesting and attractive; at some points on the river the view is more wild and picturesque than at others. A section of the river here presented, is a few miles below Newburgh, which is to be seen in the distance. The banks of the river below the Highlands are a better soil, and are better cultivated; and therefore present some rich and beautiful views. In passing the Highlands, the prospect is more attractive to those fond of natural scenery, however wild and rugged in appearance. That there was ever, since the deluge, a large lake just above the Highlands, which served as a barrier for it, does not seem very probable, though the supposition has been made by some learned men. It must have been a tremendous convulsion to cause such an effect; and we have no proof of one adequate, since the flood, in the time of Noah. The face of the earth was then probably greatly changed, as there was a breaking up or disruption, of all the waters of the globe. If there were once a continuous mountain of rocks, running across where the river now is, the force must have been most potent to have broken it and made the channel for the river, as we now behold it. Such theories may amuse, but are not to be admitted without strong proof. It has been conjectured, that the Mediterranean was once upland; but we consider it altogether improbable, that it has suffered any great alteration since the general deluge.

Hudson river may be considered a natural canal, which, with the Erie canal, constructed in 1825, extends a continued water conveyance for produce, the distance of five hundred and twenty miles from the city of New York to Buffalo on Lake Erie. From New York to Albany, a distance of one hundred and fifty miles, the passage in a steam-boat is now only about twelve or fourteen hours. Above Newburgh, there are several handsome cities and villages; indeed, they rank among the most beautiful in the country. The Champlain Canal, connecting the waters of that lake with Hudson river, adds much to the business in navigation, between New York city and the north part of the State, and Vermont.

The Halley Comet, having passed that part of its orbit nearest the sun, is now on its return to its *aphelion*, in the far distant regions of space, the extremity of which, the imagination even is unable to conceive. It was discovered by the attentive astronomers of Yale College, with a large telescope, a few nights ago in the East: but it is not visible to the naked eye. Its progress has been most rapid since the first of September, when it drew near to the solar system. The elements, and the revolution of this comet, will probably be stated by the astronomers, more fully and accurately than had been done before.

MR. MADISON.

It can hardly be said, as has lately been asserted by a letter-writer, who had visited Mr. Madison, that he was 'one of the fathers of the Revolution;' for he did not take part in the public political measures till 1780, (when he was about thirty,) and the war began in 1775; and the discussions and proceedings which led to it, and were preliminary and essential to it, were of an earlier date by ten years. The master-spirits, who argued the question between the British government and the Colonies, who manfully protested against its arbitrary measures, and convinced the people of the justice of their cause, and of the oppressions of the parent State—they were 'the fathers of the Revolution;' they are entitled to the highest praise,—and they who followed in their steps and supported the course began, are also descrving great credit for their resolution and patriotism. Mr. Madison was of this second class; but he early became distinguished in the national councils, for his ability, and his devotion to the cause of American liberty. Soon after he became a member of Congress, in 1781, he was placed on the committee for preparing instructions to our Envoys then in Europe to negociate a treaty of peace with Great Britain. And no greater proof of confidence in his talents could have been given. Some of the members of Congress, from the New England States, I recollect, were not altogether satisfied with the instructions which he proposed to give to the Envoys. For it left too much to the French court, to dictate or decide as to the terms of a treaty; and did not insist, as a *sine qua non*, on a full and free right to the *cod fishery*. And it was the wish of the New England delegation, that this right should be fully recognised by treaty, and not to depend on the pleasure of any government to grant as a privilege. The instructions were modified accordingly; and *John Adams* and *John Jay*, two of our Ambassadours then in Europe, faithfully urged our right and claim to the fishing ground, and thus secured a great benefit to the Eastern States.

Mr. Madison was a very active and efficient advocate of the federal Constitution in 1788. His influence probably decided the question of its adoption in Virginia. And it is well known that his powerful pen, with the aid of Jay and Hamilton, contributed greatly to recommend it to the people of the United States, and to remove objections which were early raised against it.

Whether the war of 1812, which was declared when Mr. Madison was President of the United States, and was brought to a close during his administration, without securing the objects, for which it was professedly made was right; is an inquiry not proper perhaps, for us to answer, or settle; but it is a part of the *secret* history of that period, that Mr. Madison himself was not fully in favour of that calamitous measure, but was induced to approve of it officially by the urgent advice of his political friends and supporters.

Mr. Madison is admitted by men of all parties to be a great statesman, and a sincere patriot. But it has been a question, whether he had the firmness of Washington; or that degree of it, which the Chief Magistrate of this great Republic ought to possess.

Mr. Madison's opinions and views of the nature and powers of the federal Government are entitled to great respect. We believe they are strictly orthodox. He says, it is partly federal and partly national—*national*, as to certain general purposes, as defined and delegated to Congress for the welfare of the whole Union; but federal also and chiefly, as the Constitution is a compact made by several independent Governments or States; and by and according to which they are united or confederated as States, and not as a whole people *en mass*. The majority of the people in each State govern; and therefore, their voice determined a State to accede to and adopt the Constitution; and the majority, or two-thirds, of the States was necessary to establish the new Federal Government. It is always to be recollected also, that no power can be rightfully exercised by Congress, except what the States have delegated to it.

A WARNING TO DRUNKARDS AND EXCESSIVE DRINKERS OF DISTILLED LIQUORS.

There are several instances on record, authenticated by the most unexceptionable testimony, of habitual drunkards having been burnt up, by the intense internal heat of their bodies, owing to long and excessive use of ardent spirits. And the fact is satisfactorily explained by considering that *alcohol* is highly inflammatory and combustible. We have noticed several of these cases in our Magazine, which were stated and testified to, by learned and honourable witnesses. The following case is in confirmation of the fact, that alcohol is combustible, and that it is fully capable of producing such effects as have been before stated. The case to which we allude, is that of the *burning of the blood* of an habitual and obstinate drunkard. A medical student prevailed on a man, long given to intemperance, and who had for some time drank with great excess of rum, and eaten very little, to be bled. A pint bowl of the blood of the drunkard, was touched by a match, when a conflagration immediately ensued; burning with a blue flame for about thirty seconds.

'ARE THEY NOT MINISTERING SPIRITS?'—Heb. i, 14.

What though we see no bright array,
Nor flaming seraphs cleave the air;
Blest spirits camp around our way,
And God himself is present there,—
'Mid wat'ry waste or woodland dell,
Lone field, or crowded city's pile,
The armies of Emmanuel
Marshal unseen, their radiant file.
And silent oft some angel arm
Is raised to aid the drooping saint,
To lighten grief, forfend from harm,
To cheer the sad, revive the faint.
And when, released from earthly ties,
The soul from death's cold bed shall spring,
Calm shall it seek its wished-for skies,
Shelter'd beneath some seraph's wing.
Bright hosts of heaven! I fain would see
Your burning ranks unveiled around,
And in your hallow'd company
Feel every spot celestial ground.
Fain would I live with God and you,
More than with men and things of earth;
Till I may be a spirit too,
Re-born by death to heavenly birth.

Christian Observer

THE LIFE-BOAT, IN A STORM.

If we do not mistake, the first successful effort in constructing a Life-boat was in 1790, by a Mr. Greatheed of England. It is said, he was induced to prepare the boat, from several (then) recent loss of lives by shipwrecks on the coast of Durham and Northumberland. In 1789, a large ship was stranded near the coast, and in a violent storm the crew all perished in plain view of the people on shore. A meeting was called, and a premium offered for the plan of a boat, on a principle, that it would not sink in the roughest sea. The invention of Mr. Greatheed was the result of this offer: and its value was soon proved, and recognised; and in 1802, he received a reward from the British Parliament of £1200, and one hundred guineas from some merchants of London. On inquiry, before the reward was granted, it appeared to the satisfaction of a committee, that from 1790 to 1802, that three hundred persons had been saved by means of these boats off South Shields alone. And it was also proved, by the testimony of competent witnesses, that no sea, however high, would sink or upset the boat. It was stated by several experienced seamen, who had been in the boat, and who had seen her often go off and return, that it never failed in bringing away the crew from the wrecks, and vessels in distress. They also stated, that no other boat could have gone from the shore at the time in safety. The boat might be filled with water by the waves, and yet would not founder, nor upset. It appears by recent accounts, that the Life-boat is more frequently used on the coasts of Durham and North umberland, which are very dangerous, than other parts of England.

The peculiar benefit of the Life-boat consists in its buoyancy,—the bottom is hollow and air-tight; and the sides are surrounded by boxes, or apartments air-tight. Some of these boats are lately furnished with copper tubes. The sides being divided into several parts, prevents danger to the boat when struck by a cross-wave; which, however, will seldom happen, as both ends of the boat are formed alike, and its direction can be changed without much exposure in a tempestuous sea. When the boat ascends a wave, the water which may have been shipped passes out at the lowest end, through holes made for that purpose. One of these boats, build at Sunderland in 1800, is twenty-six feet long, and nine and a half wide. The division of the sides into several parts is considered essential to the safety of the boat; and the air-holes are equally important. They discharge the water in less than one minute, even if the boat were full. The boat is usually manned by eight or ten persons; and it appears, that after a little experience, they meet every difficulty and every peril with great coolness and resolution. And their benevolence is equal to their courage. Indeed, this is the general character of the sailor, both British and American. They seem regardless of their own lives, when they see others in danger. The Life-boat has been instrumental of saving many from sudden death on the English coasts, within the last forty years.

It is matter of surprise that a similar plan, in order to prevent the loss of lives by shipwrecks on the coast of the United States, has not been adopted; especially, as the above plan has succeeded in England.

ANECDOTE OF A FRENCHMAN, WHO DWELT AMONG THE SAVAGES

Philip De Cocq, who was born in a little village of Pitou, went to Canada in his infancy, served there as a soldier, at the age of twenty years, during the war of 1754, and after the battle of Quebec retired to the country of the Five Nations, where, having married an Indian woman, he renounced the customs of his native land to adopt the manners of the savages. When I was travelling through the wilds of America, I was not a little surprised to hear that I had a countryman established as a resident, at some distance in the woods. I visited him with eagerness, and found him employed in pointing some stakes at the door of his hut. He cast a look towards me, which was cold enough, and continued his work; but the moment I addressed him in French, he started at the recollection of his country, and the big tear stood in his eye. These well-known accents suddenly roused, in the heart of the old man, all the sensations of his infancy. In youth we little regret the pleasures of our first years; but the further we advance into life the more interesting to us becomes the recollection of them; for then, every one of our days supplies a sad subject for comparison. Philip intreated me to enter his dwelling, and I followed him. He had considerable difficulty in expressing what he meant. I saw him labour to regain the ancient ideas of civilized man, and I watched him most closely. For instance, I had an opportunity of observing that there were two kinds of relative things absolutely effaced from his mind, viz. that of any superfluity being proper, and that of annoying others without an absolute necessity for it. I did not choose to put my grand question, till after some hours of conversation had restored to him a sufficiency of words and ideas. At last I said to him: 'Philip, are you happy?' He knew not at first how to reply.—'Happy,' said he, reflecting—'happy! Yes; but happy only since I became a savage.'—'And how do you pass your life?' asked I.—He laughed—'I understand you,' continued I. 'You think such a question unworthy of an answer. But should you not like to resume your former mode of living, and return to your country?'—'My country! France! If I were not so old, I should like to see it again.'—'And you would not remain there?' added I.—The motion of Philip's head answered my question sufficiently. 'But what induced you,' continued I, 'to become what you call a savage?'—'I don't know,' said he, —'instinct.' This expression put an end to my doubts and questions. I remained two days with Philip, in order to observe him, and never saw him swerve for a single moment from the assertion he had made. His soul, free from the conflict of social passions, appeared to me, in the language of the savages with whom he dwelt, calm as the field of battle after the warriors had smoked together the *calumet* of peace.—*Chateaubriand.*

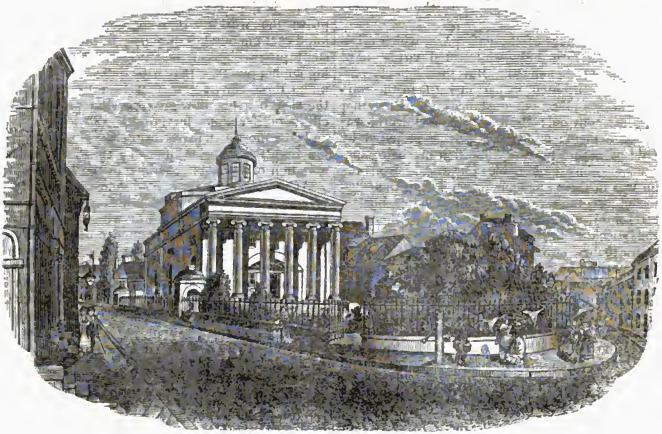
THE DOG KEEPER.

The Dog is a remarkable animal in many respects: And there is a great variety of them, though believed, by writers on natural history, to have all proceeded from a common origin. They have some properties in common with the fox and the wolf, but most resemble the latter; and are indeed considered of the same genus. All kinds of Dogs have powerful instincts, which places them near the rational creation. The elephant and the horse have similar powers and capacities. The Dog is sagacious, and discriminates by intuition, or instinct, with accuracy and promptness. And he is valuable also for fidelity and kindness towards those from whom he has received kind treatment, and in whose service he has been long engaged. There are many wonderful stories on record, of their attachment, sagacity and fidelity. Their ability to find the clothes or property or residence of their master, even when at a great distance, is very wonderful, and has been often related. One was carried to New Orleans from Boston, by water: and he soon returned to his master in the latter city, by land.

The dog *Keeper*, was the offspring of a large Newfoundlander, and the old English Ban dog: The sire could all but speak, and the mother had uncommon qualities, developed in fact by an excellent *education*. He was as fond of his master, as the master was of him; and would always accompany him, or find him, wherever he had gone, or however far distant. And when he found his master, he would look him in the face, in an inquisitive manner, as if he would ask, 'may I go with you.' If his master frowned on him, or did not look kindly, it was enough; *Keeper* left him, though disconsolately, and returned to the house. The master never found it necessary to repeat his command; a look or nod was sufficient for Keeper. He knew what was meant, and instantly obeyed. After a long absence, on the return of the master, late in the evening, *Keeper* was the first to meet him, some rods from his house, and to offer his cordial though silent salutations. 'During my absence,' said the owner, 'I sometimes forgot Keeper; but he did not forget me; though some other old friends were unable to recognise me.' Keeper went with his master to the house of a friend, a very cold night, and when the master entered, he supposed the dog would repair to his own shelter,—but at a late hour when he retired, he found Keeper lying on the cold stone of the door, ready to escort him to his home in the sleet and dark.

Artesian Wells.—Wells which are made by *boring* to a great depth, called *Artesian* Wells, were first known in France; but that peculiar mode of obtaining water has been pursued in other countries. Improvements have been lately made in the construction of these Wells, in France, by which the impure water, near the surface of the earth, in populous places, can be carried off, as well as pure water raised from a great depth. In large cities, such a plan must be highly useful.

'O, listen, man!
A voice within us speaks that startling word,
'Man, thou shalt never die!' Celestial voices
Hymn it unto our souls: according harps,
By angel fingers touched, when the mild stars
Of morning sang together, sound forth still
The song of our great immortality:
Thick-clustering orbs, and this our fair domain,
The tall, dark mountains, and the deep-toned seas,
Join in this solemn, universal song.' Dana



BANK OF PENNSYLVANIA.

The Bank of Pennsylvania in Philadelphia, is considered among the elegant public buildings of this city, which is one of the first in the United States, for its literary institutions and for the good taste of its citizens. Philadelphia may justly boast of more buildings appropriated for public purposes than any other in America. We have already referred to several of these, with a view to excite a good taste for building in other parts of the country, as well as in a desire to do justice to the people of that ancient and justly renowned city.

The Bank of Pennsylvania fronts on Second Street, near Walnut Street. The view here given was taken from Dock Square, and represents most prominently the western portico and ornamented grounds. The building is a parallelogram of 126 feet by 51, with two porticos of marble. The interiour of the Bank is so arranged as to unite convenience with elegance in a great degree. There is a circular banking room of 45 feet diameter, which is in the centre of the building. It is the opinion of the best judges in architecture, that the builder has succeeded in planning and constructing an edifice which affords an excellent specimen of the Grecian Ionic order in all its original purity and simplicity.

THE PILGRIMS.

The character of those resolute Englishmen who first settled upon the uncultivated shores of Massachusetts, the principles which governed them, the events connected with their history, both in Europe and in America, should never be forgotten. Their characters were composed of stern, enduring materials, of moral courage, of active and suffering virtue; their principles were piety to God, love of freedom, a conscientious adherence to duty, and a provident and most generous regard for posterity: and the story of their enterprise, sacrifices and labours, serves to show what may be effected by men acting under the influence of religion, and a deep sense of their obligations to promote the moral good of future generations. With these impressions, I have thought you would readily give place to a few hasty remarks, touching our ancestors, the first English inhabitants of New England.

I am aware, that this subject has been frequently brought before the public. But can it be too often considered? Does not gratitude both to God and man require us to dwell upon it? Is it not useful to contemplate the characters and deeds of those brave and holy men? Can it fail to excite and strengthen a public spirit, a love of civil and religious freedom, ardent feelings of benevolence, and elevated sentiments of piety?

It is almost universally admitted, that our ancestors, the founders of New England, were virtuous and religious men. Yet it is often said, by way of objection to them, that they were unreasonably strict, and in some degree chargeable with intolerance and bigotry. But what if we admit, that imperfection cleaved to their characters; that they laid undue stress upon some speculative and unimportant points, or were even intolerant in some cases, though in theory they were advocates for the rights of conscience; there still remains so much to admire and to imitate, that we are fully justified in holding up

their characters and principles as worthy of uncommon praise.

The consequences of the enterprise, which originated in their rare and disinterested virtue, have been extensively beneficial. But these effects perhaps, will be attributed, in part at least, to the state of the world, and to circumstances not altogether under their controul: Be it so. A new world was open before them; and a theatre was prepared by the God of nature for the exhibition of their generous dispositions and noble purposes. Still the leaven was in them; in their principles, in their disinterestedness, their unconquerable love of liberty, their resolute adherence to duty, and to the voice of God, speaking to them in his holy word.

Do we realize how much we owe to these men? Do we consider how much they suffered in our behalf? Do we appreciate, as we ought, their respect for the rights of conscience? Their resolution, their perseverance, their sacrifices, their disregard of self, and their willingness to endure reproach, persecution, and the loss of all things worldly, for the cause of truth, of freedom, and of religion?

These are the traits of character, for which (with all their mistakes and imperfections) we are called upon to cherish a grateful and respectful sense of the memories of our ancestors. They opposed civil and ecclesiastical tyranny, at the hazard of every thing personal and every thing worldly. They felt their responsibilities as rational and moral beings. They were diligent and faithful in seeking to learn their duty and the divine will; and under the guidance of a spirit of piety, of a pure conscience and of a sound mind, they devoted themselves to defend the cause of truth, with an ardour and firmness, not exceeded, if equalled, since the days of the Apostles.

It is almost impossible to estimate the blessings and benefits of their resolute efforts, too highly. It is appalling, even in imagination, to think of the despotism, bigotry, ignorance and degradation, which would have still covered the earth, had not the English Puritans, the Leyden and Plymouth Pilgrims, the Massachusetts Company of Non-Conformists, opposed most resolutely the united power of the crown and the mitre, and thus exposed themselves fearlessly to persecution, poverty and martyrdom.

But, blessed be God, 'the darkness is past, and the true light begins to shine.' Luther and Calvin began the glorious work of religious reformation, which shed a cheering light upon the cause of civil liberty. 'The former cannot exist without the latter.' The Puritans, says the royal historian Hume, kept alive the spark of political freedom, in the days of the Charleses and of James II. But they stopped far short of perfection. They, indeed, resolved to see with their own eyes, and not to trust to the limited and cloudy vision of their predecessors; and yet, they would have had all others see only as they saw. Not so the celebrated, the prophetic Robinson. He perceived that 'more light was to break forth from the word of God.' He believed that 'the kingdom of God was progressive;' and with a truly christian and liberal spirit, he exhorted his people, 'to examine and think for themselves; and to follow him only in so far as he had followed Christ and his gospel.'

This is the spirit which is to regenerate and improve the world. It recognises 'the march of mind;' it encourages inquiry; it provides for constant progression in the cause of moral truth and human happiness. It is with these impressions and under these convictions, that I am led to anticipate the vast benefits flowing from the principles and efforts of our pious forefathers. The most happy and the most extensive results are evidently to follow from the diffusion of such a spirit, and from an imitation of the noble example of the Puritans.

At the present day, indeed, and especially in our favoured country, we need not fear persecution, or chains, or tortures. But are we not accessible to the ignoble and debasing influence of low ambition, of ease, and wealth, and of a love of popularity, which may deter us from the exercise of that independent spirit, which our fathers exhibited; to do and suffer ourselves for the great good of posterity and of mankind? 'Nothing important,' says the elder Mr. Adams, 'is to be achieved, but by great efforts and perseverance, but by disinterested and ardent patriotism.'

The merits of Carver, Robinson, Bradford, Winslow, Standish, and Brewster, of Endicot, Winthrop, Phillips, Saltonstall, and others, have been often and justly recited. But there was a Shirley, an Andrews, a Beauchamp, and a Hatherly, (most of whom, never came to America,) without whose generous co-operation and support, the feeble band of the Pilgrims would have been broken in pieces, and scattered to the four winds of heaven.

Sons of the Pilgrims, go on in the glorious career which they commenced, under so many obstacles and discouragements. They have trodden the path to immortality. Let us build upon their foundation. Let us cherish the interests of learning and of religion, the cause of free inquiry and of civil liberty; and strengthen and improve the institutions, which they established. Let us imitate their virtues, imbibe their noble spirit of independence, and their preeminent love of truth; and thus contribute our humble part to the improvement and happiness of our race.

NOTE.—This article was furnished, by the present Editor of the American Magazine, for the Boston Monthly Magazine, in Aug. 1825; and is now copied into our present Number, as there is an uncommon desire manifested to learn the true characters of the Puritan Fathers of New England.

ASTRONOMY.—CONTINUED.

The Planets Mercury, Venus, Mars, Jupiter, and Saturn, have been known from the earliest ages in which astronomy has been cultivated. Uranus was discovered by Sir W. Herschel in 1781, March 13, in the course of a review of the heavens, in which every star visible in a telescope of a certain power was brought under close examination, when the new planet was immediately detected by its disc, under a high magnifying power. It has since been ascertained to have been observed on many previous occasions, with telescopes of insufficient power to show its disc, and even entered in catalogues as a star; and some of the observations which have been so recorded have been used to improve and extend our knowledge of its orbit. The discovery of the

ultra-zodiacal planets dates from the first day of 1801, when Ceres was discovered by Piazzi, at Palermo; a discovery speedily followed by those of Juno by Professor Harding, of Göttingen; and of Pallas and Vesta, by Dr. Olbers, of Bremen. It is extremely remarkable that this important addition to our system had been in some sort surmised as a thing not unlikely, on the ground that the intervals between the planetary orbits go on doubling as we recede from the sun, or nearly so. Thus, the interval between the orbits of the Earth and Venus is nearly twice that between those of Venus and Mercury; that between the orbits of Mars and the Earth nearly twice that between the Earth and Venus; and so on. The interval between the orbits of Jupiter and Mars, however, is too great, and would form an exception to this law, which is, however, again resumed in the case of the three remoter planets. It was, therefore, thrown out, by the late Professor Bode of Berlin, as a possible surmise, that a planet might exist between Mars and Jupiter; and it may easily be imagined what was the astonishment of astronomers to find four, revolving in orbits tolerably well corresponding with the law in question. No account, *a priori*, or from theory, can be given of this singular progression, which is not, like Kepler's laws, strictly exact in its numerical verification; but the circumstances we have just mentioned lead to a strong belief that it is something beyond a mere accidental coincidence, and belongs to the essential structure of the system. It has been conjectured that the ultra-zodiacal planets are fragments of some greater planet, which formerly circulated in that interval, but has been blown to atoms by an explosion; and that more such fragments exist, and may be hereafter discovered. This may serve as a specimen of the dreams in which astronomers, like other speculators, occasionally and harmlessly indulge.

We shall devote the rest of this article to an account of the physical peculiarities and probable condition of the several planets, so far as the former are known by observation, or the latter rest on probable grounds of conjecture. In this, three features principally strike us, as necessarily productive of extraordinary diversity in the provisions by which, if they be, like our earth, inhabited, animal life must be supported. There are, first, the difference in their respective supplies of light and heat from the sun; secondly, the difference in the intensities of the gravitating forces which must subsist at their surfaces, or the different ratios which, on their several globes, the *inertiæ* of bodies must bear to their *weights*; and, thirdly, the difference in the nature of the materials of which, from what we know of their mean density, we have every reason to believe they consist. The intensity of solar radiation is nearly seven times greater on Mercury than on the Earth, and on Uranus 330 times less; the proportion between the two extremes being that of upwards of 2000 to one. Let any one figure to himself the condition of our globe, were the sun to be septupled, to say nothing of the greater ratio! or were it diminished to a seventh, or to a 300th of its actual power! Again, the intensity of gravity, or its efficacy in counteracting muscular power and repressing animal activity on Jupiter is nearly three times that on the Earth, on Mars not more than one third, on the Moon one sixth, and on the four smaller planets probably not more than one twentieth; giving a scale of which the extremes are in the proportion of sixty to one. Lastly, the density of Saturn hardly exceeds one eighth of the mean density of the earth, so that it must consist of materials not much heavier than cork. Now, under the various combinations of elements so important to life as these, what immense diversity must we not admit in the conditions of that great problem, the maintenance of animal and intellectual existence and happiness, which seems, so far as we can judge by what we see around us in our own planet, and by the way in which every corner of it is crowded with living beings, to form an unceasing and worthy object for the exercise of the Benevolence and Wisdom which presides over all!

Quitting, however, the region of mere speculation, we will now show what information the telescope affords us of the actual condition of the several planets within its reach. Of Mercury we can see little more than that it is round, and exhibits phases. It is too small, and too much lost in the constant neighbourhood of the Sun, to allow us to make out more of its nature. The real diameter of Mercury is about 3200 miles: its apparent diameter varies from 5″ to 12″. Nor does Venus offer any remarkable peculiarities: although its real diameter is 7800 miles, and although it occasionally attains the considerable apparent diameter of 61″, which is larger than that of any other planet, it is yet the most difficult of them all to define with telescopes. The intense lustre of its illuminated part dazzles the sight, and exaggerates every imperfection of the telescope; yet we see clearly that its surface is not mottled over with permanent spots like the Moon; we perceive in it neither mountains nor shadows, but a uniform brightness, in which sometimes we may, indeed, fancy obscurer portions, but can seldom or never rest fully satisfied of the fact. It is from some observations of this kind that both Venus and Mercury have been concluded to revolve on their axes in about the same time as the Earth. The most natural conclusion, from the very rare appearance and want of permanence in the spots, is, that we do not see, as in the Moon, the real surface of these planets, but only their atmospheres, much loaded with clouds, and which may serve to mitigate the otherwise intense glare of their sunshine.

The case is very different with Mars. In this planet we discern, with perfect distinctness, the outlines of what may be continents and seas. Of these, the former are distinguished by that ruddy colour which characterizes the light of this planet (which always appears red and fiery), and indicates, no doubt, an ochrey tinge in the general soil, like what the red sandstone districts on the Earth may possibly offer to the inhabitants of Mars, only more decided. Contrasted with this (by a general law in optics), the seas, as we may call them, appear greenish. These spots, however, are not always to be seen equally distinct, though, *when seen*, they offer always the same appearance. This may arise from the planet not being entirely destitute of atmosphere

and clouds; and what adds greatly to the probability of this is the appearance of brilliant white spots at its poles,—which have been conjectured with a great deal of probability to be snow; as they disappear when they have long been exposed to the sun, and are greatest when just emerging from the long night of their polar winter. By watching the spots during a whole night, and on successive nights, it is found that Mars has a rotation on an axis inclined about 30° 18′ to the ecliptic, and in a period of 24ʰ 29ᵐ 21ˢ in the same direction as the Earth's, or from west to east. The greatest and least apparent diameters of Mars are 4″ and 13″, and its real diameter about 4100 miles.

We come now to a much more magnificent planet, Jupiter, the largest of them all, being in diameter no less than 87,000 miles, and in bulk exceeding that of the Earth nearly 1300 times. It is, moreover, dignified by the attendance of four *moons, satellites*, or *secondary planets*, as they are called, which constantly accompany and revolve about it, as the Moon does round the Earth, and in the same direction, forming with their principal, or *primary*, a beautiful miniature system, entirely analogous to that greater one of which their central body is itself a member, obeying the same laws, and exemplifying, in the most striking and instructive manner, the prevalence of the gravitating power as the ruling principle of their motions: of these, however, we shall speak more at large in the next chapter.

The disc of Jupiter is always observed to be crossed in one certain direction by dark bands or belts. These belts are, however, by no means alike at all times; they vary in breadth and in situation on the disc (though never in their general direction). They have even been seen broken up, and distributed over the whole face of the planet: but this phenomenon is extremely rare. Branches running out from them, and subdivisions, as represented in the figure, as well as evident dark spots, like strings of clouds, are by no means uncommon; and from these, attentively watched, it is concluded that this planet revolves in the surprisingly short period of 9ʰ 55ᵐ 50ˢ (sid. time), on an axis perpendicular to the direction of the belts. Now, it is very remarkable, and forms a most satisfactory comment on the reasoning by which the spheroidal figure of the earth has been deduced from its diurnal rotation, that the outline of Jupiter's disc is evidently not circular, but elliptic, being considerably flattened in the direction of its axis of rotation. This appearance is no optical illusion, but is authenticated by micrometrical measures, which assign 107 to 100 for the proportion of the equatorial and polar diameters. And to confirm, in the strongest manner, the truth of those principles on which our former conclusions have been founded, and fully to authorize their extension to this remote system, it appears, on calculation, that this is really the degree of oblateness which corresponds, on those principles, to the dimensions of Jupiter, and to the time of his rotation.

A still more wonderful, and, as it may be termed, elaborately artificial mechanism, is displayed in Saturn, the next in order of remoteness to Jupiter, to which it is not much inferior in magnitude, being about 79,000 miles in diameter, nearly 1000 times exceeding the Earth in bulk, and subtending an apparent angular diameter at the earth, of about 16″. This stupendous globe, besides being attended by no less than seven satellites or moons, is surrounded with two broad, flat, extremely thin rings, concentric with the planet and with each other; both lying in one plane, and separated by a very narrow interval from each other throughout their whole circumference, as they are from the planet by a much wider.

GOVERNOR EVERETT'S SPEECH.

We have purposely avoided entering into party politics, in conducting the Magazine; nor do we intend now to deviate from that purpose. But we cannot refrain from expressing our particular gratification on a perusal of the inaugural address of Governor Everett, before the Legislature of Massachusetts, in January past. As it is free from mere party feelings, and is conciliating and candid in relation to some topics, on which all do not think precisely alike, we think no offence can be taken by any, in declaring our general approbation of the speech. Several highly important subjects are noticed; but it is hazarding little, we think, to say, that the *people* will cordially respond to the sentiments advanced, with equal frankness and candour. On capital punishment, if we mistake not, the public opinion will be in favour of the suggestion, that it should be abolished in all cases, except that of wilful and deliberate murder. As to slavery, every one who considers the federal compact, it is believed must subscribe to the opinion of the Governor on the subject. In recommending the abolishment of incarceration merely for debt, the people will say *Amen*. If there still are any abuses or oppressions to be found in the existing usages or practice of the law, they also should be removed. We pretend not to say there are any. But there should be no unnecessary delay, and no heavy expenses necessarily incurred, when an honest poor man has occasion to appeal to the courts for protection or for justice.—The speech altogether shows the friend and the advocate of the people. The Governor is not the exclusive friend of the rich; no: he is against all monopolies, and the grant of particular privileges to any class of men. 'The greatest good of the greatest number,' is his motto, as it always must be of every sincere republican. He is for equal rights and equal justice. And since the administration of Gov. *Brooks*, no one has expressed sentiments more republican, or more consonant to the doctrines of the fathers of the Revolution.

Indiana.—It is a remarkable fact, that the farmers in fifty-eight counties in Indiana can transport their productions from their own doors by water, in flat boats to market. Sixteen are bounded or intersected by the Wabash—ten by the north branch of White river—twenty by the south and its forks—fourteen by the Ohio and its little tributaries—five by Lake Michigan and St. Joseph's, and others by other branches and creeks. From all parts of the State, farmers and mechanics can prepare their freight, and in the winter season float off to New Orleans or other markets, and return in season for another year's labour.

ARTILLERY AND DRAGOONS.

Train of French Artillery of 1834.

We cannot boast of much knowledge of military costume or tactics, having never served even in the ranks of a militia company, nor are we gifted with a taste for military parade or efforts. But in saying this, we mean not to condemn the militia system; we should like rather to see it improved, that it may be respectable, and thus prevent a standing army, one of the greatest dangers in a republican government. We have a respect for the citizen-soldier, and think the public treasury in each State should be drawn upon, for their equipments, and for a reasonable compensation for the time they devote to military discipline. But for a military, whose trade is war, we have no sympathy, nor can we act the part of an apologist. Our fathers of the Revolution were not fond of war; they were not mercenaries, but patriots, and buckled on their armour in a day of peril to serve and to save the republic. But as we have a company of proud cavaliers, in the costume of modern artillery, to present to our readers, some explanation will be expected.

The use of artillery in military enterprise is of comparatively modern date; and was not adopted till after the invention or knowledge of gun powder; which, though as early as the 12th or 13th century, was not applied to warlike purposes with cannon before the middle of the 14th. But soon after this time, it was known all through Europe: and gunnery, or the use of artillery, became quite a science. To manage artillery with good judgment and effect, one must have experience in the use of cannon, and have a knowledge of mathematics and engineering. In flying artillery, much employed by Napoleon, it is necessary also to be a good horseman. There is besides, a *light* artillery drawn by horses, but the men are not mounted. The latter is sometimes called *flying* artillery, as it is designed to be moved with greater rapidity than common heavy field artillery. When artillery was first introduced, though cavalry was used, its manœuvres were awkward and inefficient. The emperor of Germany perceived the important use which might be made of it: and a general in the army of Frederic the Great showed its practicable effects. Bounaparte employed the cavalry in the artillery department more than any one of a preceding age. It would require too large a space in our columns to give a minute description of the habiliments and dress of one of the mounted artillery of different periods. A brief notice must suffice.

With the foregoing view of some mounted or cavalry artillery, we give a drawing of a gunner, or one attached to cannon in the reign of Francis I, and of two others in the time of Henry II. It may

Artilleryman of Francis I, and Henry II.

be proper to add, that the service of the artillery was extended and improved from 1500 to 1550; and bands or companies of artillerists were formed in all places where there were arsenals. In the French armies, from the 15th to 17th century, there was a great variety of cannon. Their calibre, determined by the weight of the ball, was from one to thirty-three pounds for the pieces most commonly used. Under Henry II, many were recast; and after him to the reign of Louis XIII, they had only seven different calibres.

The men attached to the artillery acquired a high degree of consideration, when *Sully* had achieved the organization of his army. Before that time, there were only companies or bands of cannoniers, which were disbanded in time of peace. They were the most distinguished regiments of the army, and had charge of the materiel (the baggage.) The Swiss and Languenots, German infantry, frequently divided this honor. Sully established in their place some standing corps of bombardiers and cannoniers,

to do service at all times. They perceived too late the insufficiency of these troops; and in 1691 was created the regiment of *fusiliers du roi*, which were specially attached to the service of the artillery. It was composed of four companies, one of cannoniers, one of sappers, and two of artificers. Twenty-two new companies, created the following year, made up a corps of two battalions of thirteen companies each, of which one was grenadiers. The number of battalions was successively increased to six. In 1684 companies of bombardiers, detached in different places, formed the regiment of royal bombardiers, and in 1693 the regiment of *fusiliers du roi* took the name of regiment *royal artillerie*.

Artillerymen of Louis XIV.

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DRAGOONS.

Dragoons of 1554.

A dragoon, or light-horseman, is of French origin; which probably derived its name from the Roman draconarii, whose lances were adorned with figures of dragons. They were trained to fight either in or out of the line; and singly or in a body. Though they were usually mounted, sometimes they fought on foot. Such armed horsemen were in use more than two centuries ago; but experience proved that they did not answer the end designed, and they were seldom required to act with the infantry. In more recent times they form a useful kind of cavalry more heavy than hussars. Louis XIV, sent dragoons to convert, or chastise the *Huguenots*, in 1684. These were called *dragoon-*

Dragoon of 1684.

conversions; as sincere, no doubt, as other conversions made by persecutions and compulsion.—We cannot enter into details, as to the changes of their dress or arms, from one age to another. The accompanying drawings will serve to give a general description of their person and armour.

Dragoon of 1834.

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It is an error to condemn pleasures merely as such—they may be innocent as well as criminal.

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Temperance in youth is the assurance of vigorous old age.

PLACES OF PUBLIC RELIGIOUS WORSHIP IN BOSTON.

According to a late census, the city of Boston contains 78,000 inhabitants: and by a report of the clergymen who are engaged in the religious instruction of the poor, it appears that there are fifty places for religious worship belonging to Protestants; besides two for the Roman Catholics. The number of these are estimated at 8, or 10,000. There are then 70,000 or 68,000 Protestants for the fifty religious societies, three of which are new and small. Leaving forty-seven of the usual number, which are said to be 155 families on an average. If five to a family be assumed, the result is between 29 and 30,000, who belong to and usually attend public worship, and (without including the Catholics) there must be 35,000 at least, who do not belong to, nor statedly attend societies for religious worship. If each family were supposed to contain six members, then the number who statedly and usually attend would be 10,000 more, viz. 40,000; which would still leave 28,000 who do not statedly attend. This result presents a serious view to the friends of virtue and social order. For what can be justly expected of this part of the population, but disorder and crime? A partial remedy indeed, is applied. There are five places open for the religious instruction of the poor. And the faithful and pious men devoted to this benevolent work, have done and are doing great good. But they are not sufficient for the labour of teaching so many people. The rich are called upon to furnish means of extending these benefits, by providing places of worship, and compensating those who labour in the cause.

GERMAN LITERATURE.

The earliest written monument of the German language is the translation of the four gospels by bishop *Ulphilas* about the year 360. It was from the latin into what has been called the *Moesogothic*. This was earlier than any other of the living languages of Europe. In Gaul (France) the Franks first established schools in the sixth century; but these taught barely reading and writing, and a little bad latin. As to German *literature*, it has neither been appreciated nor known by the English (our masters) till within the last half century. By the learned and the inquisitive of the present generation, it has been cultivated with great avidity and diligence. And by some of the theologians of our country, German literature and philosophy are viewed with no favourable spirit. Some of the Sophists of that nation have shown less reverence for the Christian Scriptures, and have indulged in bolder theories and interpretations than the English divines had usually adopted. They seem desirous of subjecting all systems and doctrines to the test of human reason; even those which are derived from revelation. The liberal, or rational divines of England and America contend (as all consistent protestants must) for the use and exercise of reason in the interpretation of Scripture. And yet, as to what is purely a matter of faith, they do not insist on the umpirage of human reason. The declarations of Scripture respecting the character of God, and the future and immortal destiny of man, liberal theologians admit, without proof from reason; because reason is not competent to decide; and so also as to miracles, their reality is matter of faith, arising from historical evidence. Still there is nothing irrational or absurd admitted into their creed. But the German philosophers, or rationalists, of the present day, unless much misrepresented, demand a reason for every thing required to be believed; or, in other words, they reject or doubt whatever is not fully proved by reason to be true, or to exist. They therefore seem to set human reason above or in opposition to revelation, instead of making it the handmaid, or the interpreter of it. The liberal theologian considers reason the original revelation; and the written one as a help, a guide, an addition to, and an improvement of that first impressed on the mind of man. What then is clearly taught by the last, reason teaches us to admit; and yet what the scriptures do really teach or reveal, reason only can decide or ascertain.

German literature may be said to have begun, in the eighth century, in the reign of Charlemagne. This Prince established numerous monastic schools, collected documents of the language and laws, ordered that religious instruction should be in German, and caused translations from the latin to be made. His immediate successors showed little regard for the interests of learning; but in the tenth or eleventh centuries, the *Othos* were the active patrons of literature. About this period, public libraries were formed, and a number of learned men flourished in Germany. From this time to the Reformation, little progress was made in good learning, the great object of study being to support the dogmas and legends of the Romish church. In the sixteenth century, Erasmus, Luther, Melancthon and others were alike friendly to literature and religion. Schools and libraries were multiplied; and philology and theology mutually assisted each other.

THE STUDIES OF THE YOUNG.

We all admit that there is no royal or privileged road to science. No one can acquire or purchase learning, but by labour and study. Attention and application are indispensible on the part of the pupil. Method, or system, is as necessary as study: And judgment in the teacher, in his requirements of the young, is equally important. But, in this respect, it is feared, that many err. We refer to the very young, under the age of ten or twelve, (and yet the remark would be just if applied to them) when we observe, that the mind is injured by requiring close application for a long period. The mind of the young will not bear a heavy load; and even with a light load, it will need recreation and repose. The memory is often too much crowded. It is filled to a plethora. And there is not mental power to digest or to bear it. The ideas are indistinct, and therefore confused. Nothing is fully and thoroughly understood. Or different subjects and topics are presented at once to the mind, and due discrimination is not made. One subject should be well understood and disposed of, before another is presented, unless it be for the sake of illustration. Teaching

by compulsion is also, generally, ill-judged; especially for those quite young. The instruction offered will not attach; there must be a willingness to receive it, or it is like water spilt on the ground. The child must be allured and enticed to study. It must be induced to put forth its own powers, feeble as they are, to acquire what is tendered, and to make it its own. Encouragements should be used. It is more easily wrought upon by commendation and kindness, than by angry menaces. If a child has any docility of mind, it will be manifested by persuasion; compulsion will not create it nor strengthen it. And if a love of learning and a desire for mental improvement do not exist, and cannot first be kindled, there will be little hope of advancing in the path of knowledge. The principle of emulation should not be disregarded; but should not be made the only or chief inducement to study. Children of ordinary capacity may be injured and discouraged, if the only motive to study which is presented to their minds is that of rivalry to others. Neither the intellect nor the dispositions of children are formed in one and the same mould. A judicious teacher will endeavour first to learn the temper and capacity of his pupil: and a faithful one will not be satisfied with the routine of instruction six hours a day. He deserves no thanks and he can claim no merit for that. He must study the tastes and powers and tempers of his pupils; and with kindness and discrimination, adapt his instructions and requirements to each one, as it will endure and be benefited by them.

DESTRUCTION BY WAR.

During the war between England and France, which closed in 1763, the French lost *thirty* ships of the line, including four 50 gun ships—*twenty-six* frigates, and twenty-one sloops of war, from 24 to 16 guns. And eleven more, (four of the line) were lost by being wrecked. The English lost one of sixty guns, one of fifty, and eight of from 24 to 18 guns—and by accident they lost thirteen ships of the line, (including four fifty gun ships) and fourteen frigates, including seven sloops of war—making a total of ships lost by both nations, *one hundred and thirty-four*. Other property as well as lives lost must have been immense! Such is the calamity such the destruction of war.

THE WOLF.—(Canis Lupus.)

The Wolf resembles a large dog, in which species it is classed; and some even supposed it the original stock of the domestic dog: but their characters are exceedingly different. This animal is found both in Europe and America: whether they are of the same species seems not to be decided. In the first settlement of the British colonies, the wolf was every where found, but since the settlements have increased, it has almost disappeared. The American, like the European Wolf evidently prefers a solitary life. It is fortunate that he does so. He is very destructive to sheep; and in the new settlements of Maine, New Hampshire, Vermont and Massachusetts, it has done much injury to the farmers, within forty and even twenty years: nor are their depredations yet entirely unheard of. There is also the barking or prairie Wolf, in the plains of Missouri.

ON THE DEATH OF THE ETTRICK SHEPHERD.

When first, descending from the moorlands,
I saw the stream of Yarrow glide
Along a bare and open valley,
The Ettrick shepherd was my guide.

When last along its banks I wandered,
Thro' groves that had begun to shed
Their golden leaves upon the pathways,
My steps the Border Minstrel led.

The mighty Minstrel breathes no longer,
'Mid mouldering ruins low he lies;
And death upon the braes of Yarrow
Has closed the Shepherd-Poet's eyes.

Nor has the rolling year twice measured,
From sign to sign, his steadfast course,
Since every mortal power of Coleridge
Was frozen at its marvellous source.

The rapt one, of the godlike forehead,
The heaven-eyed creature sleeps in earth;
And Lamb, the frolic and the gentle,
Has vanished from his lonely hearth.

Like clouds that rake the mountain summits,
Or waves that own no curbing hand,
How fast has brother followed brother
From sunshine to the sunless land!

Yet I, whose lids from infant slumbers
Were earlier raised, remain to hear
A timid voice that asks in whispers,
'Who next will drop and disappear?'

Our haughty life is crowned with darkness,
Like London with its own black wreath,
On which, with thee, O Crabbe, forth-looking
I gazed from Hampstead's breezy heath;

As if but yesterday departed,
Thou, too, are gone before; yet why
For ripe fruit seasonably gathered
Should frail survivors heave a sigh!

No more of old romantic sorrows
For slaughtered youth and love-lorn maid,—
With sharper grief is Yarrow smitten,
And Ettrick mourns her *Shepherd* dead!

Wordsworth.

TO THE YOUNG.

'Tis the morning of life—Be blithe and gay,
As the birds which around thee sing;
Yet remember that *morn* is but part of thy day,
That evening its shadows must bring,
And the darkness of night must soon follow that eve
When the fast fading twilight hath taken its leave.

But fear thou not, let thy morning be spent
So that eve its course may approve,
And when stars come forth in the firmament,
Thou shalt view them with hope and love,
And mark unappall'd the gath'ring night
Waiting a morning of endless light.

'Tis thy spring-time of being; yet bear in mind
Its Summer will soon be here;
That its Autumn will linger not long behind
When flowers and leaves turn sere,
And that Winter will come, which comes to all,
When the flower must die and the leaf must fall.

So guard the blossoms thou bearest now,
That when Summer shall be o'er,
The fruitage of Autumn on every bough
May prove thy Winter store;
And when time's brief seasons no changes bring,
Thou shalt know an everlasting spring.

Juvenile Scrap Book.

St. Paul exhorts to pray without ceasing—Habitual piety is ceaseless prayer.

A HUT OF THE PURIS.

The Puris is a native tribe of Indians in South America, which inhabit the flat, woody territory, north of the river Paraiba, in Brazil. A late traveller in that extensive country, after speaking of the wild scenery and natural curiosities which he met, and referring to the hunting sports of the natives, says, he and his company requested to be shown their huts. The Indians passed on before, and we followed on horseback. We passed several fields of sugar-cane, and then entered a narrow path which we pursued, till we reached their huts in a deep forest. They are of the most simple style and construction imaginable. A hammock of twisted *l' embira* (the bark of a species of *coulequin*) is suspended from two trunks of trees, to which is attached above, by oziers, a transverse rod—obliquely against this; and on the side of the wind, they fasten some large palm leaves, which are filled at the bottom with leaves of *heliconia*. On the ground, near a small fire, we perceived some flagons made of gourds; small pieces of wax in several places, and some articles of finery, and trinkets; some reeds for arrows, feathers,—and provisions, such as bananas and other kinds of fruit. The bow and arrows were leaning against a tree. Gaunt dogs receive, with loud barking, every stranger who approaches these solitary dwellings.—These huts are small, and exposed to all the changes of the atmosphere; so that in bad weather the inmates keep close together seated on the ashes about the fire. The man is quietly sleeping in his hammock, while the woman keeps up the fire and roasts some pieces of meat, thrust on the end of a piece of sharp stick. Fire is the first and chief want of the people of Brazil, though living almost under the equator; they never let it go out. They keep it up through the whole night; for as they have not much covering, they would suffer without it. It serves also to keep off ferocious beasts from their huts. The people abandon such a cabin or hut, without much regret; and when their vicinity does not furnish provisions in sufficient quantity, they remove to a distant spot, where they expect to find more apes, stags, peccaris, agoutis, and other game.

It is said the Puris kill in the country where we were, many bearded apes. Indeed, they offered to sell us several pieces half broiled. It was a head, or sometimes a breast with the arms, without the head; a disgusting sight to an European; for they did not take off the skin of their game, which became black in broiling. They tore this dainty food with their teeth; which was tough as leather and half raw. It has been even said, that they would devour, for revenge, human flesh: but we do not at this day meet any trace of this custom. It is attributed to them by old writers, who pretend that these people eat their dead, as a last mark of affection.

When we had arrived at their huts, there began immediately a trade of barter. We presented to the women some beads and mirrors. All these, savages receive willingly; also bonnets of red wool, red handkerchiefs and knives. They give us readily in exchange, bows and arrows, and wax, which they collect in the hollows of trees, which serve the bees for hives. They set a great value on their

knife which they attach to a string tied about the neck, and which they let hang on their back. It is sometimes only a simple piece of iron; but they sharpen it constantly on a stone, and thus keep it extremely keen. When we gave them a knife, they generally broke the handle, and put a new one to it, to their taste. They placed the blade between two pieces of wood, about which they wound a string, which they bound very closely.

AMENDMENT AND REFORMATION OF THE CHURCH ESTABLISHMENT IN ENGLAND.

[From John Bull's Spy Glass, for discovering the Corruptions and Abuses in the Church.]

In the amendment and reformation of the Church Establishment of England and Ireland, all the tinkering, and tampering, and temporizing of ecclesiastical ingenuity, even backed by the wisdom of the heads of the law and the State, will not be of the least avail. Its clerical and official members must assume more apostolical habits and manners, more apostolical feelings and motives, more apostolical practices and employments, than those which they, in their clerical craft and cunning, think proper to adopt and practice: They must *put off the old man with his deeds*,—they must, with a pure heart, a good conscience, and faith unfeigned, learn to labour for and eat their own bread—instead of cleaving to their *own traditions*, defending their *world of iniquity*; their thrones, palaces, and fat livings, tithes, enormous incomes and inordinate emoluments, with the tenacious grasp of the tiger, and an appetite as keen and ravening as that of death; they must strive, *as much as in them lieth*, to copy the example, ministry and motives of their divine Master, the meek, the lowly, the holy, the patient and heavenly-minded Jesus. If they are inclined, as a holy priesthood, taking the oversight of the church, not for filthy lucre's sake, but from love unfeigned, this they will endeavour to do: And if they will put in practice the above advice, they will put to silence the ignorance of foolish men, and reclaim and bring back their flocks from infidelity and neglect of religious duties, that insensibility and indifference to spiritual and eternal concerns, which now unhappily prevail in the community, and which their selfishness, worldliness and avarice, have been the chief cause of producing.

COPPERAS MINE, IN HUBBARDSTON, MASS.

This mine is situated near the bounds of Templeton, on the brow of a hill of considerable eminence. It was first discovered to contain a valuable mineral substance, some eight or ten years since, by a gentleman professing some knowledge of mineralogy, by the name of Tenney, a resident of that town. He made known his discovery to the present owners of the mine, Messrs. Bennetts of Hubbardston, and Drs. Green and Heyward of Worcester, enjoining upon them secresy. Possessing no capital, Mr. T. desired their pecuniary aid, which was granted, and the land where the mine is located, together with several hundred acres of excellent woodland which surrounds it, was purchased by him for a mere trifle. After this, comparatively nothing was done to the mine, until last year, when the proprietors obtained an Act of Incorporation, and have now secured the services of a skilful agent, which will enable them to prosecute the manufacture of copperas on an extensive scale. We understand that last year they manufactured from fifty to sixty tons, of a superior quality, and the present season they contemplate throwing into the market at least two hundred tons. The copperas meets with a ready sale, at from one to two cents per pound, while the expense of manufacturing it, costs about one quarter of a cent.

This mine is doubtless inexhaustible; and if the proprietors pursue their work with energy, there is great reason to believe they will in a few years, realize an immense fortune from it.

RETIREMENT.—There are minds which can be pleased by honours and preferments, but I see nothing in them save envy and enmity. It is only necessary to possess them, to know how little they contribute to happiness. I had rather be shut up in a very modest cottage, with my books, my family, and a few old friends, dining upon simple bacon, and letting the world roll on as it likes, than to occupy the most splendid post which human power can give. *Thomas Jefferson.*

BEAUTY AND TIME.

Time met Beauty one day in her garden,
Where roses were blooming fair;
Time and Beauty were never good friends,
So she wondered what brought him there.
Poor Beauty exclaimed, with a sorrowful air,
I request father Time, my sweet roses you'll spare—
For Time was going to mow them all down;
While Beauty exclaimed, with her prettiest frown,
Fie, father Time! fie, father Time!
Oh, what a crime! Fie, father Time!

Well, said Time, at least let me gather
A few of your roses here;
'Tis part of my pride, to be always supplied
With roses the whole of the year.
Poor Beauty consented, though half in despair,
And Time, as he went, asked a lock of her hair;
And as he stole the soft ringlet so bright,
He vowed 'twas for love, but she knew 'twas for spite.

Time went on, and left Beauty in tears—
He's a tell-tale, the world well knows;
So he boasted to all, of the lady's fair fall,
And showed the lost ringlet and rose.
So shocked was poor Beauty, to find that her fame
Was ruined, though she was in no wise to blame,
That she drooped like some flower, that's torn from its clime,
And her friends all mysteriously said—it was Time.

English Journal.

RELIGION.—FROM THE PEN OF SIR WALTER SCOTT.

'There are those to whom a sense of religion has come in storm and tempest; there are those whom it has summoned among scenes of revelry and idle vanity; there are those too who have heard 'its still small voice' amid rural leisure and placid contentment: but perhaps the knowledge which causeth not to err, is most frequently impressed upon the mind during scenes of affliction: and tears are the softened showers which cause the seed of heaven to spring and take root in the human breast.'

THE GREAT WHITE, OR POLAR BEAR.

The Bear (*Ursus*) is generally described as carnivorous; but sometimes, as frugi-carnivorous, one living on both fruit and flesh. The general description of the genus is a heavy and apparently clumsy body, with a thick, woolly covering, a large head, with a long and tapering snout, and the lips capable of being much extended. They have five toes on the feet, and long and hooked claws, which give them power to burrow easily, and render them formidable to other beasts and to man. There are five species usually mentioned, by writers on natural history, or zoology. Some of these have been described in a former number of our Magazine. We now refer to the White, or great Polar Bear, (sometimes called the maritime Bear,) which is found in North America, and chiefly beyond the fifty-fifth or sixtieth degree of latitude, as far as the arctic or frozen ocean; the extent of the region on this continent to the north, which has been visited by civilized man. This animal has been considered particularly typical of these regions; and it has been said, is not known in Siberia or Kamtschatka, nor in the islands, between America and Siberia: But Swainson asserts, that the White Bear of Siberia is the same species. It is however admitted by all writers, to be larger than the Bear found in Siberia, as well as the common Bear of Spitzbergen, Nova-Zembla, Greenland, and Hudson's Bay. It is said, never to have been found south of fiftieth degree of north latitude.

The Polar Bear of North America is uniformly white, and is very daring and ferocious. They are amphibious, are expert divers and swimmers, and appear quite in their element when in the sea far from land. They have been seen swimming across Melville Sound, latitude 72°, and 30 miles from the shore. This species is supposed to subsist chiefly on flesh and fish; as seals, young whale, and on the carcases of whales. Few have been attempted to be tamed. One was exhibited in New York, about ten years ago. It appeared to suffer much from the heat; and when ice was presented, it rolled on it very eagerly.

'The ferocity of the Bear is as remarkable as its attachment to its young. A few years since, the crew of a boat belonging to a ship, in the whale fishery, shot at a Bear at a short distance, and wounded it. The animal immediately set up the most dreadful yells, and ran along the ice towards the boat. Before it reached it, a second shot was fired, and hit it. This served to increase its fury. It presently swam to the boat; and in attempting to get on board, reached its fore-foot upon the gun wale; but one of the crew having a hatchet, cut it off. The animal still, however, continued to swim after them till they arrived at the ship; and several shots were fired at it, which also took effect: but on reaching the ship, it immediately ascended the deck; and the crew having fled into the shrouds, it was pursuing them thither, when a shot from one of them laid it dead upon the deck.'

THE HOPE OF FUTURE LIFE.

Few think of all the lofty and divine hopes that the belief of immortality opens to us. One of the purest of these, is the expectation of a more entire intelligence—of the great gift of conversing with all who lived before us—of questioning the past ages, and unravelling their dark wisdom. How much in every man's heart dies away unuttered! How little of what the sage knows does the sage promulge? How many chords of the lyre within the poet's heart have been dumb to the world's ear! All this untold, uncommunicated, unheard-of hoard of wisdom and harmony, it may be the privilege of our immortality to learn. The best part of genius the world knows not—the Plato buries much of his lore within his cave—and this, the High Unknown, is our heritage. With these thoughts, you see how easy it is for the parting soul to beautify and adorn death! With how many garlands we can hang the tomb! Nay, if we begin betimes, we can learn to make the prospect of the grave the most seductive of human visions—by little and little, we wean from its contemplation all that is gloomy and abhorrent—by little and little, we have therein all the most pleasing of our dreams. As the neglected genius whispers to his muse, 'Posterity shall know thee, and *thou* shalt live when I am no more;' so we find in this hallowed and all-promising future, a

recompense for every mortification, for every disappointment in the present. It is the belief of the Arabs, that to the earliest places of human worship, there clings a guardian sanctity—there the wild bird rests not, there the wild beast may not wander; it is the blest spot on which the eye of God dwells, and which man's best memories preserve. As with the earliest place of worship, so it is with the last haven of repose—as with the spot where our first imperfect adoration was offered up, our first glimpse of divinity indulged, so should it be with that where our full knowledge of the *First* Cause begins, and we can pour forth our gratitude, no longer clouded by the troubles and cares of earth. Surely, if any spot in the world be sacred, it is that in which grief ceases, and from which, if the harmonies of creation, if the voice within our hearts; if the impulse which made man so easy a believer in revelation; if these mock and fool us not with an everlasting lie, we spring up on the untiring wings of a pangless and seraphic life—those whom we loved around us; the aspirings that we nursed, fulfilled; our nature, universal intelligence; our atmosphere, eternal love!

E. L. Bulwer.

CAPITAL PUNISHMENTS.

This great subject is now receiving particular attention and consideration, from the legislators and philanthropists of our country: And it certainly claims mature and thorough examination. So great a change, as some propose, should not be made, but after very deliberate and impartial investigation. That some improvements may be made in the present criminal code, most of the citizens agree:—The question is, to what extent, or in what cases. At present, the crimes, to which the punishment of death is annexed by the laws of Massachusetts, are the following: murder, arson, burglary with a deadly weapon, highway robbery armed with a deadly weapon, and rape. Formerly, other crimes subjected to the punishment of death. In looking over the early laws of the Colony, we find these—blasphemy, idolatry, and witchcraft, wilful perjury, profaning the Lord's day, reviling the magistrates, rebellion in children against parents, adultery, incest, man-stealing, bearing false witness; being in all *eleven*, besides those first above mentioned. Thus a great amelioration has been already made in our criminal code. And it is believed by many, that it would be wise to abolish the punishment of death in all cases, with the exception of wilful and deliberate murder. The great question to be decided is,—will society be safe, if a substitute be provided for capital punishment, and the criminals be confined to hard labour for life?

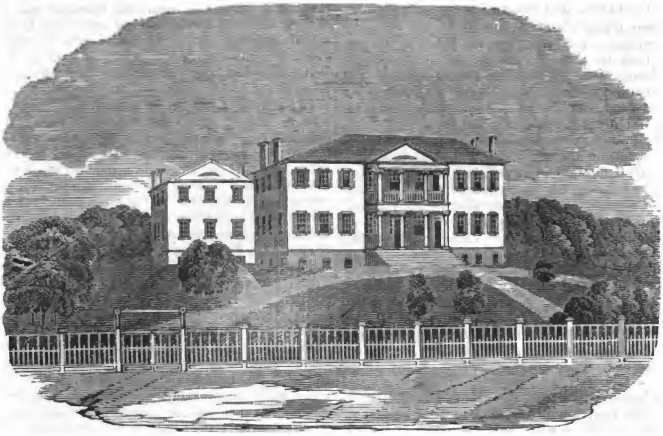
Reminiscence of Caucuses in 1772.–There were *three* political clubs or meetings, called *Caucuses* in Boston, in 1772. One at the North end, one at the South end, and another in the central part of the town. The meetings at the North part of the town are most fully known, as their records have been preserved. A caucus was held at the North end, in March, 1772, when sixty members were present. Several of these, were gentlemen of public education, and of the learned professions; and the others were respectable merchants, traders and mechanics. Among them, we find the following: Samuel Adams, John Adams, John Winthrop, Joseph Warren, Nathaniel Appleton, Moses Grant, Joseph Greenleaf, Benjamin Hitchborn, Paul Revere, Thomas Tileston, *Perez Morton*, Ezekiel Cheever, William Hickling, J. R. Sigourney, Thomas H. Peck, Benjamin Kent, Wm. Breck, Jonathan Stoddard, James Swan, Nathaniel Homes, Benjamin Edes, Edward Proctor, Nathaniel Barber, William Dennie, J. F. Condy, Elias Parkman, John Ballard, Abiel Ruddock, Henry Bass, John Symmes, Gibbens Sharp, &c. Only one of these still lives. This meeting often communicated with the other two in the town, and gave notice of their proceedings. At a meeting 4th of March, the Caucus voted to support John Hancock for Moderator of the approaching annual town meeting. October 23d, 1773, it was voted 'to oppose the vending of any *Tea*, sent by the East India Company, with our *lives* and *fortunes*.' November 2d, voted 'to invite the committee of correspondence, and also, John Hancock, Esq. to meet with us at the adjournment.' Also voted, at the same time, 'that this body is determined, the tea shipped by the East India Company shall not be landed.' May 9th, 1774, voted to 'support Samuel Adams, for Moderator of the town meeting.'

THE ASTOR HOUSE, IN NEW YORK.

This very spacious and elegant building, even surpasses in appearance all expectation; and for size and solidity, no other in the United States will fully compare with it. The building and the ground cost over half a million of dollars. The upper part, not including the stores, is rented for $20,000 per annum. Mr. Astor is to furnish it, to do which he is to expend $80,000; the tenant is to pay an interest on this sum of 6 per cent. making $24,800, together with the taxes on the same, amounting to $1,600. The rent, therefore, will be $26.400. There are eighteen stores in the basement, on Veasy and Barclay streets, and Broadway. These will rent for at least $500 each—making in all a rent of about $35,000 in round numbers; yielding over 6 per cent. for the first lease. The interiour of the house is in a rapid state of finish, the furniture is under contract, and every effort making to open the house on the first of May next. The above statement is from a New York paper.

Governour Everett, in his Inaugural Speech, expressly disapproves of the conduct and proceedings of the Abolitionists. He considers them improper and useless, and even incendiary:—Yet he justly remarks, 'that the genius of our institutions and the character of our people are entirely repugnant to laws, impairing the liberty of speech and of the press',—and he evidently disapproves of penal enactments to restrain free discussion.

A substitute for wafers and sealing wax, called *graphic* wafers, has been introduced into England, from Germany. It is expected that they will soon be in common use.



FEMALE SEMINARY, AT CANANDAIGUA.

Rapidly as the vast State of New York has increased for thirty or forty years past, in numbers and agricultural products, its attention to the interests of learning has been equally conspicuous. The means of education, and religious institutions are there not inferiour to the old States of New England: And the education of females has received special encouragement and support. The State may be justly said to abound in Seminaries, for the instruction of young ladies. Among these, the Ontario Female-Academy at Canandaigua, deserves a favourable notice. It has been established about ten years; and has a principal Teacher, a Vice-Principal, and seven Assistants. The chief building is two stories in height, and is seventy-five feet by fifty; but connected with this, is a building three stories high, fifty feet by thirty. The students are upwards of one hundred, and it is now in a very flourishing state. The locality of the Seminary has been well chosen; and the building and grounds present a striking view. Canandaigua is built on the ridge of a commanding eminence, on the north of the lake of that name, which is a very beautiful sheet of water; and the view from the high and principal Street, is uncommonly fine. Canandaigua is thirty-five or forty miles south of Rochester, and about two hundred and seventy from Albany.

The last Report of the Prison Discipline Society states,—That seventy-three in 125 convicts in the Vermont State Prison, were men of intemperate habits; sixty-eight confessed that intoxication was the cause of their crimes. In the State Prison in Connecticut, more than three-fourths were of intemperate habits; viz. 150 in 200—eighty-eight of these committed crimes when intoxicated. In the Auburn State Prison (New York) are 747 convicts, 560 of them, intemperate persons; 450 intoxicated when they committed crimes. What an appalling picture!

We believe Newspapers are very important in a free government; for the people, being the source of all political power, should be well informed respecting the passing events of the day:—And yet, we think the following remark of the late President Jefferson, rather extravagant:—

'*Importance of Newspapers.*—Were it left for me to decide, whether we should have a Government without newspapers, or newspapers without a Government, I should not hesitate to prefer the latter.'

A traveller, who has lately visited the Barbary coast in Africa, when describing the dress of the people, says, 'the females confirm the definition of an ancient philosopher, that woman is an animal which delights in *finery*. They paint their legs and arms, and are fond of ear-rings and bracelets of silver and gold: and, if they cannot procure such, they sport trinkets of baser metals.'

The manufacture of salt in the interiour of the country is increasing, greatly to the accommodation of the inhabitants distant from the Atlantic coast. During the year 1835, there have been manufactured and inspected, at the Salt Springs in Onondagua county, in the State of New York, 2,200,000 bushels.

RECOLLECTIONS OF ENGLAND: BY CHATEAUBRIAND.

There is much lately written of English character and manners; and every thing published on the subject from the pen of a scholar and philosopher is interesting to the people of the United States. And it is natural it should be so, since England is our *Father-land*, and we have still a close connexion with it, both as to commerce and literature.

'Erasmus is the most ancient traveller, with whom I am acquainted, that speaks of the English. He states that, during the reign of Henry VIII, he found London inhabited by barbarians, whose huts were full of smoke. A long time afterwards, Voltaire, wanting to discover a perfect philosopher, was of opinion that he had found this character among the Quakers upon the banks of the Thames. During his abode there the taverns were the places, at which the men of genius, and the friends of rational liberty assembled. England, however, is known to be the country, in which religion is less discussed, though more respected than in any other; and where the idle questions, by which the tranquillity of empires is disturbed, obtain less attention than any where else.

'It appears to me that the secret of English manners, and their way of thinking is to be sought in the origin of this people. Being a mixture of French and German blood, they form a link of the chain by which the two nations are united. Their policy, their religion, their martial habits, their literature, arts, and national character appear to me a medium between the two. They seem to have united, in some degree, the brilliancy, grandeur, courage, and vivacity of the French with the simplicity, calmness, good sense, and bad taste of the Germans.

'Inferiour to us in some respects, they are superiour in several others, particularly in every thing relative to commerce and wealth. They excel us also in neatness: and it is remarkable that a people, apparently of a heavy turn, should have, in their furniture, dress, and manufactures, an elegance in which we are deficient. It may be said of the English that they employ in the labours of the hand the delicacy, which we devote to those of the mind.

'The principal failing of the English nation is pride: which is indeed the fault of all mankind. It prevails at Paris as well as London, but modified by the French character, and transformed into self-love. Pride, in its pure state, appertains to the solitary man, who is not obliged to make any sacrifice; but he, who lives much with his equals, is forced to dissimulate and conceal his pride under the softer and more varied forms of vanity. The passions are, in general, more sudden and determined among the English; more active and refined among the French. The pride of the former makes him wish to crush every thing at once by force; the self-love of the other slowly undermines what it wishes to destroy. In England a man is hated for a vice, or an offence, but in France such a motive is not necessary; for the advantages of person or of fortune, success in life, or even a *bon mot* will be sufficient. This animosity, which arises from a thousand disgraceful causes, is not less implacable than the enmity founded on more noble motives. There are no passions so dangerous as those, which are of base origin; for they are conscious of their own baseness, and are thereby rendered furious. They endeavour to conceal it under crimes, and to impart, from its effects, a sort of apalling grandeur, which is wanting from principle. This the French revolution sufficiently proved.

'Education begins early in England. Girls are sent to school during the tenderest years. You sometimes see groups of these little ones, dressed in white mantles, straw-hats tied under the chin with a ribband, and a basket on the arm which contains fruit and a book, all with downcast eyes, blushing if looked at. When I have observed our French female children dressed in their antiquated fashion, lifting up the train of their gowns, looking at every one with effrontery, singing love-sick airs, and taking lessons in declamation, I have thought with regret of the simplicity and modesty of the little English girls. *A child without innocence is a flower without perfume.*

'The boys also pass their earliest years at school, where they learn Greek and Latin. Those who are destined for the church, or a political career, go to the universities of Cambridge and Oxford. The first is particularly devoted to mathematics, in memory of Newton; but the English, generally speaking, do not hold this study in high estimation; for they think it very dangerous to good morals when carried too far. They are of opinion that the sciences harden the heart, deprive life of its enchantments, and lead weak minds to atheism, the sure road to all other crimes. On the contrary, they maintain that the *belles lettres* render life delightful, soften the soul, fill us with faith in the divinity, and thus conduce, through the medium of religion, to the practice of all the virtues.

'When an Englishman attains manhood, agriculture, commerce, the army and navy, religion and politics, are the pursuits of life open to him. If he chooses to be what they call a gentleman farmer, he sells his corn, makes agricultural experiments, hunts foxes and shoots partridges in Autumn, eats fat geese at Christmas, sings 'Oh the roast beef of old England,' grumbles about the present times, and boasts of the past which he thought no better at the moment; above all, inveighs against the minister and the war for raising the price of port-wine, and finally goes inebriated to bed, intending to lead the same life on the following day.

'The army, though so brilliant during the reign of Queen Anne, had fallen into a state of disrepute, from which the present war has raised it. The English were a long time before they thought of turning their principal attention to their naval force. They were ambitious of distinguishing themselves as a continental power. It was a remnant of ancient opinions, which held the pursuits of commerce in contempt. The English have, like ourselves, always had a species of physiognomy, by which they might be distinguished. Indeed, these two nations are the only ones in Europe, which properly deserve the appellation. If we had our Charlemagne, they had their Alfred. Their archers shared the renown of the Gallic infantry; their Black Prince rivalled our Duguesclin, and their Marlborough our Turenne. Their revolutions and ours keep pace

with each other. We can boast of the same glory; but we must deplore the same crimes and the same misfortunes.

In England the name of the law is almighty. When the law has spoken, resistance is at an end.

The English clergy are learned, hospitable, and generous. They love their country, and exert their powerful services in support of the laws. In spite of religious differences, they received the French emigrant clergy with truly christian charity. The university of Oxford printed, at its expense, and distributed *gratis* to our poor priests, a new Latin Testament, according to the Roman version, with these words: 'For the use of the Catholic clergy exiled on account of their religion.' Nothing could be more delicate or affecting. It was doubtless a beautiful spectacle for philosophy to witness, at the close of the eighteenth century, the hospitality of the English clergy towards the Catholic priests; nay, further, to see them allow the public exercise of this religion, and even establish some communities. Strange vicissitude of human opinions and affairs! The cry of 'The Pope, the Pope!' caused the revolution during the reign of Charles the First; and James the Second lost his crown for protecting the Catholic religion.

They, who take fright at the very name of this faith, know but very little of the human mind. They consider it such as it was in the days of fanaticism and barbarity; without reflecting that, like every other institution, it assumes the character of the ages, through which it passes.

The English church has reserved for the dead the principal part of those honours, which the Roman religion awards to them. The last duties paid to the departed would, however, be of a sad complexion indeed, if stripped of the marks of religion; for religion has taken root at the tomb, and the tomb cannot evade her. It is right, that the voice of hope should speak from the coffin; it is right, that the priest of the living God should escort the ashes of the dead to their last asylum. It may be said, on such an occasion, that Immortality is marching at the head of death.

PALMYRA, OR TADMOR.

There is a portion of our readers who are fond of articles referring to and explaining ancient history. For such, the following account of *Palmyra* is given; and it is presumed will not be wholly uninteresting to others. This city has now long been in ruins; and modern writers have been astonished that more notice of it is not to be found in the historians of antiquity. It is now indeed, worthy of notice chiefly for its magnificent ruins; but these fully indicate a state of great splendour at a very remote period. Our object, in this short notice, is to refer to its origin and early history, and then to describe it in its present state of ruins, as mentioned by modern travellers.

The site of this once celebrated and opulent city is ascertained, not only by the extent and variety of its ruins, but by notices in very ancient historians and other writers. It is in the eastern part of Syria, north of Arabia, and west of the river Euphrates and of the ancient Mesopotamia. It is distant from the eastern shore of the Mediterranean, (and nearly in the same latitude as Tripoli, but a little north) two hundred and ten miles. It lies northeast of Damascus, (a very ancient city in Syria) about one hundred and eighty miles; and nearly the same distance from Aleppo, in a southeast direction. For a great distance from it, at all points of the compass, the country is a sandy desert, except a few mountains and ledges in the vicinity. And this fact has caused the astonishment of the moderns, that such a magnificent city should ever have been built, where Palmyra once stood. The belief now is, that it was a great depot for goods coming from the east to the west of Asia and to Europe, and for such products and articles as were sent from the west to the east, in return. The traffic and commerce between the east and the west, in early times, were by this route, and then to and down the Euphrates, much more than by the Red Sea. The Euphrates is about twenty leagues eastward of Palmyra.

The earliest account there is extant of Palmyra, is to be found in sacred history; where it is said 'that Solomon built Hamath, Tadmor in the wilderness, and other *store-cities*.' This was about one thousand years before our era, and when Solomon was in all his glory and strength; a wise, powerful, enterprising and commercial prince. He had an extensive navigation both in the Mediterranean and in the Red Sea; and he had built *store-cities*, or cities for trade, (and Tadmor was one of the principal) as well as fenced or walled cities, for the protection of his empire.

The Hebrew name (Tadmor, or Tedmor) has reference to the *Palm* tree, which abounded there. The Romans, at a later period, called it Palmyra. The wealth and magnificence of this ancient city are owing to its rich and extensive trade, and to the pacific character of its inhabitants, who were wise enough generally to keep out of the wars of surrounding nations. They do not appear to have become a warlike people till the time of *Zenobia*, their celebrated Queen, about the year 270 of the christian era. The Arabs still call the place Tadmor; and they pretend also that it was a place of importance before Solomon, who only repaired or enlarged it. It is thought strange by some writers, that more notice is not to be found in ancient history respecting this city, if it ever were so rich and populous as supposed. The answer is, that it was not a warlike people that inhabited it, and therefore took no part in the political revolutions of the times. Another conjecture is offered to solve the difficulty alluded to; which is, that Tadmor was greatly defaced and injured by the vast armies of Nebuchadnezzar which invaded and conquered Judea, four hundred years after Solomon and six hundred years before our era: that it long lay in comparative ruins; and then again was rebuilt, and became a populous and flourishing place in the time of the successors of Alexander the Great, (upwards of two centuries before Christ) and so continued after the power of Rome extended over all that part of the world. It appears to have been a place of great trade and wealth in the time of Pompey and Mark Anthony, (sixty years before our era;) and though it suffered some by the Roman Armies, it still prospered.

Anthony is said to have committed some depredations on the rich citizens; but the most of them fled, and removed their most valuable effects. But the Romans soon became fond of the goods and products of the far East; and therefore more generally favoured and encouraged than oppressed the inhabitants. Thus probably, was the Grecian and Roman style of building, introduced among the rich citizens of Palmyra; and thus may we reasonably account for the numerous ruins of temples, monuments, and other buildings. The ruins now described by travellers, cannot be justly supposed to have belonged to buildings erected by Solomon. In his time, it was rather a place of traffic, than of magnificent buildings. These must have been erected by the Romans, as late as our era, or probably one and two centuries still later. The materials, the monuments, and the inscriptions, all point to the period last mentioned.

Pliny says, 'Palmyra is finely located; it is well watered, and the soil is rich; but it is surrounded on all sides by a sandy desert, which separates it from the rest of the world; and it has long preserved its independence between the two great empires of Rome and Parthia. It lies directly between Seleucia on the Tigris and Antioch.' The celebrated Zenobia, (widow of a brave General, who was himself formidable to the Romans) had the courage to resist the power of Rome, and for sometime had quiet possession of Syria and Mesopotamia, during the unpopular reign of the cruel and effeminate Gallienus. She even asserted an hereditary right to the dominion of Egypt, as being a descendant of the Ptolemies; and afterwards, by her successes over the Roman army in that quarter, became mistress of the country. The greater part of Asia Minor also, submitted to her sway. The Emperours Claudius and Aurelian (in the third century) successively undertook to subdue the Palmyrenes; but each lost many men before they were able to conquer this brave and resolute people. The latter besieged the city; and after various reverses became master of it, and carried away or destroyed most of its movable riches. The learned *Longinus* was a friend and adviser of Zenobia; but she betrayed her generous counsellor to the Emperour, by whose order he was put to death. We have not room to describe the ruins of monuments and temples mentioned by recent travellers. The most perfect piece of antiquity which remains, is a Mausoleum, probably 1760 year old; the stairs and floors of which are entire, though the building is five stories high. One of these travellers says, 'the people of Palmyra took their funeral customs from Egypt, their luxury from the Persians, and their literature and arts from Greece.'

One of Bishop Burnet's parishioners, who was taken in execution for debt, applied to him for assistance. The Bishop requested to know what would serve him—the man named the sum. Burnet instantly called the servant to give it him. 'Sir,' said he, 'tis all we have in the house.' 'Well, give it this poor man; you do not know the pleasure there is in making a man glad.'

The New York Canals.—The income from the two principal canals, in the state of New York, the Erie and the Champlain, for the year 1835, amounted to $1,893,694; of which $1,404,710 were for tolls, after deducting the expenses of collection. The expenditures for the year were $707,503, of which $260,957 were paid for interest on the canal debt, and the residue, $446,546 for repairs, salaries, &c. The net income, after defraying the expense of repairs, superintendence, and interest on the canal debt, was 1,086,146. The surplus revenue of all the Canals in that State for tolls only, exclusive of repairs and salaries, &c. was $979,98.

THE MORAL EDUCATION OF CHILDREN.

In retiring from the editorial department of the American Magazine, after fourteen months' labour, if there is any one subject more than another, on which I wish to say a parting word, it is that of advice and warning to parents, respecting the moral education of their children. Some remarks have already been made, in reference to this highly interesting topic; for it has always been kept in view, that this work is designed to be *useful*. Without speaking of oneself in this last paragraph, which (though it might be pardoned, as custom could be pleaded to sanction it,) is neither delicate nor wise, I will seize the occasion to urge attention to the moral education of the young. Children may be made amiable, obedient and respectful, if duly directed and governed when young. They are naturally docile and affectionate. These traits of character should be nursed and strengthened. But how often are they neglected; how often blunted and destroyed! If neglected, they are not sure to grow or to continue. If subject to unkind, harsh, arbitrary and severe treatment on the part of parents, all their natural docility and original affectionate feelings will be destroyed or much impaired. Children are not born demons; they have a capacity for good, for moral improvement; a kind and genial soil may be found in their hearts, if the seeds of kindness and truth are duly sown—Indeed, they are naturally found there; and only want a judicious, faithful and affectionate hand for the work of culture and developement. Children naturally love and respect their parents; and are disposed to be kind and obedient: If they become otherwise, it is because of the neglect, or severity or unfaithfulness of parents; or because of early falling into bad company, when no parent is near to restrain or to advise. Ask then the parents, if they intend their children should be honest, kind and useful when they grow up; And if they do, let them remember, that kindness and mildness, with a proper degree of firmness, and with faithful attention, are indispensible on their part.

THE EDITOR.

February 1836.

A GOOD EDUCATION is a better safe-guard for liberty, than a standing army or severe laws.

No one can improve in any company, for which he has not respect enough to be under some restraint.

MARCH.

WASHINGTON.

What American has not beheld the majestic features of WASHINGTON!—A generation has been born, and arrived at middle age, since he departed. Yet, were it possible that his illustrious shade should return, to mark the mighty growth of the country which he made a nation—were he to walk, in visible shape, the streets of our cities, not one among the crowd but would know Washington; were he to enter the most solitary farm-house, its inmates would at once recognise their awful guest; were he to visit that far western region, which he left a wilderness, the population of its busy towns would bow before him; or were he to pause near a New England school-house, the group of children round the

door would gaze at him, and whisper—'It is Washington, our Father!'

In some of its innumerable representations, his face must have met every eye. His figure in Italian marble, wrought with the noblest sculpture, looks down from its pedestal upon the deliberations of our legislative halls. His bust is seen in the niches of our galleries, and his picture, with the calm dignity which every painter of Washington has thrown over the canvass, meets our gaze upon the walls. His statue, indeed, has not yet taken its destined place, beneath the dome of the Capitol. But the chisel of an American sculptor is even now re-creating the form, from which the nation, and posterity, shall receive its idea of the living presence of Washington. The successful accomplishment of this most honourable task is worth the toil of a life-time, and will satisfy the loftiest aspirations of the artist, by indissolubly connecting his fame with the immortality of his subject. Yet, were the mein and aspect of Washington preserved only in the statues, busts, and pictures, which adorn our halls of state, our galleries of art, and the mansions of the wealthy, such honours alone would not distinguish him from the vulgar crowd of heroes, who have grown illustrious by the ruin of their country, and to the sorrow of the world. It is a far surer token of the universal reverence which hallows his memory, that his waxen image always keeps its place among those of the great men of the day, who figure at a country show—that the village painter tries his skill upon that noble face, and hangs the unworthy effigy before the tavern-door—that the silver medal, which was struck after his death, bearing his urn and profile, is treasured by the poor—and, more than all, that prints of Washington, dark with smoke, are pasted over the hearths of so many American homes. And long may he be there! No cottage should be without his likeness, no mansion without his picture, no legislative hall without his statue, that rich and poor, the highest statesman and the humblest citizen, may have him always before their eyes, and copy, each according to his station, the public and private virtues of Washington.

We here present a portrait of the Father of our Country, as the first of a series of vignettes of the successive Presidents of the United States. The bust of Washington is represented on a pedestal, amid the battle-smoke and lowering clouds, but with a radiance brightening about his head, prophetic of the peaceful prosperity which his skill and valour won for us. Military emblems are displayed around him; there are the stars and stripes, which he reared so high among the banners of the nations, and there the cap which he placed on the triumphant head of Liberty; while the cannon, the musket and bayonet, the war-like drum, the pyramid of balls, and other martial insignia, are strewn at the base of the pedestal. In the back-ground, is seen the famous Passage of the Delaware. On the right, the chief figure among a group of officers, sits Washington on horseback, and downward to the bank of the river goes the ponderous artillery and all the military array. On the left, the troops are embarking, some already in the midst of the river, and others just pushing from the strand. This scene has been worthily selected to adorn the vignette of Washington; for it was one of the hero's greatest military exploits, by which, at the darkest period of the Revolution, he not only escaped a superior enemy, but surprised and captured a large body of Hessian troops, at Trenton; and thus gave another aspect to the war.

These emblems refer exclusively to Washington's military deeds.—But it should never be forgotten, that it is not merely in the character of a hero, that his fame shines resplendent, and will remain undimmed by the gathering mist of ages. It is true, that no other man possessed the peculiar military talent, the caution mingled with boldness, the judgment, the equanimity which never sank too low nor rose too high, that were requisite to carry us triumphantly through the Revolutionary contest. Yet it may be justly said, that, even while the war was raging, his civil virtues and abilities held no inferior place to those which marked him as a soldier. It was his moral strength of character that gave firmness to a tottering cause. Other great generals have been idolized by their armies, because victory was sure to follow where they led; their fame has been won by triumphant marches, and conquest on every field. Fortune has been the better half of all their deeds. But his defeats never snatched one laurel from the brow of Washington. In him, his soldiers recognised qualities far superior to those of the mere military chieftain, and gave him their confidence as unreservedly at Long Island, as at Yorktown. And, in the troubled times that succeeded the Revolution, no influence but Washington's could have harmonized the discordant elements of our country; no other arm could have upheld the State.

If, therefore, they could have been visible amid the war-smoke and the thunder-cloud, the artist would have mingled tokens of the peaceful virtues, and the statesman's calmer wisdom, with those heroic emblems. A canopy of state, to represent his civil sway—a horn of plenty, scattering its abundance on the soil—a written scroll, to denote the power of his pen—a Bible, to point out his trust, in doubt and danger—a bounteous harvest-field, instead of warriors and steeds, and a wintry river—all these might have been fitly seen around the bust of Washington. In our pride of country, let it be the proudest thought, that America in the very struggle that brought her into existence as a nation, gave to history the purest and loftiest name that ever shone among its pages.

An obsolete Law.—At the trial of a Puritan, being asked by the Clerk of the Court, how he would be tried, the prisoner answered—'by the Law of God.' 'Whereat,' says the old writer, from whom we take the fact,—'the Lawyers gave a great hiss!'

Parisian Post Office.—Thirty-six thousand letters, on an average, are daily sent from Paris, through the Post Office, and twenty-five thousand are received. Besides this enormous number, five hundred thousand franked letters are yearly sent from Paris, two-fifths of which are addressed to foreign parts.

MAJOR GENERAL LINCOLN.

General Lincoln was a Massachusetts man, and born of reputable parentage, in the year 1733, at Hingham, a town long famous for wooden ware. He received a common school education, and spent the early part of his life in the homely New England way, toiling on his hereditary farm, and performing the duties of town-clerk, representative, and other honourable offices, both civil and military. At the breaking out of the Revolution, he was more than forty years old, and like a thousand other gentleman farmers in the province, had cherished his wife, ruled his household, and ploughed his own furrow, ever since the age of manhood. On the day of Lexington battle, being the Colonel of the second regiment of Suffolk militin, he mustered his men for the field, but was prevented from marching by the news of the flight of the British forces back to Boston. In February, 1776, he was made a Brigadier, and in May of the same year, a Major General of the State militia, and received the latter rank in the Continental army, early in 1777.

Being stationed at Bound Brook, on the Raritan, he had an extent of five or six miles to guard, with a force of less than five hundred men, fit for duty. On the thirteenth of April, owing to the negligence of his patroles, he was surprised by a large party of the enemy, under Cornwallis and Grant, who came upon him so suddenly, that the General and one of his aids had barely time to get on horseback. The other aid was taken, as were also a few pieces of artillery. On account of his popularity with the New England militia, Lincoln was now sent to join the northern army, under Schuyler, and afterwards under Gates, to whose success at Saratoga he materially contributed. But, in one of the conflicts that preceded Burgoyne's surrender, Lincoln, as he passed with his aids from one part of the line to another, perceived a small body of troops in the German uniform, near the point whither he was riding. As many of the American soldiers wore captured uniforms, the General conceived that this party was of the number, and was galloping up to take the command, when the Germans let fly a volley and hit him in the leg. The wound was very severe, compelling him to retire from the seat of war, first to Albany, and afterwards to Hingham; nor (though he resumed his duties in the course of the following Summer,) did he entirely recover his health for several years.

At the request of the delegates from South Carolina, General Lincoln was next placed in command of the Southern Department. In December, 1778, he arrived at Charleston, having fallen from his carriage on the way thither, and grievously injured his knee. The difficulties of his present command were such as to preclude any very brilliant exploit; and some of the southern people expressed their discontent, in such a manner that it reached the General's ear, and, with other reasons, induced him to solicit a recall. But the Governour and Council of South Carolina, with General Moultrie and the principal inhabitants, persuaded him to continue at the head of the department. In the winter of 1779 and 1780, Sir Henry Clinton having set on foot an expedition against South Carolina, the General resolved to defend Charleston; and accordingly sustained a siege from the thirtieth of March till the eleventh of the following May. Then, the principal inhabitants and county militia having petitioned for a surrender, and the militia of the town having thrown down their arms; the troops being worn down with fatigue, and nothing to eat but rice, nor half enough of that; there being nine thousand men of the flower of the British army, within twenty yards of the American lines, besides their naval force and a great number of blacks; his own troops amounting to but two thousand five hundred, part of whom had refused to act; the cannon being dismounted, or silenced for want of ammunition; the citizens discontented; and affairs generally in a hopeless state; Lincoln found it necessary to ask terms of capitulation. The country did him justice. He continued to enjoy the respect and confidence of Congress and the Commander in Chief; and by his long defence, the plans of the British were frustrated, and North Carolina saved from their dominion, during the remainder of the year.

General Lincoln returned to Hingham on parole, and was exchanged in the November following. At Yorktown, he commanded a central division with great credit, and was deputed by General Washington to receive the sword of the vanquished commander, as a requital for the misfortune of giving up his own, at Charleston. In October, 1781, without losing his rank in the army, he was appointed Secretary of War, and retained that office for the next two years; when he resigned it with a high eulogium from Congress. He now betook himself to his farm again, till, during Shay's War, he was put at the head of the militia of Massachusetts, and gained an almost bloodless victory over the insurgents, at Petersham. He was afterwards elected Lieutenant Governour. In 1789, he was appointed Collector of Boston, and, in the Autumn of the same year, while proceeding to the South, as a Commissioner to treat with the Creek Indians, he visited

Mount Vernon, and enjoyed another meeting with his old Commander in Chief. After these good services, and in the enjoyment of his well-won honours, General Lincoln died of natural decay, on the 9th of May, 1810, in the seventy-seventh year of his age.

General Henry Lee, of Virginia, in his Memoirs of the War, has said that 'Lincoln was a good, but not a consummate soldier.' The judgment is a fair one. In our view, it would have detracted from the character in which we would hold him up to the observation of our readers, had his soldiership been perfect. Few men have a better claim to be remembered by posterity, than General Lincoln, but not on the score of splendid achievements, or deep knowledge of the military art, or a natural genius for war. He is an admirable example of what the New England soldier generally has been, and always ought to be—a man of plain good sense and respectable abilities, which he exercised in peaceful pursuits, till the situation of his country made him leave the ploughshare for the sword. He then set his mind to work, with its native force, upon the new business of warfare, and accomplished it well.

Trained soldiers could find little to criticise in his management of a battle or a siege. He might be pretty confidently relied upon, to do all that ought to be done, whether in attack or defence, with the means committed to his charge. With such leaders—and there will be enough of them in every contest—we need never fear that an enemy should step far within our borders, or remain there long.

THE SCIENCE OF NOSES.

Turning over an old book, the other day, we lighted upon a set of rules for discovering people's characters, by the length and formation of their noses. This ancient and forgotten science appears to us, far preferable to the phrenological inventions of later times. It is simple in its application, and comprehensible to the meanest understanding. Its chief advantage however, is, that—whereas the bumps on a man's head are hidden beneath his hair or a wig, and the worse qualities they indicate, the less will he permit them to be examined—here, on the contrary, the index of his character is precisely the most prominent feature of his face. It would seem as if Nature had taken this precaution, in order to render hypocrisy unavailable. A person might endeavour, no doubt, to keep the world in the dark by merely putting his handkerchief to his nose, like a chicken that thrusts its head into a corner and fancies itself invisible. But in a case of this studied concealment, it would not be uncharitable to conclude, that he was characterized by such an atrocious nose, as it would affright mankind to look upon. Without further preface, we shall favour our readers with the elements of the science, beseeching them not only to study their neighbours' noses, but to glance in the looking glass at their own.

'A Nose long, slender, and small, denotes a person audacious, testy, hasty, peevish, credulous, irresolute.' Not a very amiable nose, this! The next is better.

'A Nose long, and declining downwards over the upper lip, signifies a person sagacious, secret, serviceable, true to his friend, honest and fair in his dealings.' This, methinks, is not a very pretty nose to look at. We fear that some of our fair readers would prefer a better-shaped one, even with worse indications.

'A Nose sharp in the end, and of middling proportion, denotes a person conceited, unstable, contentious, irritable, scornful, cunning, malicious, but with a good memory.' Doubtless, a good memory is a desirable thing enough; but it will hardly make amends for so many evil attributes as are here enumerated—especially as, when combined with malice, the possessor will be likely to remember an old grudge.

'A Nose crooked in the upper part, long, and grosser than ordinary, marks a person bold, proud, fierce, tenacious, envious, covetous, luxurious, deceitful, vain-glorious, perfidious, and a scold.' We would flee from this nose, as far as we could see it with a telescope.

'A Nose broad in the middle, and growing less towards the upper part, is a sign of a person variable, luxurious, nice in his language, and of a churlish disposition.' This, we presume, is the sort of nose that its owner is addicted to turning up, when matters do not happen to suit his fancy.

'A Nose long, and very thick, denotes a person greedy, covetous, simple in good things and witty in evil, fawning, dissembling, and much more ignorant than he would be reported to be.' Whoever has a nose of this pattern, we advise him never to go abroad without clapping his handkerchief to it, as if it were bleeding.

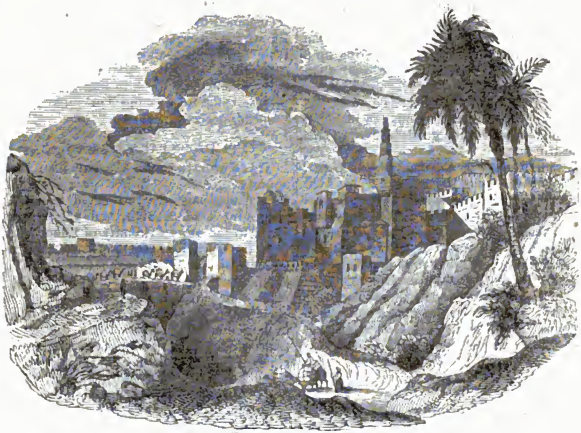
'A Nose unusually elevated in the middle, like the arch of a bridge, marks a person lying, idle, inconstant, luxurious, credulous, importunate, ready-witted, a gross liver, and irreligious.' Mercy on us! Are there no good noses in the list? For our own part, if we were not already provided, we had about as lieve do without a nose, as make a shift with any such wicked snouts as these.

'A Nose indifferently long, and small in the middle, signifies a person bold, rational, honest, soon angry, but soon pleased.' As noses go, this is worth any money. It is not to be sneezed at.

'A Nose somewhat hairy at the end, bigger than ordinary, but small where it joins the forehead, denotes a person of good disposition, but too easily deceived.' Supposing this to be a lady's nose, we should feel no sort of inclination to take advantage of her easy nature. It seems to be a good honest nose, but a very hideous one.

'A Nose every way very big, very long, and with wide nostrils, denotes a person more weak than wise, fallacious, subtle, contentious, luxurious, vain-glorious, envious, and impertinently curious.' Wherever we meet this nose, we shall hardly refrain from giving it a tweak.

'A Nose conveniently big, and reasonably straight, denotes a person peaceful, meek, faithful, laborious, diligent, secret, and of good intellect.' Oh, happy nose! Mayst thou continually inhale the scent of roses! And may we, no long time hence, find just such a nose on a fair lady's face!



The Walls of Jerusalem.

JERUSALEM.

Jerusalem was first called Salem, and Solyma, and is supposed to have been founded by Melchizedek. It was built upon Mount Sion, and gradually spread over other hills in the vicinity, with deep vales sinking down between. The Jebusites, a people of Canaan, conquered it from its original founders, and were themselves driven out by Joshua, who, in his division of the Land of Promise, assigned this, afterward sacred city, to the tribe of Benjamin. A strong hold, however, remained in the possession of the Jebusites, till the days of the warriour-psalmist, by whom they were utterly expelled. Jerusalem was thence called the city of David.

No other city in the world presents such a dismal history of siege, storm, intestine commotion, captivity, famine, pestilence, and every sort of ruin, continued and repeated through a course of ages, as Jerusalem. In the year 3046 before Christ, it was taken by Shishak, who is supposed to have been Sesostris, king of Egypt. It was afterwards destroyed by Nabuzaradan, general under Nebuchadnezzar; 'the walls,' as Nehemiah says, 'were broken down, and the gates were burned with fire;' and in this desolation it remained, a hundred and fifty years. Many centuries after it had been rebuilt, Alexander 'the Great,' being refused assistance by the Jews in his warfare, determined again to destroy the city. But as he drew near, at the head of his triumphant army, a procession came forth from the gate—where now we may see yonder train of camels entering—and advanced to meet him, with the wild clangour of the Jewish music. First marched the people, all in white, followed by the Levites in their robes, all preceding the High Priest, who had put on his garments of purple and gold and wore a tiara on his head, whereon was a golden plate, inscribed with the name of the Lord. Overawed by the magnificence of the array, the Conquerour of the World bowed himself before the Priest, and offered his worship to that God whose holy city he had threatened to cast down. But Jerusalem was seldom so fortunate in its victors, as in the case of the mighty Macedonian. The eastern monarchs made war upon it, time after time, slaughtered its inhabitants, by hundreds of thousands, or made slaves of them, and defiled the temple with the statues of Heathen deities.

In the year 66 of the Christian era, the Jews attempted to throw off the Roman yoke, which had long before been imposed upon them by Pompey. The Emperour Nero sent Vespasian to quell them, who, being subsequently called to the imperial purple, deputed his son Titus to carry on the war. Titus accordingly laid siege to Jerusalem, which was almost torn asunder by the factions of its inhabitants; so that the civil war within the walls was even more frightful than the war of invasion at the gates; and to increase the horrors of the period to the utmost, a famine raged within the city. In Scripture there is a prophecy, that Jerusalem being reduced to the extremity of want, a tender and delicate woman should devour her own child; and, in the course of the siege, the terrible words of the prophet were literally fulfilled; and she, on whom was laid the doom of the ancient prophecy, was named Mary, a lady of one of the noblest families in the city. Titus was so shocked by this horrible fact, that he swore to bury the remembrance of it under the ruins of the city. He had intended, however, to preserve the temple; but after Jerusalem was taken, a soldier flung a blazing torch within the holy edifice, which burst into sudden flames, and was consumed to ashes. A small number of

Jews were suffered to continue in their native city, and paid tribute to the Romans. But, about half a century afterwards, the inhabitants of Jerusalem having become numerous and again stirring up a rebellion, the Emperour Adrian made war upon them, slaughtered five hundred thousand men, razed the city to its foundation, and sowed the hills, where it had stood, with salt. Thus the words of its terrible prophets were made good, by Jerusalem's complete destruction.

The Christian Emperour, Constantine the Great, afterwards partially rebuilt the city, and protected the Christians who had settled there in considerable numbers. In the year of Christ 363, the Emperour Julian, the Apostate, scorning the prophecies of Scripture, attempted to renew the temple; not one stone of which had lain upon another, since the time of Titus. But no sooner was the work commenced, than earthquakes shook down the rising structure; fire burst from the earth and consumed the materials that had been collected; and other awful wonders so affrighted the workmen, that, although Pagans, they no longer dared to set their feet on the site of the Jewish Temple.

Many noble and sanctified persons now came on pilgrimage to Jerusalem, and monks took up their residence there. In 614, when the city was taken by the Persians, nine thousand Christians were made slaves. Heraclius afterwards gained possession of it, and forbade any Jew to come within three miles of its walls. The next conquerour of Jerusalem was the Caliph Omar, from whose reign it continued several centuries under the dominion of the Saracens. In 1076, it was taken by the Turks. A few years subsequently, Peter the Hermit preached the Crusades among the princes and nobles of Europe, and persuaded many of them to lead their vassals to the Holy Land, which they wrested from the Pagans, and made Godfrey of Bouillon, king of Jerusalem. Five monarchs of Gothic origin succeeded each other in a dominion that was little more than nominal; the Pagans again established themselves in the city, and could not be driven out by the valour of subsequent Crusaders.

In after ages, though the Turks still governed Jerusalem, Christians were permitted to settle there, and almost every nation in Europe was represented by a small community of stationary monks. A church was built upon Mount Calvary, which, though less than a hundred paces long and fifty wide, contained under its roof twelve or thirteen holy places, where some incident, relative to the death or resurrection of our Saviour, was supposed to have occurred. There was the very spot on which the Cross had stood; there was the Holy Sepulchre, around which the rock had been hewn away, so that it was now a grotto above the earth, instead of a cave beneath it; there, too, was the cleft, which the earthquake rent asunder at the time of the crucifixion. It was held as faith by the Greeks and Arminians, that, every Easter eve, a flame descended into the Holy Sepulchre, and kindled all the lamps and candles which were there. The pilgrims, who visited Jerusalem, lighted tapers at this sacred flame, and daubed the melting wax upon pieces of linen, which they intended as their shrouds. The monks of the Greek Church were accustomed to contend with those of the Church of Rome, for the privilege of celebrating Mass in the Holy Sepulchre; and it is a curious and rather melancholy fact, that these Christians have shed blood in such a quarrel, in that place of awful sanctity—and the unbelieving Turks have interfered to keep the peace!

AN ONTARIO STEAM-BOAT.

The Steam-boats on the Canadian lakes, afford opportunities for a varied observation of society. In the spacious one, on board which I had embarked at Ogdensburgh, and was voyaging westward, to the other extremity of Lake Ontario, there were three different orders of passengers;—an aristocracy, in the grand cabin and ladies' saloon; a commonalty in the forward cabin; and, lastly, a male and female multitude on the forward deck, constituting as veritable a Mob, as could be found in any country. These latter did not belong to that proud and independent class, among our native citizens, who chance, in the present generation, to be at the bottom of the body politic; they were the exiles of another clime—the scum which every wind blows off the Irish shores—the pauper-dregs which England flings out upon America. Thus, within the precincts of our Steam-boat—which indeed was ample enough, being about two hundred feet from stem to stern—there were materials for studying the characteristics of different nations, and the peculiarities of different castes. And the study was simplified, in comparison to what it might have been in a wider sphere, by the strongly marked distinctions of rank that were constituted by the regulations of the vessel. In our country at large, the different ranks melt and mingle into one another, so that it is as impossible to draw a decided line between any two contiguous classes, as to divide a rainbow accurately into its various hues. But here, the high, the middling, and the low, had classified themselves, and the laws of the vessel rigidly kept each inferiour from stepping beyond his proper limits. The mob of the deck would have infringed these immutable laws, had they ventured abaft the wheels, or into the forward cabin; while the honest yeomen, or other thrifty citizens, who were the rightful occupants of that portion of the boat, would have incurred both the rebuke of the captain and the haughty stare of the gentry, had they thrust themselves into the department of the latter. Here, therefore, was something analogous to that picturesque state of society, in other countries and earlier times, when each upper class excluded every lower one from its privileges, and when each individual was content with his allotted position, because there was no possibility of bettering it.

I, by paying ten dollars instead of six or four, had entitled myself to the aristocratic privileges of our floating community. But, to confess the truth, I would as willingly have been any where else, as in the grand cabin. There was good company, assuredly; —among others, a Canadian judge, with his two daughters, whose stately beauty and bright complexions made me proud to feel that they were my countrywomen; though I doubt whether these

lovely girls would have acknowledged that their country was the same as mine. The inhabitants of the British provinces have not yet acquired the sentiment of brotherhood or sisterhood, towards their neighbours of the States. Besides these, there was a Scotch gentleman, the agent of some land company in England; a Frenchman, attached to the embassy at Washington; a major in the British army; and some dozen or two of our own fashionables, running their annual round of Quebec, Montreal, the Lakes and Springs.—All were very gentlemanly and ladylike people, but too much alike to be made portraits of, and affording few strong points for a general picture. Much of their time was spent at cards and backgammon, or in promenading from end to end of the cabin, numbering the burnished mahogany panels as they passed, and viewing their own figures in one or other of the tall mirrors, which, at each end of the long apartment, appeared to lengthen out the scene. Then came the dinner, with its successive courses, soup, fish, meat, pastry, and a dessert, all attended with a somewhat affected punctuality of ceremonies. Lastly, the slow sipping of their wine kept them at the table, till it was well nigh time to spread it again for supper. On the whole, the time passed wearily, and left little but a blank behind it.

What was the state of affairs in the forward cabin, I cannot positively say. There the passengers of the second class feasted on the relics of the original banquet, in company with the steward, waiters, and ladies' maids. A pleasant sketch, I think, might be made of the permanent household of a steam-boat, from the captain downward; though it is observable, that people in this and similar situations have little variety of character, and seldom much depth of intelligence. Their ideas and sentiments are confined within a narrow sphere; so far as that extends, they are sufficiently acute, but not a step beyond it. They see, it is true, many different figures of men and women, but scarcely any thing of human nature; for the continually varying crowd, which is brought into temporary connexion with them, always turns the same surface to their view, and shows nothing beneath that surface. And the circumstances of their daily life, in spite of much seeming variety, are nevertheless arranged in so strict a routine, that their minds and characters are moulded by it. But this is not what I particularly meant to write about.

The scene on the forward deck interested my mind more than any thing else that was connected with our voyage. On this occasion, it chanced that an unusual number of passengers were congregated there.—All were expected to find their own provisions; several, of a somewhat more respectable rank in life, had brought their beds and bedding, all the way from England or Ireland; and for the rest, as night came on, some sort of litter was supplied by the officers of the boat. The decks, where they were to sleep, was not, it must be understood, open to the sky, but was sufficiently roofed over by the promenade-deck. On each side of the vessel was a pair of folding doors, extending between the wheels and the ladies' saloon; and when these were shut, the deck became in reality a cabin. I shall not soon forget the view which I took of it, after it had been arranged as a sleeping apartment for at least, fifty people, male and female.

A single lamp shed a dim ray over the scene, and there was also a dusky light from the boat's furnaces, which enabled me to distinguish quite as much as it was allowable to look upon, and a good deal more than it would be decorous to describe. In one corner, a bed was spread out on the deck, and a family had already taken up their night's quarters; the father and mother, with their faces turned towards each other on the pillow, were talking of their private affairs; while three or four children, whose heads protruded from the foot of the bed, were already asleep. Others, both men and women, were putting on their night-caps, or enveloping their heads in handkerchiefs, and laying aside their upper garments. Some were strewn at random about the deck, as if they had dropped down, just where they had happened to be standing. Two men, seeing nothing softer than the oak-plank to stretch themselves upon, had sat down back to back, and thus mutually supporting each other, were beginning to nod. Slender girls were preparing to repose their maiden-like forms on the wide, promiscuous couch of the deck. A young woman, who had a babe at her bosom, but whose husband was nowhere to be seen, was wrangling with the steward for some better accommodation than the rug which he had assigned her. In short, to dwell no longer upon the particulars of the scene, it was, to my unaccustomed eye, a strange and sad one—and so much the more sad, because it seemed entirely a matter of course, and a thing of established custom, to men, women, and children. I know not what their habits might have been, in their native land; but since they quitted it, these poor people had led such a life in the steerages of the vessels, that brought them across the Atlantic, that they probably stept ashore, far ruder and wilder beings than they had embarked; and afterwards, thrown homeless upon the wharves of Quebec and Montreal, and left to wander whither they might, and subsist how they could, it was impossible for their moral natures not to have become wofully deranged and debased. I was grieved, also, to discern a want of fellow-feeling among them. They appeared, it is true, to form one community, but connected by no other bond than that which pervades a flock of wild geese in the sky, or a herd of wild horses in the desert. They were all going the same way, by a sort of instinct—some laws of mutual aid and fellowship had necessarily been established—yet each individual was lonely and selfish. Even domestic ties did not invariably retain their hallowed strength.

But there was one group, that had attracted my notice several times, in the course of the day; and it did me good to look at them. They were a father and mother, and two or three children, evidently in very straightened circumstances, yet preserving a decency of aspect, that told of better days gone by, and was also a sure prophecy of better days to come. It was a token of moral strength, that would assuredly bear them through all their troubles, and bring them at length to a good end. This family now sat together near one of the fur-

naces, the light of which was thrown upon their sober, yet not uncheerful faces, so that they looked precisely like the members of a comfortable household, sitting in the glow of their own fireside. And so it was their own fireside. In one sense, they were homeless, but in another, they were always at home; for domestic love, the remembrance of joys and sorrows shared together, the mutual anxieties and hopes, the united trust in Heaven, these gave them a home in one another's hearts; and whatever sky might be above them, that sky was the roof of their home.

Still, the general impression that I had received from the scene, here so slightly sketched, was a very painful one. Turning away, I ascended to the promenade deck, and there paced to and fro, in the solitude of wild Ontario at nightfall. The steersman sat in a small square apartment, at the forward extremity of the deck; but I soon forgot his presence, and ceased to hear the voices of two or three Canadian boatmen, who were chatting French in the forecastle. The stars were now brightening, as the twilight withdrew. The breeze had been strong throughout the day, and was still rising; while the billows whitened around us, and rolled short and sharp, so as to give the vessel a most uneasy motion; indeed, the peculiar tossing of the waves, on the lakes, often turns the stomachs of old seamen. No land was visible; for a head-wind had compelled us to keep farther seaward than in the ordinary passage. Far astern of us, I saw the faint gleam of a white sail, which we were fast leaving; and it was singular, how much the sight of that distant sail increased my sense of the loneliness of our situation.

For an hour or more, I paced the promenade, meditating on the varied congregation of human life that was beneath me. I was troubled on account of the poor vagabonds of the deck. It seemed as if a particular Providence were more necessary, for the guidance of this mob of desperate individuals, than for people of better regulated lives; yet it was difficult to conceive how they were not lost from that guidance, drifting at large along the stream of existence. What was to become of them all, when not a single one had the certainty of food or shelter, from one day to the next? And the women! Had they been guarded by fond fathers, counselled by watchful mothers, and wooed with chaste and honourable love? And if so, must not all these good influences have been done away, by the disordered habits of their more recent life? Amid such reflections, I found no better comfort than in the hope and trust, that it might be with these homeless exiles, in their passage through the world, as it was with them and all of us, in the voyage on which we had embarked together. As we had all our destined port, and the skill of the steersman would suffice to bring us thither, so had each of these poor wanderers a home in futurity—and the God above them knew where to find it.

It was cheering, also, to reflect, that nothing short of settled depravity could resist the strength of moral influences, diffused throughout our native land;—that the stock of home-bred virtue is large enough to absorb and neutralize so much of foreign vice;—and that the outcasts of Europe, if not by their own choice, yet by an almost inevitable necessity, promote the welfare of the country that receives them to its bosom.

OLD PIRATES.

Among the British State Trials, are recorded the trials of several pirates, who infested the coast of South Carolina, about the year 1718. The name of one of them was Thatch. He had a ship of forty guns, and one hundred and forty men, with a fleet of smaller vessels, over which he exercised the authority of Commodore. Such was the force of his armament, that he lay at the bar of Charleston, in full sight of the town, and seized and rifled several ships, bound inward and outward. He levied contributions on the government, and took prisoner a member of the Colonial Council. Notwithstanding these outrages, some of his men were allowed to land, and walk openly about the streets of Charleston. One Vaughan afterwards acted in a similar way. The feats of these bold rovers sound strangely, when we reflect that they took place on the North American sea-coast, now so secure; although a century later, the pirates of the West Indies have displayed almost equal effrontery.

But the most noted hero of the black flag—the 'Archipirate, or Chief of Pirates,' as the prosecuting officer calls him—was Major Stede Bonnet. The Attorney General of South Carolina complained, that some persons had expressed themselves favourably towards Bonnet, as being a 'gentleman, a man of honour, a man of fortune, and one that had received a liberal education.' All the government witnesses appear to have felt a high respect for this accomplished and excellent person. Pell, the boatswain of his vessel, who had turned King's evidence, was almost willing to relinquish his own pardon, rather than testify against Major Bonnet. The Admiralty Judge seems to have partaken of the general sympathy; he passed sentence with singular courtesy, and expressions of high consideration towards the criminal; and the hangman did his office with as much politeness as the circumstance would permit.

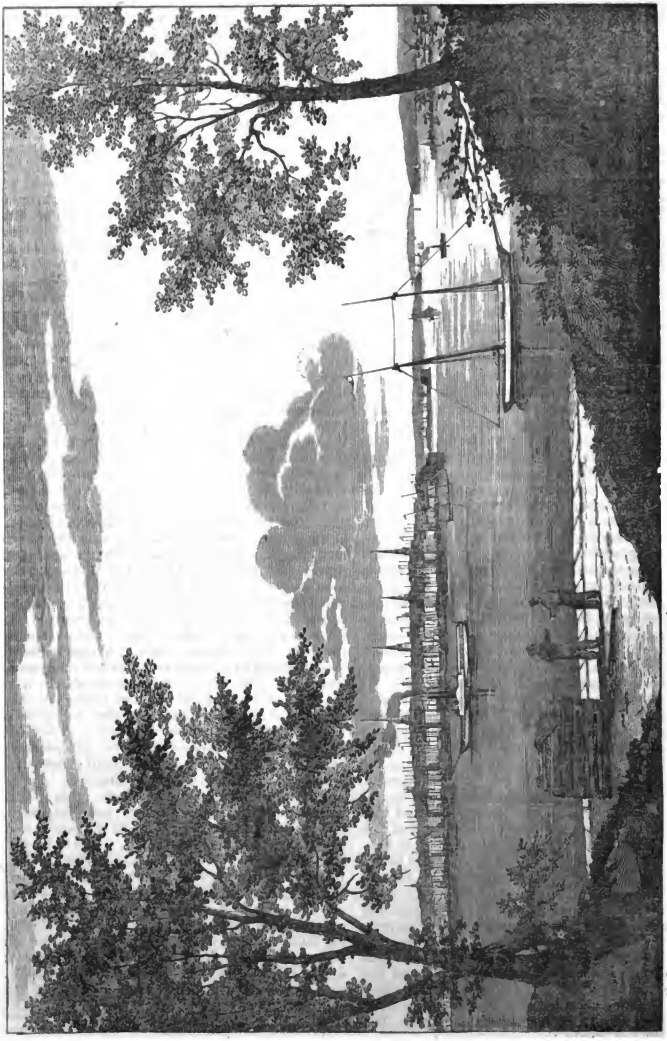
This Major Bonnet, and his associates, appear to have been partisans of the Stuart family, which was then in exile, and whose hopes of returning to the British throne, had recently been frustrated by the accession of the House of Hanover. It is noticed that the Pretender's health had been drunk by the pirates, aboard one of their prizes. As the exiled monarch might be considered as always at war with his rebellious kingdom; so his adherents might consider themselves justified in carrying on actual hostilities;—at least, such an argument might satisfy the consciences of desperate men, and throw a specious veil over their crimes. Hence, perhaps, the sympathy which they received from the South Carolinians, who probably were not such devoted Whigs as the people of New England. But, in truth, the days of the Buccaneers were then so recent, that the public feeling was every where very lenient towards pirates; although the laws against them were as severe, and as rigidly executed, as at present. The famous Captain Kidd was suffered to go at

large, several days, in Boston, and it was even whispered that the British ministry, and the king himself, were concerned in his depredations.

FISHER AMES.

Mr. Ames may justly be classed with the most eminent and political characters in our country. The period of his public services and greatest glory, was from 1788 to 1800. He died in 1808, at the age of fifty. He had been an invalid for several years before his death; and this consideration, together with the course of public measures, of which he disapproved, probably induced him to retire from political life. Mr. Ames was a native of Dedham, Massachusetts, and son of a respectable physician. He entered the University at the early age of twelve years. Leaving College at sixteen, he or his relations, thought it too early to enter on the study of law, the profession which had been early chosen for him. He spent between three and four years in teaching youth; but the school, under his care, was of the higher order than the common public schools, in the country towns. In 1778, at the age of twenty, he entered the office of William Tudor, and devoted himself to the study of the law; And in 1781, he began the practice, in his native town. His professional business was sufficient to employ the most of his time; but he was too much of a patriot, and of too elevated views to devote himself to the low employment of making money. The subject of politics soon engaged his attention, and occupied much of his time. The debt of the Commonwealth was then very great, and its credit at the lowest point of depression. Mr. Ames took part with other patriots of the day, in devising measures for paying off the debt, and for reviving the credit of the State. But it was in 1788, when he was scarcely thirty years old, and as a member of the State Convention of Massachusetts, for adopting the Federal Constitution, that he burst forth in the political horizon, as a bright luminary, which gave high promise of light and heat which would assist in renovating the dark and gloomy period which had visited the United States. He was among the ablest members of that very respectable Convention, where sat a Bowdoin, a Samuel Adams, a Strong, and a Parsons. His arguments were equal to his zeal and ardour, in favour of the Constitution; and after its adoption, he was the first member of Congress from Suffolk County, (then including the towns which now compose the County of Norfolk,) though several able and tried statesmen of Boston were also proposed for that high trust. Mr. Ames was repeatedly elected to Congress, till his feeble health, in 1797, induced him to decline. While he was a member of the National Legislature, his brilliant powers were often called into exercise. On several occasions, and especially on the question of money and measures, for carrying into effect the treaty with Great Britain, made by Washington, in 1794, he surprised and convinced his political opponents, by the united force of eloquence and argument. His speeches were far from being declamatory; nor were they merely brilliant. They were justly characterized as eloquent—but, like *Pitt* and *Burke*, they were discriminating, they had truth and patriotism for their foundation; and therefore were convincing, unless when addressed to those governed wholly by party feelings.—Mr. Ames was a short time at the Council Board, after retiring from Congress, and when Governour Sumner was in the chair. On the death of General Washington, in December, 1799, he was chosen by the Legislature to deliver an eulogy on that most eminent patriot. It was a chaste and faithful, but sober memoir of the hero and the statesman. It wanted the fire and eloquence of some of his earlier productions; but will be read, at this distant period, with far more profit and satisfaction than most of the orations on that occasion, which then received enthusiastic commendation. The health of Mr. Ames continued quite infirm, and some of his friends thought he yielded too much to his feelings. A more active life might have given him better health, and protracted his valuable life. While in this feeble state of health, he wrote frequently in the public papers, on the public affairs of the nation, when difficulties arose between our government and the rulers of France; and some persons supposed his writings received their tone from the morbid state of his mind induced by disease. He indulged much in apprehensions of political evils from the ambition and intrigues of the *few*, and the inattention and love of change of the *many*. He feared the spread of Jacobinical or radical notions; and thought he saw a speedy downfall of our republican institutions. Mr. Ames made a distinction between republicanism and democracy. The former, he said, consisted in conforming to the Constitution, and to the laws and measures of the representatives of the people. And the latter, in a more pretended love or regard for the people, while the interested demagogue, who cried liberty the loudest or the most frequently, would break down the constitutional barriers, erected for the preservation of equal rights: And anarchy and despotism would ensue. There is too much truth in this distinction, and in the fears of Mr. Ames, and yet a representative democracy and a republic seems to be synonymous terms. In 1804, Mr. Ames was requested to take the office of President of Harvard University; but the state of his health was such, that he declined the proposal. He thought the place required full health and vigour to meet the duties and responsibility of the office. He was the third person chosen to that place, who was not a clergyman. Judge Leverett, in 1708, was one of the other. Mr. Ames was a good classical scholar, and possessed a fine taste for composition: And his disposition and deportment were very conciliating. Had he been in good health, he would have made a distinguished Principal of that ancient and respectable Seminary. Mr. Ames died in 1808: and 'his setting sun,' as one has justly said, 'was serene as philosophy and religion could make it.' The Hon. Samuel Dexter, his intimate friend and compatriot, pronounced an eulogy on his character at the place of interment; which, though short, and in some measure probably, extemporaneous, did justice to himself and to the illustrious dead. B.

Any character is better than none.



View of the City of New York.

NEW YORK.

The first European discoverer of the island, on which New York is situated, was Henry Hudson, an Englishman in the service of the Dutch East India Company. In 1609, when he visited the site which is now covered with the innumerable edifices and thronged with the population of this great city, it was wild, rough, and desolate. The island, which is about fourteen miles long, and less than a mile in average breadth, was overshadowed by a thick forest, wherever the soil was fruitful enough to supply nourishment. The beach was sandy, but broken by ledges of rock, and interrupted by numerous inlets; the surface of the interiour was diversified with sandy hills, masses of rock, ponds, swamps, and marshes. Such, when the old Dutch vessel anchored off Manhattan island, was the aspect of the spot, which the engraving now represents as a mass of contiguous roofs, with steeples pointing to the clouds, and the ships of every nation thronging at its wharves. Old Henry Hudson would have been even more wonderstruck at the steam-boats which we see in the river, than the red men were at his big canoe.

The Dutch early planted a garrison upon the island; but the city appears not to have been laid out till 1656, forty-five years after the first discovery. It was originally called New Amsterdam, deriving its name from the capital of Holland, whose daughter it might be considered. But the Dutch government was not long to retain its sway over the infant city. In the year 1664, it was claimed by Colonel Robert Nicolls, under the authority of king Charles the Second, as being within the English jurisdiction, which, on very doubtful grounds, was said to cover the whole space between Virginia and New England. The right of the strongest, however, was indisputably on the English side; and Peter Stuyvesant, the Dutch Governour, a stout old soldier with a wooden leg, was reluctantly compelled to surrender New Amsterdam—which misfortune, according to Knickerbocker, a highly esteemed historian, went near to break his heart. At the period when Colonel Nicolls took possession of the city, it consisted of several small streets, with houses in the Dutch fashion, presenting their gable-ends in front. Nine years afterwards, during a war between Great Britain and Holland, New York again came into possession of its original founders, being taken by a Dutch fleet; but was restored to the English authorities at the peace of 1674.

In 1689, when the Stuarts were driven from the throne of England by the Prince of Orange, the Dutch inhabitants of New York eagerly seized the opportunity to place the city under the dominion of a monarch of their own blood. The English rulers, and principal gentlemen, were favourers of the Stuarts; but Jacob Leisler, a Dutchman, took military possession of the town with a force of forty-nine men, and sent a written message to the Prince of Orange, informing him of this important accession to his party. Leisler doubtless anticipated some distinguished mark of favour from the Prince, who had now become King William the Third. But the unfortunate Dutch captain had made many enemies during his short period of power in New York, and by their machinations, he was condemned to death for high treason, and underwent his sentence soon after the arrival of Colonel Sloughter, the English Governour, whom King William had sent over. The troubles, arising from this dark and complicated affair, continued to disturb the city and province for several years afterwards.

In the year 1708, the original Dutch settlers of New York had become intermingled with many new emigrants from other countries; there were then in the city a great majority of Dutch Calvinists, whose mode of worship was on the plan of the church of Holland—a considerable number of French refugees, who had been exiled by Louis XIV, for their adherence to the faith of Geneva—a few English Episcopalians, and a yet smaller proportion of English and Irish Presbyterians. Notwithstanding these amalgamations of various stocks, the city continued to be Dutch in its aspect and general character, for many succeeding years. The language, however, went gradually into disuse, and in 1756, there were but two churches wherein religious services were performed in Dutch, and their congregations continually diminished. It is a proof, indeed, that the national character of Holland is strongly marked and deeply ingrained, that so small a community as that of New Amsterdam, passing under a foreign government, should so long have retained the characteristics of the country whence it sprung.

No historical sketch of New York, however brief and rapid, should omit to notice the Negro Plot, which seems to partake somewhat of the character of the Catholic and innumerable other plots, that threw England into such confusion, and cost so many men their lives, in Charles the Second's days. This mysterious business took place in 1741, at which period there were eighteen thousand inhabitants in the city, one-sixth of whom were slaves. Several incendiary attempts having been made, it was rumoured that the slaves, in conjunction with a few white men, had laid a conspiracy to burn the whole city to ashes, and murder the inhabitants. On this suspicion, one hundred and fifty-four negroes were imprisoned, fourteen of whom were subsequently burnt to death at the stake, eighteen hanged, and seventy-one transported. Twenty whites were also committed to prison, of whom two were executed. This horrible severity, which would hardly have been justifiable, even had the slaves fully succeeded in their alleged plot, makes us shudder when we read the doubts of the historian, whether any such design had ever had existence. There was probably a panic and excitement; the inhabitants were at once terror-struck and bloodthirsty; and if ever New York should reproach New England with the martyrdom of the witches, it will be fair to ask, where they have hidden the ashes of their negroes who perished at the stake.

In 1776, after the battle of Long Island, the city was taken by the British; and a few days subsequent to that event, a fire broke out which consumed one thousand houses. New York continued the head-quarters of the hostile army, the capital of the English government in America, and the metropolis of its affairs, till the peace of 1783; when the last roll of the British drum was heard along its streets

as the troops marched to the point of embarkation. Since that period, the events which would chiefly be touched upon, in a sketch like this, are the prevalence of Yellow Fever, at some seasons, the ravages of the Cholera in 1832, and the Great Fire of December, 1835; which latter calamity will doubtless be an epoch in the history of New York, and never, we trust, be outshone by any future conflagration. We cannot give a better idea of the rapid growth of the city, since the peace of Independence, than by stating the number of its inhabitants, at successive periods. In 1785, there were 35,000; in 1800, they had nearly doubled, being 60,000; in 1810, they had become 95,000; in 1825, they amounted to 165,000, and in 1830, to 200,000; and the increase of every year would be sufficient, were they to take up their residence in a desert, to form a very considerable city. Besides the permanent population, from ten to twenty thousand strangers are usually there.

The geographical position of New York will secure it against any of those reverses, which have sometimes caused grass to grow in the streets of cities, once as busy and populous as this. It is happily situated on the central portion of the sea-board, the most convenient for intercourse with the American ports, for regular communication with France and England, and for commerce with all the maritime countries of the world. Canada and all the West send their produce thither, by the Erie and Champlain canals, and down the Hudson river. It is already a great city, and can hardly fail to increase, and cover the whole island on which it stands. Broadway, which runs through it like a back-bone, while the cross streets form the ribs, is about three miles long, and eighty feet in width. Here the jewellers have their shops, with the dealers in silks, and all sorts of showy commodities, making it the most splendid promenade on our side of the Atlantic. South street is where the wholesale merchants most do congregate; at least, they did so, before the recent conflagration. In Pearl street, the chief business is the retailing of dry goods. Wall street is the haunt of the stock-brokers, and of all who buy money or sell it; and the effect of the transactions there is felt at the Bourse in Paris, and on the Exchange in London. The Battery is a beautiful walk, whither the citizens may escape from the dust and din, and enjoy the fresh sea-breeze. It would require a volume to describe the public buildings, the institutions of learning and science, the hundred churches, the theatres, the great hotels, which have clustered on the spot where the Dutchmen traced their muddy streets; and where still a few of their antique houses, with high-peaked roofs, remain among the edifices of brick, stone, and marble, with which their successors have burdened the narrow island.

The site of New York, as will be seen by the engraving which we present of it, has none of those inequalities which give a picturesque aspect to a city. In this particular, Boston far exceeds it. But the land and water scenery, of which New York forms a component part, is said to be excelled by no prospect in the world.

Bells of Moscow.—One of the most remarkable bells in the world is that of the Church of Saint Ivan, at Moscow. It weighs one hundred and fourteen thousand pounds, and is never sounded except on great occasions. The bell itself remains immovable, and is rung by means of a rope fixed to the clapper, which alone is heavier than our ordinary bells. When a peal is rung, its vibrations are perceptible throughout the city, and produce a solemn impression upon the hearer, in which the effect of the distant roll of thunder is harmoniously combined with the deepest and softest tones of an immense organ.

A FAMILY.

I saw Content, the other day,
Sit by her spinning wheel,
And Plenty in a wooden tray
Of wheat and Indian meal.

Health, also, at a table sat,
Dining upon a ham:
But appetite demanded yet
A cabbage and a clam.

Wealth sat enthroned upon a green
And fragrant load of hay;
And Happiness compelled a dog
Behind the cart to play.

Delight was chasing butterflies,
With Laughter and with Joy;
Affection gazed with ardent eyes
Upon the sweet employ.

Beauty was watering flowers
Beside the cottage door:
And Pleasure spoke about a tour
To Mr. Staple's store.

Industry bid good morrow, and
Invited me to tea;
But Jolly bid me stay away,
Unless I came with Glee.

Patience sat in an easy chair,
Unravelling a skein;
While Mirth, with roguish eye, and air,
Would tangle it again.

Benevolence had built a tower
Of pudding, bread and meat,
And bid Compassion take it o'er
To Want, across the street.

But I was gratified to see
Easy, and free, and fair,
With Innocence upon his knee,
Old Satisfaction there.

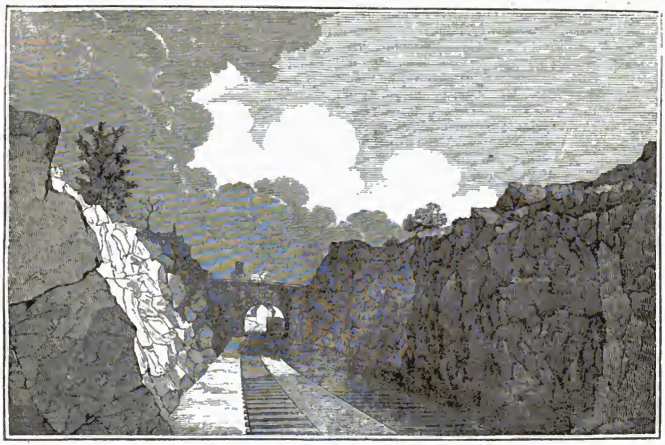
He took me by the hand, and led
Me down a vista green,
Where Fun and Frolic antics played,
Two ancient oaks between.

But, best of all it was to find,
That Love, the day before,
The fopling Dress had kicked behind,
And tossed him out of door.

And now kind reader, if you choose
This family to know,
A farmer's here I'll introduce:—
A 'hundred years ago.'

Long Island Star.

Lombardy Poplars.—In the United States, if a boy set out one of these trees, it will probably have arrived at its full growth, and have begun to decay at the top, while he is still a young man. But at Whitton, formerly the residence of Archibald, Duke of Argyle, a Lombardy poplar was set out by that nobleman, about a century ago, and is still alive and flourishing. It is now 115 feet high, and measures nineteen feet and eight inches round the trunk, at two feet from the ground.



View of the Deep Cut of the Lowell Rail Road, near Lowell.

LOWELL RAIL ROAD.

The engraving represents the passage of the Lowell Rail Road through a ledge of solid rock. It is on the northern part of the road, within the limits of the town of Lowell. The arch-bridge, which is seen in the view, crosses the Rail Road near the northern extremity of the ledge, and is about three thousand nine hundred feet from the Merrimack House, in the village. This bridge is on a country highway, and, at the moment when the view is taken, a horse and gig are crossing above, while the engine and train of cars come steaming beneath.

The Rail Road runs through the ledge, upwards of six hundred feet. The depth of the Cut, straight downward through the solid rock, is, in some places, forty feet; though, in the far greater portion of the tract, it is less. The passage is thirty feet in breadth at the bottom, and gradually becomes wider to the top. The expense of cutting this avenue, through a solid ledge of rock, is said to have been more than $40,000. The whole length of the Road from Boston to Lowell, is twenty-five miles, and one thousand feet. The travel on the Rail Road is very great. Last Summer, soon after its completion, three trains of cars daily passed over the road, and returned, carrying a thousand persons each day. The time occupied in the passage is from an hour to an hour and fifteen or twenty minutes; but the cars have occasionally performed it in less than an hour.

This work is highly honourable to the enterprising spirit of the proprietors. It will contribute to the prosperity of Lowell, which is still rapidly increasing, and will probably long be the first manufacturing town in the United States. The situation is admirable, and the water abundant; the surrounding country is well cultivated; the preser owners of the factories possess great wealth, and combine much energy with a degree of prudence and calculation, that will deter them from all ex travagant enterprises. Thus Lowell has all the elements of prosperity, and its growth will contribute to the welfare of the country at large. The manufacture of cottons and woollens, but especially of cottons, has already done much towards that end.

SONG.

[From the American Monthly Magazine.]

There is a wee and pretty maid,
  As sweet and winsome as a fairy,
I wadna ask wi' wealth to wed,
  If I could wed wi' thee, Mary.

I've wandered east—I've wandered west—
  As wanton as the winds that vary,
But ne'er was I sae truly blest
  As when I met wi' thee, Mary.

Like a wee purple violet,
  That hangs its blushing head a-weary,
When wi' the dew its leaves are wet,
  Sae modest sweet art thou, Mary.

Thy brow is white, as is the mist
  That sleeps on Heaven's forehead starry—
Or mountain snow by sunrise kissed,—
  Thy heart is whiter still, Mary.

Thine e'en are like an eagle's e'en
  That sitteth proudly in his aerie—
They glitter with a starry sheen,—
  Yet modest as thy heart, Mary.

Upon thy rosy cheek, the soul
  Seems in the gushing tide to vary;
An' crimson currents in it roll,
  As tho' it wad break thro', Mary.

If I could press thee in my arms,
  As my wee wife and bonny fairy;
I wadna gie for thy sweet charms
  The warld an' a' its wealth, Mary.

How sweetly wad the hours gae by
  That now sae solemn are and dreary
If thou upon my breast didst lie,
  My ain, my lovely, dear Mary.

A. Pike.

SCHUYLER, CLINTON, AND JAY.

[From Hamilton's Life, by his Son.]

In New York, (in 1775,) the ministerial party maintained their ascendency in the Assembly, although not without a severe and persevering conflict. Not daring longer to defend the measures of the ministry, they sought by holding out the prospect of a favourable answer to their petitions, and by assuring to their constituents a special exemption from the common calamity, to quiet the minds and paralize the efforts of the people. The opposition in this body was still led by two men of the most determined resolution,—Philip Schuyler and George Clinton,—who, together with John Jay, were the leading patriots of New York; and when the importance of the concurrence of this Province, and the embarrassments with which it was surrounded, are taken into view, contending, at the same time, with the whole influence of the ministry, with the power of the colonial government, adroitly exercised, with a large body of its wealthy proprietors actively co-operating with the timid portion of the mercantile community, amid a divided population and distracted councils, it is difficult to measure the extent of their services.

The first of these, Colonel Schuyler, had been a partisan officer in the war of seventeen hundred and fifty-six. By his fertility of resource and unyielding energy, he rendered distinguished services to the British commander, Lord Howe, who fell, lamented, by his side, and to him the honour of his interment was confided. Descended from one of the early Dutch settlers of this province, the influence and respectability of whose family had been transmitted through successive generations, he exercised an almost unrivalled sway over the minds of the descendants of a people, whose first mention in history, as a distinct political community, is associated with the assertion of their liberties.

Possessed of great wealth, he embarked it in the contest, as a pledge of his patriotism, and, in the course of the Revolution, sacrificed as much of fortune and of feeling, as any other individual in America.

Party to the most secret councils of the continent, he had staked every thing on the issue of the conflict, and had acquired a weight of influence which led both Virginia and Massachusetts, to regard him as the connecting link in the great purposes at which they aimed. 'On the shoulders of this great man,' said Judge Benson, 'the conduct of New York rested.'

His love of fame was less than his love of country; and when the misadventures of some robbed him of the glory to which he was entitled, and while artifice withheld from him an opportunity of vindication, he is not seen indulging in invidious comments on the successes of others, but continuing within the sphere of his great influence and resources, to advance the cause of his early preference. Thus, his strength of character sustained him when other men sunk, and his adversity gave him more true honour than he could have derived from success.* Sullied by no private vices, and misled by no small passions, his path through life was high, unspotted, equal; and he died with a reputation, which those who knew and followed him, have contended to perpetuate.

Sprung from a family of Irish descent, which counted among their ancestry a gallant officer of the cavaliers who fell with Charles the First,—George Clinton, in a nobler cause, displayed all the perseverance and courage of his blood.

In early youth he broke from the thrall of parental authority, and exchanged for his father's house, a berth on board of a privateer, in which he made a cruise during the French war. He is next seen in service with his father and brother in an attack which resulted in the capture of Frontinac. He then became a lawyer, and was placed soon after in that sphere in which he was the associate of Schuyler, in opposition to the influence of the crown. Transferred by the popular choice to the Continental Congress, he took part in the measures of 1775 and 1776, and on the formation of the Constitution of the State of New York, was chosen its governour, and filled that station during a period of eighteen years. On the first call to arms, he was appointed a brigadier general, and during the most trying years of the war commanded in the Highlands, and held the keys of that natural citadel. In intrepidity, perseverance, and love of liberty, he was not less distinguished than his great compatriot; but in the modes of obtaining their objects, and in their political views, they were most unlike. By Schuyler, the Declaration of Independence was regarded but as the first step toward the creation of a great nation, pledged to the principles which that instrument proclaimed. With Clinton, the love of liberty was a fiercer passion.

In Schuyler, it was a principle of high benevolence, enlarging with the sphere of action. With Clinton, it was a jealousy of power, contracting and deforming the object of his adoration. The one, conscious of his own imperfections, regarded mankind with a kindred feeling, as full of weaknesses from which they were to be protected. The other, with a profound knowledge of human nature, and consummate talents for popularity, looked more to the passions of men, as a field from which could be gathered a store of influence for his own advancement. The one aided in building up the Constitution of the United States on the basis of a firm and perpetual union. The other, had he prevailed, would have doomed them to perpetual anarchy.

John Jay, younger than either, was educated for the bar, and had already acquired celebrity in his profession. His father, the descendant of a persecuted Hugonot, established himself in the vicinity of New Rochelle, where, surrounded by a small community, who traced their origin and their adversities to the same source, he pursued an agricultural life, and preserved all the simplicity of habits and purity of character, which had been cultivated by the Protestants in France, amid the varied vicis-

* 'I hope, said Mr. Jay, 'you will seriously determine to serve your country, at least in a legislative capacity. Class yourself with those great men of antiquity, who, unmoved by the ingratitude of their country, omitted no opportunities of promoting the public weal.'—February 12, 1778.

situdes of their fortunes. Educated in such a school, he espoused the cause of liberty, with an ardour equal to the zeal with which he defended it, and soon acquired the ascendency, to which his probity, and the soundness of his understanding, entitled him.

By some, his jealousy of errour was supposed to have run into a proneness to suspicion; and his strict adherence to right, to have bordered on severity; but the basis of his character was lofty virtue and manly self-dependence. Elevated by these qualities in the public confidence, he rose to some of the highest stations in the civil branch of the government, and long shone conspicuous among the great lights which ushered this nation into existence,—a pure, consistent, and unyielding patriot.

PUNISHMENT OF DEATH.

From the Report of the Committee of the Massachusetts House of Representatives, on the abolition of Capital Punishment, we extract their arguments against the infliction of death for the crime of murder. The report is well written, and urges the abolition of laws of blood, chiefly on the sensible and sustainable ground, that they do not conduce to that end which was proposed in enacting them,—the prevention of crime.

'There remains for our consideration the crime of Murder, and to this crime it is supposed by some that the punishment of death should be affixed, even though it should be dispensed with in all other cases. The object of punishment is the security of society by the prevention of crime. If society have the right to take away life in any case, nothing but an absolute necessity can justify the exercise of that right; and such absolute necessity, if clearly made out, would justify capital punishment in any other case as well as in that of murder. The experience of Great Britain proves that the threatened penalty of death cannot prevent or essentially diminish the frequency of such crimes as horse stealing, house breaking, shop lifting, forgery, or even simple larceny. If the terrour of such a punishment be not sufficient to deter from lesser crimes, much more certain is it that it cannot prevent murder, to which the guilty must be drawn by much more powerful temptations, or impelled by much more violent passions, and which is therefore much less under the controul of any reasonable calculation of consequences. The fear of being burned to death, when such was the law, could not prevent a timid girl from preparing, concealing, or passing to others a few white-washed farthings; it is not to be expected that the remote and uncertain chance of death, in a much milder form, will prevent him whose heart is steeled to the requisite degree of hardness from the commission of murder. A punishment confessedly ineffectual for the suppression of comparatively trivial offences, cannot be necessary, because it cannot be competent, to suppress a degree of crime so far beyond its power.

'We punish the murderer to make the lives of others more secure. Let us not then punish him by taking away his life, for that will defeat our object—that will make life less secure by breaking down its greatest safeguard, its *sanctity*, if the expression may be used—the natural horrour which every man feels at the idea of the violent extinction of another's life, until, by frequent repetition, it becomes familiar to his mind, and ceases to excite the same emotion. If the spectacle or knowledge of an execution, tends to deter from murder, the effect would be much heightened by repeating it every day. Suppose by an arrangement with foreign nations all the criminals condemned in all the courts of the old world could be brought within this Commonwealth, and executed in its different towns throughout the next year. Does any one believe that such is the moral effect of these exhibitions, that capital crimes would be less frequent after the expiration of that period than before? Is it not a more reasonable conclusion that the value of human life would be so cheapened in the eyes of the spectators of such a lavish waste of it, that capital crimes, and particularly murder, would be fearfully multiplied, and almost in the ratio of the executions? If a thousand executions would produce this most miserable effect, one execution would produce much more than a thousandth part of it, since the first execution that a man witnesses gives a much severer shock to his moral sense, and inflicts a deeper and more lasting injury upon his character than any ten or twenty scenes of the same sort that he may witness afterwards.

'When the law punishes murder by death, it gives a legal sanction to the unholy passion of revenge, one of the most frequent motives of murder. It sets an example of revenge pushed to its farthest possible extent. It does all it can to justify murder in revenge of a great wrong, for it holds up the spectacle of a life violently taken away—taken away too, without an absolute and apparent necessity, and with this infernal feature peculiar to the transaction, that whereas most private murders are committed in the heat of blood, and without much deliberation on the nature of the act or its consequences, society perpetrates its revenge with a cool and deliberate malignancy, and after years of forecast and calculation. By so doing it becomes the model for the individual who makes himself the avenger of his own wrongs—the murderer. By so doing, it blunts the virtuous sensibilities, dissipates the wholesome prejudice, if it be a prejudice—let us rather call it a universal instinct, implanted in us for the wisest purposes, which makes the unsophisticated heart regard with awe and horrour the violent extinction of life—a feeling a thousand fold more effectual for the security of human life than all human legislation, actual or possible, could be. Let the law then cease to counteract its own objects, and let it rather teach that great lesson which pure Christianity, sound philosophy, and the instinctive dictates of our better nature concur in teaching, that the life of man is something sacred—not to be violated by human hands—rightfully to be taken away only by Him who gave it.

'It has sometimes been imagined, that the Mosaic and ante-Mosaic laws upon this subject are still binding upon Christian communities, and that, therefore, capital punishment for this crime cannot be done away with. If the great antiquity of these laws is supposed to prove their universal obligation, let us go back farther to an adjudication of divine wisdom in a case much more ancient than any of

them, the case of the first murderer, Cain, upon whom a mark was set, not that he might be capitally punished, but purposely to prevent such a catastrophe, lest men finding him should slay him. Coeval with the law referred to, and promulgated with quite as many indications of an intention to render it universally obligatory, is the regulation forbidding animal food to be eaten with its juices, in the manner now practised by all christian nations, yet no Christian has any scruples about regarding this as a local and temporary ordinance, although it is one of the few provisions expressly retained by the Committee of the Apostles when they declared the Mosaic ritual generally to be abolished. As a part of the same system, resting upon the same grounds, and meant for all that we can discover to have the same duration, the law of Moses punished with death a slight infringement of the prescribed rest of the Sabbath, and authorised also a parent to put to death a disobedient child. So well satisfied are we all that the change in the whole condition and fundamental construction of society has abrogated these provisions of the Jewish law, that while the whole community acknowledges their divine origin, a Jew who should carry into effect these precepts of his religion among us, would be tried, convicted and executed for the crime of murder—a murder too, which, if the Mosaic law on this and collateral subjects is still in force, it was his duty to commit; and from which as a pious and conscientious professor of his ancient religion, he could not excuse himself.

'Let those who believe that the ante-Mosaic and Mosaic law of murder is still in force, recollect what that law is, and they will be among the first to disclaim it. It introduced no new principle of action, but merely for wise reasons growing out of the then existing state of society, sanctioned the indulgence of private revenge. The avenger of blood, without judge or jury, upon his own personal responsibility executed the law. How would intelligent men receive a proposition to re-enact, in the present state of civilisation, a code so liable to the grossest abuses? These laws were framed to meet the wants of a rude society, and should cease, as for the most part they have ceased, with the condition to which they were suited. In the imperfect organization and irregular action of the Jewish Government through most of the period of its independent existence, it was necessary that the execution of the law against murder should be lodged in hands where interest and the passion of revenge would ensure that it should not remain a dead letter. Such was the situation of the avenger of blood, his bad passions were allowed full scope in this instance, for through them only could the violated majesty of the law be vindicated. Upon the known and uniform principles of human nature he must have been a most efficient judge in his own cause, executor of his own decrees, and swift and indefatigable pursuer and destroyer of his victim.

'The impossibility of any *secure* perpetual imprisonment left those barbarous ages without any eligible substitute for capital punishments. This, the only valid plea in excuse of that savage practice, has long been done away'

By the proposed Act, the crime of murder is to be punished with solitary imprisonment for life. The following section sets forth the manner in which the civil condition of the guilty person will be affected by his punishment. While yet alive, he will be blotted out, as it were, from the book of life—from the roll of living men. Instead of being hanged, buried, and forgotten, he will remain, perhaps for half a century, an awful example of enduring retribution for long-past crime.

'Sec. 4. *Be it further enacted*, That when any person shall hereafter be convicted of the crime of murder, all contracts of whatever nature to which the person so convicted shall be a party, shall be affected, changed, or annulled, in the same manner as they severally would have been by the death of the person so convicted. The bonds of matrimony between the husband or the wife, as the case may be, and the person so convicted, shall be dissolved; the person so convicted shall cease to have any title to or interest in his own estate, real and personal, and the same shall be treated, be disposed of, and descend, in all respects as if his actual death had taken place on the day when he was convicted as aforesaid; and all power and authority of whatever nature which he might lawfully have or exercise over any other person or persons, shall from and after his conviction as aforesaid, cease and determine as if he were dead.'

The Waterloo Vase.—This magnificent specimen of modern art has been recently removed to the National Gallery, in Trafalgar square. It was found necessary to have it sent there before the completion of the building of the gallery, as the dimensions of the Vase would render it impossible to admit it within the building when finished. The circumstances connected with the marble of which the Vase is composed may be considered as remarkable. Napoleon Bonaparte, having seen the blocks in passing through Tuscany, in his 'progress' to the Russian campaign, desired that they might be preserved, in order that a trophy of the 'anticipated' victory might be worked from them by some eminent sculptor. A few years afterwards the identical blocks of marble were sent to his late Majesty George IV, who caused them to be sculptured into a Vase of enormous size, in order to commemorate the victory of Waterloo. The height is about sixteen feet; the diameter of the top about nine or ten feet. On one end is represented King George IV, on his throne, with Fame presenting the palm of victory. Bonaparte, on the other side, is seen dismounted from his horse. The rest is filled up with allegorical figures. This choice specimen of British art is the work of Richard Westmacot, Esq. R. A. and it is without doubt the largest and most splendid Vase in the world. It was originally intended to adorn 'the Waterloo Gallery,' in Windsor Castle; but, in consequence of its great weight, (about twenty tons) the idea was abandoned, as it was considered unsafe to place it in that situation. It is stated that the Emperour of Russia has requested a cast of the vase in bronze.—*English paper.*

Olive Oil is often mixed with oil of poppies. It requires a less degree of cold to congeal the pure oil than the adulterated.

Capt. Franklin's Encampment, sketched by himself.

CAPTAIN FRANKLIN'S EXPEDITION.

In May, 1819, Captain Franklin left England for America, to the northern regions of which country he was bound, on a land expedition of discovery and research. His companions, besides two sailors, were Midshipmen Hood and Back of the British navy, and Dr. Richardson, a learned naturalist. Toward the last of August the party arrived at York, a principal depot of the Hudson's Bay Company, where they received the instructions necessary to the further prosecution of their enterprise. It was past the middle of October, when they reached the station called the Cumberland House, after a journey of nearly seven hundred miles, since leaving York. In that high latitude, of sixty-four degrees, the autumnal weather was as severe as that of midwinter, in a more southern clime; and Captain Franklin felt the necessity of awaiting the return of Spring, before venturing further towards the inclement region of the Arctic Circle. But, as he had been advised to visit the district of Athabusca, in order to obtain guides and interpreters, as well as information respecting the country which stretches north of Slave Lake, he started for Fort Chippewayan, accompanied by Mr. Back and one of the sailors. Mr. Hood and Dr. Richardson remained at Cumberland House.

Captain Franklin and his companions were two months in reaching Fort Chippewayan, which is little short of a thousand miles from Cumberland. The country through which they passed was thinly inhabited, and seldom afforded them any shelter from the inclement sky, during the long and dreary nights of a northern winter.—The engraving is from a design sketched by Captain Franklin, and represents one of their encampments. The dogs are unharnessed from the sledges, and may be seen trotting about in the open space, or reposing themselves after their fatigues. The fire is kindled, and sends its smoke up among the wintry pines, while its blaze glows upon their huge trunks and snow-covered branches, and gleams far into the wild avenues of the forest, till its light is lost in their lonesome obscurity. Supported by three stakes over the fire, hangs the kettle, wherein the adventurers are cooking a rich stew, composed of birds, rabbits, and other delectable ingredients, which will soon be set smoking upon the ground, and make them an excellent supper. The dogs also will partake, and then lie down comfortably at the feet of their masters, who, when their hunger is satisfied, will seat themselves round their fireside in the forest, and talk of the beloved ones whom they have left at the hearths of distant England. Then, their hearts yearning with the remembrances that have been roused, they will stretch themselves on the frozen earth, whence the snow has been shovelled away, and strive to sleep that they may be ready for the toils of the morrow. The deep, broad tones of the wind will sigh through the overarching branches—the trunks of the pines will creak, and cause the dogs to awake, with a sharp and sudden bark—sometimes, too, it will be needful to throw a fresh heap of wood upon the fire, and kindle up the wintry wilderness with a more cheerful light. But, after awhile, the twinkling stars, in the cold blue firmament, will cease to glimmer upon the travellers' eyes; they will sleep, and dream of home. May they awake with their toes unharmed by frost, and spend the next winter with their sweethearts and wives, by a good coal fire in England!

We must not forget to notice the marks on the trunk of the large tree, on the right, by which, when

Captain Franklin at Slave Lake.

they resume their journey in the morning, the travellers will direct their course.

In the Spring, after Captain Franklin's visit to Fort Chippewayan, he and his companions set out northward, to accomplish the objects of their expedition. They were accompanied by about a score of Canadians and Indians, who were to serve as guides and interpreters. Their course lay north and west, and carried them as high as the sixty-eighth degree of latitude, when it was deemed necessary to retrace their steps. It was now the Autumn of 1821. Their journey back towards the civilized world, through a dreary waste, where the winter had set in at the beginning of September, was one of extreme hardship, and attended with many misfortunes. Sometimes, indeed, they were fortunate enough to kill a musk-ox; in which case, they immediately devoured the intestines raw, and even made a meal of the contents of the stomach, which had already satisfied the appetite of the poor ox. Occasionally, they caught a few fish, or shot a bear, which, from the nature of his food, tasted as much like fish as flesh. One or two reindeer, also, afforded them a providential supply. But owing to the number of mouths to be fed, and partly to the improvidence of the Canadians, they were almost continually in want of food, and often compelled to gnaw the bones of deer or musk-oxen, the flesh of which had been long ago devoured by the wolves. A certain unpalatable herb, which they found among the snow, was also made use, of to allay their hunger, although it caused a terrible commotion of their inward regions. Some sat down, in starvation of body and anguish of spirit, and ate up their old shoes—a portion of their apparel which, one would think, they could least dispense with, being to travel through the snow.

Some of the party were so worn out by these hardships, that it was deemed expedient for Captain Franklin to hasten onward, with those who were in a condition to accompany him, and seek assistance for their more exhausted companions. Dr. Richardson and Mr. Hood were among those who remained behind; and the latter, happening to be left alone with an Iroquois Indian, who belonged to the party, was shot by him through the head. The murderer and the survivors travelled on together for a considerable time; but, as the Iroquois appeared to meditate further bloodshed, Dr. Richardson tried the case in his own mind, and felt it his duty to take this Indian's life. Accordingly, he shot him dead with a pistol. It was the act of a determined man, yet a conscientious one; and we know of few more striking incidents than this, when a gentleman of education and sensibility found himself compelled to act as judge, jury, and executioner, on a fellow creature, and put him to death in cold blood.

It would require too large a portion of our pages, to trace all the weary and painful steps of the travellers, and tell how one sank down and died in the snow, and was frozen like a block of ice, before his companions found him—and how all were pined away to skin and bone; so that they looked like a party of skeletons, straggling back to repose their fleshless joints in the grave yards of their native country. They at length encountered some Indians, with whom they had formed an acquaintance on their outward journey, and who were under the influence of the North-West Company. These wild people, when Captain Franklin first came to their regions, had heard that a great chief was about to visit them, and likewise a great medicine chief, whose skill could not only cure the sick, but raise dead corpses and clothe skeletons with flesh. And now they beheld the great chief, a half-starved man, so weak that one of their children might have overcome him;

and Dr. Richardson, the great Medicine Chief, himself a skeleton, and far more likely to die than raise the dead. However, they treated the poor strangers kindly, and gave them so much food that they had nearly split asunder—the Doctor, as well as the rest; for while exhorting his companions to abstain, he kept eating at an enormous rate.

When the party had recovered sufficient strength to pursue their journey, the Indians put their baggage into canoes, to which they harnessed their dogs, and set forth across the frozen and snow-covered surface of Slave-Lake. This is the scene to which our cut refers. The dogs, as the reader will perceive, are stout animals, and go at a pretty brisk trot, with their tails curled over their backs, in token of good spirits. They are an excellent substitute for horses, except in the trifling particular, that a man must walk by their side, instead of riding comfortably in the vehicle behind them.

MILITARY ADVANTAGE OF RAIL ROADS.

General Gaines, of the United States' Army, in a long letter respecting certain proposed rail roads in Tennessee and the neighbouring states, takes the following professional view of the subject. It probably has not occurred to most people to consider it in this light.

In reference to the military aspect of the subject of rail roads with steam power applied to vehicles of land transportations, I have much to say, more, indeed, than I can flatter myself with a hope that the committee of the legislature would feel inclined during the present session to hear. It is a subject so much altogether within the unquestionable sphere of my professional vocation—a subject too, of such tremendous and awful import, when taken in connection of the national defence, that I have felt it to be as much my duty for some five years past, to devote my attention to it, as I ever deemed it, in obedience to my official oath, to meet in battle my country's enemy. It is *tremendous* and *awful*, because it is destined soon to enable us, the people of the United States, with the aid of our State governments and our United States government, to wield with irresistible effect, all the vast elements of the military power and countless resources of the central and interiour States and districts, to any threatened point of our national frontier in time to crush the invader, strong as he may be, before he could possibly take any one of our first rate fortifications if prepared for a vigorous defence; and without an expense of more than one tenth of *time* or of *money* that the present and all former means of national defence required—with little or no expense on our part of health or of life.—The subject is *awful*, because it places at the controul of instructed man, a power which hitherto, from the beginning of the world up to the present age, was believed to belong only to Him who created and who controuls the elements of all power! It presents to us the means of wielding without the usual animal power, from this spot to an Atlantic seaport, distant six hundred miles, with seventy-two locomotive engines, an army of one hundred thousand men, and six hundred tons of cannon or other arms, *in sixty hours —in the short space of sixty hours!* A cargo of men and arms that would, with our present roads, require thirty-six thousand draught horses and six thousand wagons, thirty days to convey the *baggage and ordnance and stores* of this army the same distance — whilst the 6,000 wagons and 36,000 horses would cost $3,600,000

And the cost of the 72 locomotives at $5,500 each, would be but 396,000

Making a difference in money of $3,204,000

Three millions two hundred and four thousand dollars in favour of the rail road movement, in the march of one hundred thousand men in the space of sixty hours. Besides a difference *in time* (often more precious than any thing that money can command) of *more than ten to one* in favour of rail roads —and which would constitute a clear saving of twenty-seven days out of thirty; or, in other words, would enable us to pounce upon the invader with our hundred thousand *disposable* Tennesseans or Kentuckians, fresh from the heart of the country, twenty-seven days sooner than, according to all former experience, and with our present miserable roads, we could hope (fatigued, sickened and depressed, as we should in all probability be,) to meet in battle the invader: and we should then most probably meet him, under all the untoward disadvantages of having our own improved cannon turned against us, from our own splendid fortifications, conquered and fallen into his hands for want of rail roads, such as those now recommended, to throw in them timely succour; for unbounded as is my confidence in the gallantry of our brethren of the seaboard and the adjacent districts, that could be brought together at the point of attack, in time to co-operate with the garrisons of our works of defence—a powerful veteran foe would, if possible, cover himself from their attack, and thus enjoy the advantage taken from us of *acting on the defensive* whilst carrying on the most vigorous approaches upon our principal works,—he might thus, in the course of two, three, or four weeks, not only destroy in detail a very large portion of our minutè men of the States and districts of the place besieged, but triumph in taking our fortifications, with every thing of value near the theatre of action.

I have said, that to a clear saving *in time* of twenty-seven days out of thirty, we would effect a saving *in money* to the enormous amount of $3,204,000, and this in the short period of sixty hours from the time our young sharp-shooters shall have taken leave of those most dear to them at the place of their departure. Apply these views to the well established axioms that '*time is power*,'—and that '*a dollar saved* is at least equal to a dollar *gained*,' and add the obvious and self-evident truth that all the most expensive means of national defence hitherto employed, such as fortifications, cannon and ordnance stores *essential in war*, are useless and even *worse than useless in peace*, being both expensive in their repairs and preservation, and at the same time wholly unproductive, whilst rail roads in war are indispensable appendages to our fortifications: and on the return of peace, when fortifications become useless, rail roads continue their utility to every class of the community; whilst they almost imperceptibly create

a revenue from the commerce and wealth to which they give facilities, equal in 8 to 12 years to the whole amount of capital invested in their construction! are these views indeed visionary? or are they based on demonstrated realities, such as must fill to overflowing every patriot heart with gratitude to Heaven, and joy to the cause of national liberty for the signal blessing bestowed on our beloved country in having discovered the indubitable means of perfect security from all the countless evils of war:—Means in the employment of which we are sure of contributing much to the benefit of our *agriculture, our commerce, mechanic arts* and *manufacturing establishments*, and above all to the *efficiency of our militia*, our *political, literary, scientific, moral* and *religious institutions*, whilst we are equally sure that in the accomplishment of these great objects we shall not only not sink or waste our *money* or *labour*, but shall doubtless convert the capital necessary for the attainment of these inestimable benefits into investments that will to a certainty afford us more than the lawful interest—most probably, indeed, compound interest upon all such investments.

With rail roads, such as those which I have deemed it to be my duty to advocate, this disposable force may be thrown, in four days time, from these central States to any section of the national frontiers, in season to meet and beat an invading foe, before he could possibly take, by the best means of approach yet devised, any one of our strong fortifications. Whereas, without rail roads, this great disposable force would waste millions worth of *health* and *life* and *treasure*, in vain efforts to meet the invader, without being able to find any other trace of his footsteps than such as may be marked with his *fire* and *sword*. He will have time to land and to measure his strength with the gallant bordermen that may happen to be near the point of attack, and whether repulsed or victorious, the enemy will have withdrawn from that point, and by the aid of steam power applied to his fleet, he will have directed his attention to some other vulnerable point, where he may be least expected, and where he will have time to re-enact his tragedy of fire and desolation. And in this way, our whole Atlantic and Mexican border may, in a war of two or three years, be completely overcome and sacked to an amount of property (to say nothing of national honor) more than sufficient for the construction of ten such rail roads as those which I have advocated; and these disasters may be effected by a force of less numerical strength, and less prowess than the force which these two States could alone furnish!

A MODERN SAMPSON.

A correspondent of the Keeseville (N. Y.) Herald gives an account of Joseph Call, recently deceased; who according to the Editor, 'undoubtedly possessed more bodily strength than any man since the days of Sampson.' We extract the following instances of his wonderful prowess.—

As he grew older, his natural joviality of disposition led him to frequent whimsical displays of his physical superiority. At one time he would lift a barrel of cider to his lips, and after having satisfied his own thirst from the bung-hole, would gravely offer to pass it round the company. At another, stealing silently behind a teamsters' wagon, he would seize hold of the wheel, and suddenly bringing the team to a halt, would quietly remark, 'A breathing spell to your nags, neighbour!'

At one period of his life, when a teamster himself, he used frequently to find his immense strength of great service; for whenever his team would happen to get set in a mud hole, he would crawl under his wagon, and placing his broad shoulders against the bottom, would raise the wagon, load and all, gradually up, until his horses were able to drag it forth without difficulty.

A celebrated wrestler from Albany having heard of Joe's reputation, once made him a visit for the express purpose, as he declared, 'of giving him a touch of the fancy!' Joe with his usual modesty, disclaimed all knowledge of the exercise, but upon the stranger's pressing him, finally consented 'to take hold.' Accordingly they grappled; the stranger throwing himself into the most scientific position, whilst Joe, pretending utter ignorance of all rule, assumed the most careless and exposed attitudes. They had scarcely got fairly hold, when the stranger, placing his foot on Joe's toe, attempted with a sudden yerk to throw him by what is termed the 'toe-lock.' But Joe anticipating his movement, quietly permitted him to assume the necessary position, and then as he stood for a moment balancing on Joe's toe, gravely raised him into the air, and danced him about as a mother would her child.

On one occasion, Joe happening to spend a night at St. Johns, as he sat in the bar-room of the Hotel where he stopped, the conversation turned upon wrestling. Joe being an entire stranger to the company collected, sat listening to the conversation, without participating but little in it. At length one individual, after relating several wonderful feats which he had accomplished, finally wound up by roundly asserting that he had thrown Joe Call! Joe as might readily be supposed, was not a little surprised at this assertion from an entire stranger, and in that spirit of fun which always prompted him, exclaimed, 'Why! you'd *swallow* a common man! I should like to take hold of you myself if you would promise not to hurt me.' The braggadocio instantly accepted the proposition, and they took hold. Joe with scarcely an effort, raised him from the floor, and holding him out at arm's length, said to him, 'there, *wrestle!*' The astonished wrestler could only cry, 'Who—who—the devil are you?' 'The man you threw; Joe Call, at your service, sir!'

Fashionable Wigs. It was the custom of the early settlers of New England (at least of the frontier men, about the year 1725) to wear wigs made of the scalps of Indians, whom they had slain. This strikes us as a truly Yankee idea—to keep their ears comfortably warm with the trophies of their valour—to cover themselves at once with glory and with a wig. Perhaps they took the hint of this excellent fashion from Julius Cæsar, who, when the Romans had given him a laurel crown as a symbol of his fame, used to wear it constantly to hide his baldness.

COMMODORE BARRY.

In addition to his own exploits, Commodore Barry has a strong claim to the gratitude of America, as the officer under whom many of our distinguished naval warriours were initiated into their profession. He was born in the county of Wexford, in Ireland, in the year 1745. At the age of about fourteen, with the consent of his father, he shipped on board a merchantman bound to America, where he had no sooner landed, than he resolved to adopt the country as his own. From 1760 till the Revolution he sailed in the employ of the most eminent merchants in Philadelphia, and long commanded a large ship in the London trade, called the Black Prince, which was afterwards purchased by Congress. In February, 1776, he was appointed to command the Lexington, of 16 guns,—the first Continental ship of war that was fitted out at Philadelphia. Being blockaded by the ice in the Delaware river, he served with great credit as aide-de-camp to General Cadwallader, and was distinguished in the military operations of that period.

When Philadelphia was taken by the British, Commodore Barry assisted to run the American vessels of war up the river to Whitehill. While at this station, he conceived a design to intercept the enemy's supplies, by means of small boats, well armed, which in case of danger might take refuge in the creeks. Accordingly, he manned the boats of the frigate, descended the Delaware with muffled oars, and arrived opposite Philadelphia, before the alarm was given. The city was thrown into the utmost confusion;—the bells rang, cannon fired, and the whole British forces stood to their arms throughout the night, supposing that the American troops were about to attack their position, by means of flotillas. Meantime, Barry and his little band of boatmen had fully succeeded in their object, not only intercepting the supplies, but capturing a vessel laden with precisely the munitions of war that were most needed by the American army. For this exploit, the Commodore and his party received the public thanks of General Washington, who was accustomed to recur to the event, as one that had given him peculiar satisfaction.

Shortly afterwards the Lexington, with the other vessels of war at Whitehill, having been burnt by the British, Barry was appointed to the Raleigh, a 32 gun frigate. On his first cruise in her, he was driven ashore on Fox's island in Penobscot bay, by a large squadron of the enemy, from whose hands he could rescue his ship no otherwise than by destroying her. He then made several voyages in letter-of-marque vessels to the West Indies, during one of which he was commander of a large fleet, and had an opportunity to practise naval tactics on a more extensive scale. His next duty was to superintend the building of a 74 gun ship, at Portsmouth in New Hampshire; and the command would have been entrusted to him, if Congress had not seen fit to make a present of their only ship of the line to their ally, the king of France. Barry was appointed to the Alliance of 36 guns, then in the harbour of Boston, whence he sailed for the port of L'Orient in February 1781, having on board Colonel Laurens and his suite, bound on an important embassy to the French court.

On the twenty-ninth of May, he fell in with two British vessels; the Atalanta, Captain Edwards, a ship of between twenty and thirty guns, and the Trepassa, Captain Smith, a large brig. Shortly after they hove in sight, it became a perfect calm; the Alliance lay like a log upon the water; but the enemy threw out their sweeps, and were thus enabled to choose their own position. In the course of the action, the Commodore was struck by a grape-shot in the left shoulder; the wound was dangerous and excessively painful; but he refused to be carried below, till, by the loss of blood, he had nearly fainted on the deck. He had not long been in his cabin, when a lieutenant entered, and representing the shattered state of the sails and rigging, the loss of the crew, and the desperate state of the battle, desired to know if the flag might not be struck. Barry roused himself, at once, from the gory couch where he had lain almost insensible. 'No, never!' cried he; 'and if the ship can't be fought without, carry me on deck again.' He was about being borne thither, when the British vessels struck, and Captain Edwards was ushered into his conqueror's cabin.

In March, 1783, the Alliance sailed from Havana, with a large quantity of specie, in company with the Luzerne, of twenty guns. A squadron of British frigates being discovered right ahead, at two leagues distant, the Luzerne was compelled to fling her guns overboard, in order to escape. During the chase which ensued, another sail hove in sight on the weather-bow, and proved to be a French fifty-gun ship, depending on whose assistance, Barry resolved to engage the British squadron. He accordingly attacked the foremost frigate, and disabled her, with a loss, as was afterwards ascertained, of thirty-seven men killed, and fifty wounded. Had not the French captain behaved like a poltroon, the whole squadron might have been captured; but as he kept aloof, Barry was forced to give over the ac-

tion with the frigate by the coming up of her consorts. Many years after this event, a distinguished officer of our navy, being then on the Mediterranean station, was introduced to Vice Admiral James Vashan. The admiral alluded to the above-mentioned conflict, announced himself as the commander of the British frigate, and made many inquiries respecting Commodore Barry, of whose gallantry he spoke with the utmost admiration. So high, indeed, was Barry's naval renown, that General Howe attempted to seduce him from his fidelity by the offer of fifteen or twenty thousand guineas, and the command of the best frigate in the English service. Barry answered indignantly, that he would not desert the suffering cause of America, to be made Lord High Admiral of England.

After the Revolution, the Commodore retained his rank, and superintended the building of the frigate United States, which, excepting old Ironsides, has been as glorious a ship as any in the navy. He commanded her, during the maritime hostilities between this country and the French Republic. Commodore Barry spent the greater part of a long life upon the ocean, and saw every variety of service. He was a rigid disciplinarian, yet never failed to win the affection, as well as obedience of his officers, and was enthusiastically beloved by his crews. His piety was exemplary, and the Sabbath was kept holy in every ship where he commanded. In lieu of all other eulogiums, we may add, that he enjoyed the friendship of Washington.

Commodore Barry died in 1803, of an asthmatic affection, at Philadelphia. His portrait shows the aspect of a stout old sailor, and a frank, kind-hearted gentleman,—and such he was.

PIKE'S LETTERS.

In the January Number of the American Monthly Magazine, Albert Pike, a free and natural writer, gives the following description of a shooting-match in Arkansas.

Reader, didst ever see a shooting match in the West? I dare swear you never have, and therefore there may be no tediousness in a description of one. I hate your set descriptions; laid out, formally, in squares and parallelograms, like an old-fashioned garden, wherein art hath not so far advanced as to seem like nature. You can just imagine the scene to yourself. Conceive yourself in a forest, where the huge trees have been for ages untouched by the axe. Imagine some twenty men—tall, stalwart, browned hunters; equipped in leather, with their broad knives by their sides, rifles in hand, and every man with his smoke-blacked board in his hand. The rivals in the first contest were eight sturdy fellows, middle aged and young men. The ox for which they were to shoot was on the ground, and it was to be the best six shots out of eleven. The four quarters, and the hide and tallow, were the five prizes; they were to shoot *off-hand* at forty yards, or with a *rest* at sixty, which is considered the same thing. Two judges were chosen, and then a blackened board, with a bit of paper on it about an inch and a half square, was put up against a tree. 'Clare the track?' cried the first marksman, who lay on the ground at his distance of sixty yards, with his gun resting over a log. The rifle cracked, and the bullet cut into the paper. 'Put up my board!' cried another—'John, shade my *sight* for me!' and John held his hat over the *sight* of the gun. It cracked, and the bullet went within half an inch of the centre. 'My board!' cried another; 'I'll give that shot *goos!*' and he did; fairly boring the centre with the ball. The sport soon became exciting. It requires great steadiness of nerve to shoot well, for any irregularity in breathing will throw the bullet wide of the mark. The contest was longer than I had anticipated; but was decided without quarrel or dispute. The judges decided, and their decision was implicitly obeyed. The whole eleven shots of one man, who won two quarters, could be covered with a half dollar. You have made a show of Davy Crockett; but there are thousands of men in the West who are better marksmen, better bear hunters, and every whit as smart as Davy himself.

Speaking of him, however, reminds me of an anecdote of him, which may perhaps be contained in his autobiography; if not, it is too good to be lost, for it does him more honour than the fact that he has been in Congress. Before he was a candidate, or had any idea of being one, there was a season of scarcity in the Western District, where he lived. He went up the Mississippi, and bought a flat boat load of corn, and took it to what he calls 'his old stamping ground.' When a man came to him to buy corn, the first question he asked, was, 'Have you got the money to pay for it?' If the answer was in the affirmative, Davy's reply was, 'Then you can't have a kernel. I brought it here to sell to people that have *no* money.' It was the foundation of his popularity.

The hurricane, described in the next extract, is a scene that was probably never witnessed in New England, on any thing like the same terrific scale. Among us, the wind sometime rages, but never goes mad out-right.

There is very little worthy of remark on the road from Pope county to Little Rock, except about fifty-five miles above the latter place, where you cross the track of a hurricane. A tremendous tornado passed there some five years ago, with a power almost inconceivable. It was about a mile and a half in width; and no one knows the distance it travelled. It left hardly a tree standing where it swept by. The largest hickory and oak trees were twisted round, and *broomed* up by the blast; and a thick growth of vines and briars has grown up in place of the forest. It has never been my fortune to behold the passage of such a tornado; neither am I anxious for the honour. One of the lawyers in this territory, who was caught in such a hurricane once, has described it to me frequently. He was travelling through the woods in the southern part of the territory, on a clear, warm summer day, when he heard a roaring, like the bellowing of the ocean, rising in the distance, and increasing every moment. He sought for some open place, and found one, where a small hickory sapling stood alone, with no tree within twenty or thirty yards. Here he alighted, and, holding the sapling with one hand, kept the bridle in the other. In a few moments he saw, afar off, in the direction of the tornado, the air dark-

ened with branches swept onward before the mighty wind. Directly the blast struck him—not like a wind, but like a body of condensed air, pouring on with the swiftness of lightning. At one moment he was dashed on the ground—and then the tornado would lift itself, and leave a calm below—then it would descend again, and again dash him to the earth. He was stunned with the terrible roar of the mad hurricane, and the crash of the giant trees, over which the chariot of destruction was rolling its mighty, though invisible wheels. Large branches were whirled far away over his head, or fell close by him; and it was a full half hour ere the hurricane had passed away. It had swept a path through the forest, as a cannon ball would cut its road through a solid column of Lilliputians.

BRIDEWELL IN NEW YORK CITY.

[Report of Prison Discipline Society.]

This is the place where they *blanket* a stranger. On the last visit of the Secretary of this Society to the Bridewell in New York, the keeper explained to him this process of blanketing. Here—in one large room which is not very well lighted, and which is so far removed from the keeper's office, and so separated from it by heavy, solid doors, and fastenings, and winding passages, as not ordinarily to be under the least inspection or controul from the government of the Prison, other than to keep in safety those who are locked up in it—are commonly to be found from twenty to fifty persons, of all ages, and of all nations—the old, hoary-headed, State Prison character, the young and destitute boy, the highwayman, the beastly drunkard, the accomplished foreign thief and pickpocket,—in one word, those who have been guilty, or have been suspected of being guilty, within a few days, of the countless and nameless crimes of such a city as New York. Here is the first receptacle of nearly all the men. Into this room, a man is committed on suspicion of crime. He is well dressed, and, when he is locked up, and the keeper has retired from the apartment, and left him in this den of thieves, he is surveyed from head to foot by the prisoners; and the conclusion is formed, that he may have money about him, or other valuable articles, and he must be blanketed. There is strength, combination and villany enough in the room to do it. A strong blanket is thrown over his head, and he is seized by a sufficient number to overpower him, and it is made fast around his body, and under his arms, in such a manner as to stop his mouth, hide his face and eyes, and secure his arms from resistance: if needful, in case of determined resistance, his feet and legs are made fast in the hands of strong men. The art of doing all these things—blinding the eyes, stopping the mouth, fastening the hands and feet—is well understood in the New York Bridewell. When the man is thus blanketed and secured, his pockets and person are searched and robbed; and, this being done, the blanket is taken off, and he is suffered to go at large among his robbers. What is the penalty for Bridewell robbery? None at all. Who are the witnesses? The robbers themselves, or others locked up in the same room with them, whom they can more than rob, if they witness against the robbers. This is blanketing; and the keeper described it as a matter of course, which might be expected in such a place, and which could not be prevented.

FAMILY LYCEUMS.

[Pennsylvania Lyceum Address.]

Families, from their nature, partake more of the character of Lyceums, than any other institutions, hitherto organized in the world; they have much that is voluntary, social and practical, and of course exert a constant and powerful influence upon every individual, and consequently upon the whole nation. This influence is good or bad, according to the arrangements and circumstances under which they exist. A family may be a tattling Lyceum, or a petty scandal Lyceum; a gossiping Lyceum, a drinking, swearing, or wrangling Lyceum. It may be, and often is, a reading, or intellectual, or a moral and *Christian Lyceum*. Parents, a brother and sister, a mother and daughter, a father and son, or the whole united, may under some ***regular system***, adopt and pursue a course of mutual improvement, in biography, history, anatomy and physiology, entomology, botany, mineralogy, ***Christian kindness*** and ***benevolence***, or any other subject interesting and useful to human beings, or ennobling, dignifying and redeeming to human nature.

Few are aware, how much would be accomplished, by devoting, regularly, one hour, or even half an hour a week to some subject of human improvement. If it should be done in each of the two millions of American families, it would infallibly produce an intellectual and moral revolution in the character and prospects of our nation, in spite of the national Congress, our state legislatures, our courts, our churches, colleges, academies, schools, and all the formal arrangements which ever have been, or ever can be adopted, to ***compel*** men to be intelligent, honest, kind, benevolent or christian, in their character or deportment towards each other.

To effect this, a family, or two or more individuals of a family, have only to agree upon, and pursue a regular course of reading and collateral exercises upon some subject, and at some hour fixed upon, once, or if they prefer it, twice a week.

THE CULTIVATION OF FLOWERS.

The surpassing beauty and brilliancy of the dahlia has raised it, in the estimation of the floral taste, whether considered in its single unadorned simplicity, or when brought to the acme of perfection by the ingenious labours of the horticulturist. Scarcely unrivalled by the unique elegance of the camellia, it has become, like that remarkably transmuted plant, as universal a favourite among the curious and wealthy; and still more a companion of the antique and venerable accompaniments of the cottage garden or the village flower-bed, of some humble admirer of nature's sportive wonders, such as may be found in every community, and not by any means few in our own, happy, smiling New England. Perhaps the moral and mental improvement of a people cannot be better estimated, surely not better

promoted, than in the observation and introduction of the spirit of the love of the more elegant and refined occupations attendant on agricultural pursuits. For my own part, I want no better proof of a feeling and exquisitely sensible mind, even under a rough and rude exterior, than may be observed in a love of nature, particularly that which relates to the care of flowers. A rose-bush, a honeysuckle, a pæony—famed in village love for pharmaceutic worth—a lilac-bush, or even a huge tuft of the singularly striped 'ribbon grass,' preserved by some rustic enclosure from the trespass of those sober, useful, though less intelligent, tenants of the farmyard, whose tastes are more alimentary than mental—all denote a higher order of mind, in some tidy housewife, or younger female; and when I discover the highly patronised dahlia, lifting its rich blossoms among the associates of its new and strange locality, to me it proves the gradual development of a purity of taste and feeling, which, though not incongruous, is not always to be expected in such scenes.—*Prof. Russel.*

THE OHIO.

No river in the world rolls for a thousand miles a current so smooth and peaceful. Its 80 tributaries wind through as many valleys in 10 different States. The first in size—the Tennessee—having pursued a navigable course through three States, for more than 1000 miles, falls into the Ohio, 50 miles above its mouth. The Cumberland, 62 miles, being navigable for steamboats to Nashville, and for keel boats 300 miles further.—The Wabash, 130 miles. Green river, 208 miles from the mouth of the Ohio—navigable 200 miles, and 200 yards wide at its mouth. Kentucky, 504 miles—navigable 150 miles, and as many yards wide at its mouth. Great Miami, 582 miles—Scioto, 743—Great Kenawha, 850 miles; navigable 65 miles to the Salines, where are annually made from 500,000 to 700,000 bushels of salt. Great Muskingum, 950 miles. These are the principal auxiliaries which give substance and strength to the beautiful Ohio. In its course of more than a thousand miles, it washes six States, and with its tributaries, has more than 5000 miles of navigable waters. Its main width is 600 yards; with the exception of its lowest 60 miles, where its average width is more than 1000 yards. The average rapidity of its current, is 3 miles an hour. Its average descent in a mile is about 6 inches. It sometimes rises 50 or more feet. At low water, its surface at Cincinnati is supposed to be 130 feet below the level of Lake Erie; and 430 above that of the tide water of the Atlantic Ocean. Such is the Ohio.—*Cincinnati Luminary.*

On the use of chilled Cast Iron, for Punches and other Tools.—It is well known, that in making holes in red hot iron articles, such for instance as wheel tire, horse shoes, etc., the hardened and tempered steel punches become softened, from the heat—and changing their shape, must be repaired from time to time.

Mr. Peter Kier, Engineer of St Pancreas, several years since, having occasion to make many nail holes, in the wheels of the artillery carriages, and horses' shoes; and having experienced the above inconvenience in a great degree, luckily thought of substituting punches, made of chilled cast iron, for those of steel, and which he found fully to answer the purpose, as they constantly retained their original hardness, notwithstanding they very frequently became red hot in using.

As, however, chilled cast iron is not sufficiently tough to bear bending, without breaking, he found it necessary to strengthen his punches, by surrounding and enclosing their stems in cast iron holes, made of shapes corresponding with the stems, in properly shaped supports, and having their points only standing out a sufficient length for use.

Singular Accident.—A gardener at Nantes, a short time since, while clipping the branches of a fruit-tree, with a large and keen pair of shears, cut off his own arm between the wrist and the elbow. The amputation was complete, and the severed portion fell to the ground. This seems hardly credible, though the London papers give it as an authenticated fact. In Sir Jonah Barrington's Memoirs, there is an account of an accident not entirely dissimilar, and far more serious, which befell an Irish labourer. He was on his way to the mowing field, with a scythe over his shoulder, and in crossing a brook, perceived a speckled trout in the calm depth of a hollow, under the bank. The trout was of immense size, and the poor man's mouth watered at the thought of such an addition to his usual dinner of potatoes; but he had neither fishing line nor spear, wherewith to capture him. It occurred to him, that, if he could hit the trout on the head, with the butt-end of his scythe-handle, the shock would stun him, and render him an easy prize. Accordingly, he uplifted his scythe high in air, at the same time stretching his neck over the bank, in order to take a sure aim at the unsuspecting fish. Down came the blow with mighty force—whether it hit the trout, remains a mystery,—but the scythe chanced to be turned across the Irishman's out-stretched neck, and while he made his thrust with the handle, the blade cut off his head. Sir Jonah tells this unhappy occurrence as a fact, within his own knowledge; and we may at least allow, that if any man could happen to cut off his own head, it would certainly be an *Irishman*

Oaks.—If the woodpecker is heard to tap upon an oak, it is a sure proof that it is time, and more than time to fell it; for this bird never thrusts his beak into a sound tree, though he has often been accused of so doing. In England, an oak is said proverbially to be a good banker; yet, on account of its slow growth, it is believed that the price of a sapling, if put at interest, will amount to a greater sum at the end of fifty years, than the *price of an oak* at that age.

Servants at Paris.—The domestics and other hired servants of both sexes, in Paris, amount to one hundred and fifteen thousand. A very large proportion of these are probably mere idlers, of no earthly use, except to swell the pomp and increase the vanity of their masters.

It has been supposed that the Israelites built the Pyramids, during their bondage in Egypt.

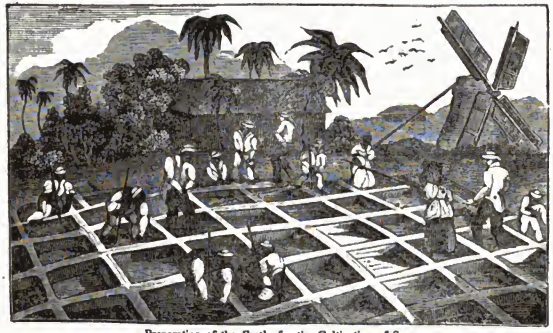
SUGAR.

Among the numerous varieties of this plant, two only are cultivated: the *saccharum spicatum*, or pointed Sugar-cane, originally from the East Indies, and the *saccharum officinalis*, or common Sugar-cane of the West Indies. It is uncertain whether it was known to the ancients. History first speaks of it about the time of the Crusades; and it appears probable that this was one of the benefits which those expeditions conferred upon mankind. The canes were planted in the island of Cyprus, and in 1166, there was a Sugar-mill in Sicily. The culture was established at Madeira in 1420, and a few years after at the Canary islands. It was introduced at the island of Cuba by Christopher Columbus, in his second voyage.

It has been ascertained that this plant grows spontaneously in South America, in the West Indies, and in the islands of the Pacific Ocean; but although the natives of these regions used it as food, none of the means employed for preparing Sugar were known to them. A Venetian, at the end of the sixteenth century, discovered the art of refining it, and his secret, although a considerable time concealed, became at length known in Italy, France, England, Spain, and the whole of Europe. France, especially, soon acquired a great superiority in this process.

CULTURE OF THE CANE, AND PREPARATION OF UNREFINED SUGAR.

The toil necessary to the setting out of the cane, is considered as the severest labour of the slaves; so that it is indispensable, during the time, to allow them some repose in the greatest heat of the day, and to increase their usual allowance of food.—Holes of four feet square are dug in the earth; the young negroes mark the angles by setting sticks at them; and by means of a chain of considerable length, these square holes are dug over the surface of the field, with sufficient regularity. When the earth is thus prepared, they plant the potatoe and other vegetables on the spaces between the hollows, and sow Indian corn, and several products of the islands, at the bottom of the pits. When the different harvests have been gathered in, the squares destined to receive the Sugar-canes, are again made regular and equal.



Preparation of the Earth, for the Cultivation of Sugar.

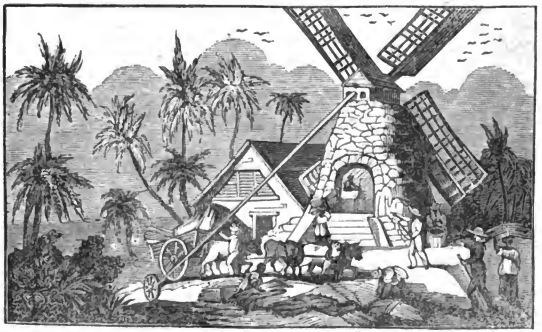
The Sugar-cane is propagated by slips taken from the upper part of the plant, at some distance from the summit; they are about twelve inches long. It is necessary to leave them twenty-four hours in the water before planting them. If the earth be not sufficiently moist, the slips are bound together in small bundles, placed side by side, covered with the leaves of Sugar-cane, and carefully watered two or three times a day. Rain is absolutely necessary to the developement of the young cane; in a season of drought, there is no prospect of successful cultivation. When the season is favourable, the young negroes place two or three slips in each pit or square, while the more experienced dig little trenches six inches deep, where they lay the plant; so that the knots, whence the shoots will sprout up, appear on both sides. They are then covered with earth.

The harvest comes on in about eleven or twelve months. To ascertain whether the crop is arrived at full maturity, one of the canes is gathered; a portion of the juice is expressed and exposed to the sun, in order to evaporate the aqueous part; if it crystallizes, the crop is judged in a condition to be cut. The slaves, with small hatchets, are placed in a rank. They cut off, in the first place, the upper part of the cane, and that which is reserved for the planting of the next crop; this they lay aside. The rest, cut in pieces of three feet long, is bound together in bundles, which are tied with the green and flexible tops of the plants. The reapers, as they advance, pull off the leaves of the cane; these leaves pass from hand to hand, and are thrown into heaps at some distance; so as to clear the space, where the less robust negroes are employed in tying the bundles together. The bundles of cane are deposited as near as possible to the mill, in order to lighten the labour of the female slaves, who carry them on their heads to

the entrance. The tender tops of the Sugar-cane, which have been made use of to tie the bundles, are then taken off, and become nourishment for cattle.

Harvest of the Sugar-cane.

Three cylinders, placed one beside the other, form the under part of the Sugar-mill; they are put in motion by wheels with teeth, and the cane is bruised between their surfaces. The slave, whose duty it is to feed the mill, keeps constantly near these cylinders; and when the wind is strong, the canes are ground so rapidly, that two men can hardly supply them fast enough. The juice passes successively from a wooden trough, constructed underneath the cylinders, into a reservoir at the side of the mill; when, passing through two sluices of wood, it is freed from all the particles of cane that may chance to remain in it, and empties itself into a metal tube, by which it is conveyed to the spot where the boilers are placed. The cane itself, after having passed between the cylinders, glides on an inclined plane through an opening in the wall; where the women and old men receive it, and spread it in the sun. When dry, it serves as fuel.



The Sugar Mill.

The juice is received in immense boilers of copper, some of which contain six hundred gallons. This enormous mass of liquid is raised to that degree of heat which precedes the boiling point; and a certain quantity of lime causes the greater part of the impurities to rise to the surface. The juice is then drained into another copper vase, and is skimmed till it becomes transparent, but is not suffered to boil. It is thence passed into the largest of the boilers, which are usually four in number. In the last, it is made to boil, and with large skimmers the scum is taken off as fast as it appears. By degrees, the juice is purified, and acquires consistency It is, at this period, of a colour very similar to that of Madeira wine. Being reduced in quantity by boiling, it passes successively into smaller kettles; and if it be not yet clarified to the necessary degree, lime is anew thrown into it. In the place where the boilers are contained, there are generally six wooden vessels, about a foot deep, eight feet long,

and six or seven broad. In these, the Sugar is coagulated. As it cools, it separates itself from the molasses, and takes the appearance of an irregular mass of half-formed crystals.

The Building where the Sugar is Boiled.

Each day, the Sugar that was made the preceding day, is put into hogsheads, where it remains five or six weeks. The uncrystallized portion falls drop by drop into a sluice, prepared to receive it. It afterwards undergoes other preparations, by means of which different varieties of Sugar are obtained. When it has stopped running, the hogshead is closed up, and the Sugar is ready for exportation.

The heat of the climate renders it necessary to boil the juice at the very instant in which it is extracted from the cane; the interval of even half an hour, would suffice to make it ferment.

MANNER OF REFINING SUGAR.

The refiners prefer the Sugars, of which the rough particles are brilliant and sharp, and the colour of which approaches to gray. Those of which the grain is not so sharp, and which are of a yellowish colour, are less esteemed; and it is for this reason, that the East India Sugars, and those of Barbadoes, are not admitted into commerce. It would be impossible to bring them to a perfect crystallization, and in this respect, it resembles the Sugar of the raisin.

The business of the refiners consists in freeing the rough Sugars from the substances which are still mingled with them. To accomplish this, the Sugar is dissolved with lime-water and bull's blood. It is boiled several times in different kettles, and the scum is taken off, as each ebullition causes it to rise. When the sirup appears to be clarified, it is made to pass through a woollen stuff into a great kettle. It is then suffered to boil, and is afterwards transported into another part of the manufactory, where it is reduced to crystals by stirring it with wooden spoons. This imperfect Sugar, while yet warm, is turned into earthen vessels, made in the shape of cones open at the base, and pierced at the apex with a small hole, which is at first closed with wet linens. These vessels are placed bottom upwards.

When the Sugar begins to cool, the surface is covered with a crystalline crust, which it is necessary to break. The cloths, which prevented the uncrystallized portions from escaping, are now withdrawn; the points of the Sugar-loaves are introduced into pots, of a size proportioned to the quantity of sirup which is expected to run off. Five or six days after, the loaves are taken out of the moulds for the purpose of being *earthed*. This operation consists in covering the bottoms of the loaves with powdered Sugar, and in filling up the spaces left by the draining of the sirup, with a preparation of clay and water. When the Sugar-loaves have been earthed, the doors and windows are closed, to hinder the exteriour air from drying the clay. The water, which it contains, filters gradually through the particles of the Sugar, carries with it the superfluous sirup that coloured it, and falls by its own weight into vessels placed underneath. After a few days, the clay is removed from the loaves, perfectly dry, and a new layer is applied. When it has produced its effect, nothing remains but to carry the loaves into a building called the stove, where a sufficient heat is kept up to dry them.

PROGRESS OF EDUCATION IN THE WEST.

To one who was born and has ever lived in the Mississippi valley, it is a matter of interest to compare the present state of society in the West, as it regards the knowledge of letters, with what it was thirty or thirty-five years ago. The contrast is striking. We very distinctly remember the first school we ever attended in the days of our childhood, about the year 1800, which may serve as a specimen of the literary advantages of that day. To receive the benefits of that school, we had to cross and recross the Great Kanawha river every day in a canoe, with two older brothers and a sister. The building appropriated for the use of the school, was a small hut of round logs, covered with clapboards, and having a floor of earth. It was situated in a beech grove on the bank of the river, a few miles above Charleston, Va., on the present site of the celebrated Kanawha Saline, where, in those

days, our slumbers were often disturbed by the howling of wolves, or an uproar among the swine, occasioned by the attack of a wild bear, which was always promptly repelled by the hardy settlers, with their dogs and rifles, and generally attended with total defeat on the part of the ferocious enemy. The teacher, Mr. Clayton, was little more than a dwarf in stature, but decidedly a gentleman in his manners, and a very popular schoolmaster of that day. It is true his scientific attainments were very limited, but that was not then objectionable, as the standard of education was very moderate. Indeed, many of those born and reared in the West, among the early settlers, had none at all, nor did they generally feel much concern on the subject. Those who did pretend to afford their children a knowledge of letters, had many difficulties to contend with, especially the want of competent teachers. The custom in country places then was, for some one of the farmers best qualified for the task, to spend a few weeks or months of the most leisure season of the year, in teaching the children of the neighbourhood, whose parents might choose to send them, at a small expense, say $1,25 a quarter, payable in work or provisions. In this way some of them succeeded in obtaining such an education as was then thought to be necessary among the common people; for the course was very short and superficial. Girls learned to spell and read imperfectly—the art of writing being a rare attainment among the native daughters of the West, of that day, except in the larger towns, and a few favoured spots in the older settlements. The education of a boy was then considered sufficient among us, if he could spell, read, write, and had 'ciphered to the rule of three;' and if by any superiour privilege was added to these, a knowledge of grammar and geography, he was considered quite learned. The following were the principal items in the bill of expense for the entire course of studies: one Child's book, one Spelling book, one Reader, one New Testament (which should never be excluded,) one quire of fools-cap, one Arithmetic, one slate, and the tuition fees of a few quarters. The pupil gathered his pencils from the brook, and plucked his quills from the wing of a raven, or wild goose, killed by the father's rifle.

Great simplicity of manners then prevailed. The teacher and children ate their dinners from their school-baskets, and frequently united on a common level in the sports of 'play time,' as they called the recess at noon. The amusements consisted of athletic exercises, such as foot-racing, leaping, catch-ball, corner-pen, &c. Those of the girls, who were always required to occupy different ground, were milder and more simple. The scholars were generally disposed to conform to the rules of the preceptor, except once a year, when they would deliberately enter into a plot to 'turn out the master,' that they might enjoy a Christmas frolic without restraint. The manner of conducting on such occasions was sufficiently ludicrous. When the appointed time arrived, which they took good care to keep concealed from the master, they met early in the morning in the school-house, and secured the door with bars, logs, &c., shutting themselves in, and him out. They also took care to arm themselves with clubs, sharp-pointed sticks, and shovels for throwing ashes, should he attempt to descend the chimney. When he came and demanded entrance, it was refused; but they presented him with written terms of compromise, securing to themselves as much holiday as they desired. If he complied, the door was unbarred; if not, they put him at defiance. In some instances he obtained a reinforcement, and attempted to storm their fort, when a general engagement would ensue; but knowing what would be the consequence if overcome, they fought like little heroes and heroines, and generally maintained their ground too; for their cause was popular with the citizens, and but few would join to oppose the little rebels. Strange as it may seem, this custom prevailed with the knowledge and consent of the parents and patrons of the school, who frequently took more delight in feats of strength and activity among their children, than in literary acquirements.—*Western Advocate.*

MIND AND MATTER.

[Babbage on the Economy of Machinery, &c.]

When we reflect on the very small number of species of plants, compared with the multitude that are known to exist, which have hitherto been cultivated, and rendered useful to man; and when we apply the same observation to the animal world, and even to the mineral kingdom, the field that natural science opens to our view seems to be indeed unlimited. These productions of nature, numerous and varied as they are, may each, in some future day, become the basis of extensive manufactures, and give life, employment, and wealth, to millions of human beings. But the crude treasures perpetually exposed before our eyes, contain within them other and more valuable principles. All these, in their innumerable combinations, which ages of labour and research can never exhaust, may be destined to furnish, in perpetual succession, new sources of our wealth and of our happiness. Science and knowledge are subject, in their extension and increase, to laws quite opposite to those which regulate the material world. Unlike the forces of molecular attraction, which cease at sensible distances; or that of gravity, which decreases rapidly with the increasing distance from the point of origin; the farther we advance from the origin of our knowledge, the larger it becomes, and the greater power it bestows upon its cultivators to add new fields to its dominions. Yet does this continually and rapidly increasing power, instead of giving us any reason to anticipate the exhaustion of so fertile a field, place us, at each advance, on some higher eminence, from which the mind contemplates the past, and feels irresistibly convinced, that the whole, already gained, bears a constantly diminishing ratio to that which it contained within the still more rapidly expanding horizon of our knowledge.

But, if the knowledge of the chemical and physical properties of the bodies which surround us, as well as our acquaintance with the less tangible elements, light, electricity, and heat, which mysteriously modify or change their combinations, all concur to convince us of the same fact; we must

remember that another and a higher science, itself still more boundless, is also advancing with a giant's stride, and having grasped the mightier masses of the universe, and reduced their wanderings to laws, has given to us in its own condensed language, expressions, which are to the past as history, to the future as prophecy. It is the same science which is now preparing its fetters for the minutest atoms that nature has created; already it has nearly chained the ethereal fluid, and bound in one harmonious system all the intricate and splendid phenomena of light. It is the science of *calculation*,—which becomes continually more necessary at each step of our progress, and which must ultimately govern the whole of the applications of science to the arts of life.

Perhaps to the sober eye of inductive philosophy, these anticipations of the future may appear too faintly connected with the history of the past. When time shall have revealed the future progress of our race, those laws which are now obscurely indicated, will then become distinctly apparent; and it may possibly be found that the dominion of mind over the material world advances with an ever-accelerating force.

Even now, the imprisoned winds which the earliest poet made the Grecian warriour bear for the protection of his fragile bark; or those which, in more modern times, the Lapland wizards sold to the deluded sailors;—these, the unreal creations of fancy or of fraud, called, at the command of science, from their shadowy existence, obey a holier spell; and the unruly masters of the poet and the seer, become the obedient slaves of civilized man.

Nor has the wild imagination of the satirist been quite unrivalled by the realities of after years: as if in mockery of the College of Laputa, light almost solar has been extracted from the refuse of fish; fire has been sifted by the lamp of Davy; and machinery has been taught arithmetic instead of poetry.

In whatever light we examine the triumphs and achievements of our species over the creation submitted to its power, we explore new sources of wonder. But if science has called into real existence the visions of the poet—if the accumulating knowledge of ages has blunted the sharpest and distanced the loftiest of the shafts of the satirist, the philosopher has conferred on the moralist an obligation of surpassing weight. In unveiling to him the living miracles which teem in rich exuberance around the minutest atom, as well as throughout the largest masses of ever-active matter, he has placed before him resistless evidence of immeasurable design. Surrounded by every form of animate and inanimate existence, the sun of science has yet penetrated but through the outer fold of Nature's majestic robe; but if the philosopher were required to separate, from amongst those countless evidences of creative power, one being, the masterpiece of its skill; and from that being to select one gift, the choicest of all the attributes of life;—turning within his own breast and conscious of those powers which have subjugated to his race the external world, and of those higher powers by which he has subjugated to himself that creative faculty which aids his faltering conceptions of a Deity,—the humble worshiper at the altar of truth would pronounce that being,—man; that endowment,—human reason.

But however large the interval that separates the lowest from the highest of those sentient beings which inhabit our planet, all the results of observation, enlightened by all the reasonings of the philosopher, combine to render it probable that, in the vast extent of creation, the proudest attribute of our race is but, perchance, the lowest step in the gradation of intellectual existence. For, since every portion of our own material globe, and every animated being it supports, afford, on more scrutinizing inquiry, more perfect evidence of design, it would indeed be most unphilosophical to believe that those sister spheres, glowing with light and heat, radiant from the same central source—and that the members of those kindred systems, almost lost in the remoteness of space, and perceptible only from the countless multitude of their congregated globes—should each be no more than a floating chaos of unformed matter;—or, being all the work of the same Almighty Architect, that no living eye should be gladdened by their forms of beauty, that no intellectual being should expand its faculties in decyphering their laws.

AMERICAN RAIL-ROADS.

A late writer in the Edinburgh Review pays a merited compliment to the enterprise which is now 'cementing,' as it has been well observed, 'with bonds of iron,' the most distant portions of our Union. He remarks, that 'the country, which surpasses all others in the spirit and rapidity by which its means of inland transport have been improved, is the United States. The number and extent of Rail-roads completed, in progress, or projected throughout the Union must surprise all who have not attended to the advances made by this country in the arts of life. We extract from a tabular view, published under the direction of Congress in 1833, the following list of Rail-roads then executed or projected in the United States. [Here follows a list of forty-six Rail-roads completed, and one hundred and thirty-seven projected.]

After a short account of the most considerable Rail-roads in the United States, the writer proceeds to say: 'In our inquiries regarding the American Rail-roads Companies, we have been struck by the public spirit and candour which characterize the proceedings of our trans-atlantic countrymen. This is especially conspicuous, when we compare the meagre statements put forth by the Liverpool and Manchester Rail-road Directors, with the copious and satisfactory reports published by the Baltimore and Ohio Rail-road Company. The reports now before us, published between the years 1828 and 1833, occupy upwards of a thousand octavo pages, illustrated with numerous plans and tables. In these we find not merely the formal reports of the directors, but also the detailed reports of the engineers, and of the subordinate engineers to the engineers in chief. We find also the most minute details of the various contracts, with the names of the contractors. These details are not merely submitted

to the stockholders themselves, but are laid before the public. The volumes in which they are recorded form a rich storehouse of knowledge for guidance in other similar enterprises; whilst the publicity thus given to every particular, operates as a check upon the spirit of jobbing. It is only by this carefully recorded experience, that we can hope to see this new and powerful means of transport brought to perfection. In the absence of such information, every new undertaking will have to work its way, in a great measure, in the dark; reproducing, at infinite labour and expense, the precious fruits of that experience which are withheld by those who have already obtained them.'

BENT OF THE MIND.

[From Curiosities of Literature.]

Parents are interested in the metaphysical discussion, whether there really exists an inherent quality in the human intellect, which imparts to the individual an aptitude for one pursuit more than for another. Our children pass through the same public education, while they are receiving little or none for their individual dispositions, should they have sufficient strength of character to indicate any. The great secret of education is to develope the faculties of the individual; for it may happen that his real talent may be hidden and buried under his education. A profession is usually adventitious, made by chance-views, or by family arrangements. Should a choice be submitted to the youth himself, he will often mistake slight and transient tastes for permanent dispositions. A decided character, however, we may often observe, is repugnant to a particular pursuit, delighting in another; talents, languid and vacillating in one profession, we might find vigorous and settled in another; an indifferent lawyer might be an admirable architect! At present all our human bullion is sent to be melted down in an university, to come out, as if thrown into a burning mould, a bright physician, a bright lawyer, a bright divine—in other words, to adapt themselves for a profession, preconcerted by their parents. By this means we may secure a titular profession for our sons, but the true genius of the avocation in *the bent of the mind*, as a man of great original powers called it, is too often absent! Instead of finding fit offices for fit men, we are perpetually discovering, on the stage of society, actors out of character! A laughing philosopher, the Democritus of our day, once compared human life to a table, pierced with a number of holes, each of which has a pin made exactly to fit it, but which pins being stuck in hastily, and without selection, chance leads inevitably to the most awkward mistakes. 'For how often do we see,' the orator pathetically concluded,—'how often, I say, do we see the round man stuck into the three cornered hole!'

The difficulty of discerning the aptitude of a youth for any particular destination in life will, perhaps, even for the most skilful parent, be always hazardous. Many will be inclined, in despair of any thing better, to throw dice with fortune; or adopt the determinatian of the father who settled his sons by a whimsical analogy which he appears to have formed of their dispositions or aptness for different pursuits. The boys were standing under a hedge in the rain, and a neighbour reported to the father the conversation he had overheard. John wished it would rain *books*, for he wished to be a preacher; Bezaleel, *wool*, to be a clothier, like his father; Samuel, *money*, to be a merchant, and Edmund, *plums*, to be grocer. The father took these wishes as a hint, and we are told, in the life of John Angier, the elder son, a Puritan minister, that he chose for them these different callings, in which it appears that they settled successfully. 'Whatever a young man at first applies himself to, is commonly his delight afterwards.' This is an important principle discovered by Hartley, but it will not supply the parent with any determinate regulation how to distinguish a transient from a permanent disposition; or how to get at what we may call the connatural qualities of the mind. A particular opportunity afforded me some close observation on the characters and habits of two youths, brothers in blood and affections, and partners in all things, who, even to their very dress shared alike; who were never separated from each other; who were taught by the same masters, lived under the same roof, and accustomed to the same uninterrupted habits; yet had nature created them totally distinct in the qualities of their minds; and similar as their lives had been, their abilities were adapted for very different pursuits; either of them could not have been the other. And I observed how the 'predisposition' of the parties was distinctly marked from childhood: the one slow, penetrating, and correct; the other quick, irritable, and fanciful; the one persevering in examination, the other rapid in results; the one unexhausted by labour; the other impatient of whatever did not relate to his own pursuits: the one logical, historical, and critical; the other having acquired nothing, decided on all things by his own sensations. We would confidently consult in the one a great legal character, and in the other an artist of genius. If nature had not secretly placed a bias in their distinct minds, how could two similar beings have been so dissimilar?

COLOURED BONES.

[From Dr. Roget's Physiology.]

It has been found that by mixing certain colouring substances with the food of animals, the bones will soon become deeply tinged with them. This fact was discovered accidentally by Mr. Belchier, who gives the following account of the circumstances that led him to notice it. Happening to be dining with a calico printer on a leg of fresh pork, he was surprised to observe that the bones, instead of being white as usual, were of a deep red colour; and on inquiring into the circumstances, he learned that the pig had been fed upon the refuse of the dyeing vats, which contained a large quantity of the colouring substance of madder. So curious a fact naturally attracted a good deal of attention among physiologists, and many experiments were undertaken to ascertain the time required to produce this change, and to determine whether the effect was permanent, or only temporary. The red tinge was found to be communicated much more

quickly to the bones of growing animals than to those which had already attained their full size. Thus the bones of a young pigeon were tinged of a rose colour in twenty-four hours, and of a deep scarlet in three days; while in the adult bird, fifteen days were required merely to produce the rose colour. The dye was more intense in the solid parts of those bones which were nearest to the centre of circulation, while in bones of equal solidity, but more remote from the heart, the tinge was fainter. The bone was of a deeper dye in proportion to the length of time the animal had been fed upon the madder. When this diet was discontinued, the colour became gradually more faint, till it entirely disappeared.

LITHOGRAPHIC PRINTING.

[From Babbage, on the Economy of Machinery and Manufactures.]

This is a mode of producing copies in almost unlimited number. The original which supplies the copies, is a drawing made on a stone of a slightly porous nature; the ink employed for tracing it is made of such greasy materials that when water is poured over the stone it shall not wet the lines of the drawing. When a roller covered with printing ink, which is of an oily nature, is passed over the stone, previously wetted, the water prevents this ink from adhering to the uncovered portions; whilst the ink used in the drawing is of such a nature that the printing ink adheres to it. In this state, if a sheet of paper, be placed upon the stone, and then passed under a press, the printing ink will be transferred to the paper, leaving the ink used in the drawing still adhering to the stone.

There is one application of Lithographic Printing which does not appear to have received sufficient attention, and perhaps farther experiments are necessary to bring it to perfection. It is the reprinting of works which have just arrived from other countries. A few years ago one of the Paris newspapers was reprinted at Brussels as soon as it arrived, by means of Lithography. Whilst the ink is yet fresh this may easily be accomplished: it is only necessary to place one copy of a newspaper on a Lithographic stone; and by means of great pressure applied to it in a rolling press, a sufficient quantity of the printing ink will be transferred to the stone. By similar means, the other side of the newspaper may be copied on another stone, and these stones will then furnish impressions in the usual way. If printing from stone could be reduced to the same price per thousand as that from moveable types, this process might be adopted with great advantage for the supply of works for the use of distant countries possessing the same language. For a single copy of the work might be printed off with *transfer ink*, which is better adapted to this purpose; and thus an English work, for example, might be published in America from stone, while the original, printed from moveable types, made its appearance on the same day in England.

MEXICAN CUSTOM.

Forty days before the feast of one of their gods, the ancient Mexicans used to purchase a slave of very fine shape, who, during that time, represented the deity to whom he was to be sacrificed on the day of festival. They arrayed and ornamented him like a god, and he spent all the forty days of his deification, in dancing and rejoicing, and all sorts of pleasures. The Mexicans were attendant on his festivities. They paid him divine worship; but lest he should forget his inevitable fate, two ancient ministers of the idol refreshed his memory, by saying, whenever he appeared to enjoy himself best,—'Lord, thy pleasures will end a few days hence.' The deified slave was obliged to answer, with a cheerful air—'Be it so'—and continued his mirth. When the forty days were past, they sacrificed their mock deity, at midnight, offered his heart to the moon, threw it afterwards before the idol, cast his body from the top of the temple, and concluded the whole with a dance.

What the Mexicans meant by this singular custom, or whether it had any meaning, we cannot say. Yet all, who are surrounded with pomp and festivities, might not be the worse for such monitors as the Mexican priests, to remind them how soon their pleasures are to end. Another sort of moral, however, might be extracted, and applied very patly to what has been the usual fate of men idolized by the people, in countries where the people are a mob. While they appear most great and powerful, they are but slaves to their own idolaters, who, in a little time, are likely enough to sacrifice them to a new idol, or cast them down from their high places, and dance and make merry at their ruin. But, though the public favour, in all countries, is subject to ebb and flow, yet such tremendous vicissitudes of popular adoration and hatred can never occur among a truly enlightened people. The more a people thinks, and the more it learns, the less will it be acted upon by frenzied impulses; as knowledge is diffused, popularity will become more a matter of judgment than of feeling; and the great men of futurity will seldom rise so high, or fall so low, as the great men of the past. On this principle we trust and believe that American history will tell of fewer great men—great by their actions, their fortunes, and their influence, and signalized by their fate—than have appeared in any other country. Perhaps it is a sign of the healthy condition of a people and a government, when the latter is administered by men of not extraordinary character, with abilities sufficient for the perfect discharge of their duties, and nothing more.

COMPLAINT.—[By Coleridge.]

How seldom, friend, a good great man inherits
Honour or wealth with all his worth or pains
It sounds like stories from the land of spirits,
If any man obtain that which he merits,
Or any merit that which he obtains.

Reproof.

For shame, dear friend! renounce this canting strain!
What wouldst thou have a good great man obtain?
Place—titles—salary—a gilded chain?
Or throne of corses which his sword hath slain?
Greatness and goodness are not means, but ends!
Hath he not always treasures, always friends,
The good great man? Three treasures, Love and Light,
And Calm Thoughts, regular as infant's breath;—
And three firm friends, more sure than day and night,
Himself, his Maker, and the angel Death.

ROCKY MOUNTAIN GOAT.

[Capra Americana.]

This animal, found in the lofty peaks of the range of the Rocky Mountains, has sometimes been confounded with the *ovis montana*, or Rocky Mountain sheep. This probably, was owing to a slight observation of the animal, and to its long woolly-hair covering; and also to its frequenting places near where the sheep are found. The goats are seldom seen on the lower parts of the mountains. They are therefore not taken without much difficulty. These animals have been known to the Hudson-bay and the North West Companies from their early establishments; and are met with from 40 to 65 degrees north latitude. Their covering is part hair and part wool; or, in other words, a part of their hair is so fine as to be used for similar purposes as wool. The course hair is very long, and reaches nearly to the ground. In its habits it resembles the domestic goat. The form of the body and neck is robust, and its horns are shaped like an awl, with an inclination backwards. The legs are thick and short; and the hoofs perpendicular. The colour of this animal is wholly white, except the horns, hoofs, lips and margin of the nostrils. B.

SOLDIERS.

De Boufflers, an old French Marshal, was of opinion, that 'No man was fit for a dragoon, who, in time of war, outlived two campaigns, or in peace, did not, once at least in fifteen days, get his head broken in a private quarrel.' This gives us a strong idea of the wild, reckless, ruffian-like fellows, who then composed the mercenary armies of Europe; and probably there has been little improvement since. On the evidence of our military annals, we are entitled to claim for the American soldiery a far different character. They have individually a higher rank as moral beings;—they cannot be drilled into machines, nor maddened into wild beasts. The citizen, with his recollections of domestic life and civil government, is never entirely lost in the soldier, with no home but his tent, and no law but his leader's word. American troops would never, we think, be guilty of such enormities as disgraced the British army, after the storm of Badajoz; for each man would be restrained by a law within himself, though, as far as external circumstances were concerned, he might be left lawless. Nor would the disorganization of the army, drive the individual soldiers to despair; as was the case with the French, on their retreat from Moscow. Perhaps it is not too much to say, that no American ever was a thorough soldier, and nothing but a soldier. Long and frequent warfare, and the necessity of standing armies, might create thousands of such military monsters; but they would be too severe a curse upon our native land, except as a punishment to the guilt and madness, which would have given them existence.

CLIMATE.

The climate of North America, east of the Rocky Mountains, differs from that of Europe in two particulars—the mean temperature is much lower, and the vicissitudes of temperature are much greater. The immense forests, the great lakes, and the mountains of America, have been assigned as the causes of this difference; but not satisfactorily. Dr. Halley could account for it no otherwise, than by supposing that the poles of the earth were, at some remote period of time, placed in the vicinity of Hudson's Bay; in which case, the portion of America, now inhabited by us, would once have been within the limits of the Arctic circle; and the Doctor supposed that the temperature of this region has not yet had time to reach its proper height, since the poles have been shifted to their present position. If this theory be correct, we have the comfortable prospect of an amelioration of climate, although so gradual, that our remote posterity will derive the chief benefit from it. Another theory is, that the winds from the Pacific Ocean, being chilled in their passage over the snow-covered summits of the Rocky Mountains, cool the atmosphere of the whole region east of them. At first sight, the cause would appear hardly adequate to the effect, and we might suppose that the coldest wind would have time to grow tolerably warm, in its passage across the western side of the Mississippi valley, the space between that river and the Alleghanies, and the wide tract that divides the latter mountains from the sea-coast. It is certain, however, that the climate west of the Rocky, or Oregon range is far milder than our own; the difference is perceptible, immediately on crossing the mountains, in the increased growth and more numerous varieties of the forest-trees; and it is natural to suppose, that the cause of this difference is somehow connected with the mountains themselves. Our prevalent winds come from the west, and instead of bringing heat with them, abstract it from the soil. Hence, also, the vicissitudes of the climate are accounted for; inasmuch as these are said to be greater in every country, the prevailing winds of which blow from landward, than where they come from the sea.

THE FIELD OF THE WORLD.

[By Montgomery.]

Sow in the morn thy seed,
At eve hold not thine hand;
To doubt and fear give thou no heed,
Broad-cast it o'er the land.

Beside all waters sow,
The highway furrows stock,
Drop it where thorns and thistles grow,
Scatter it on the rock.

The good, the fruitful ground,
Expect not here nor there;
O'er hill and dale, by plots, 'tis found;
Go forth, then, every-where.

Thou know'st not which may thrive,
The late or early sown;
Grace keeps the precious germs alive,
When and wherever strown.

And duly shall appear,
In verdure, beauty, strength,
The tender blade, the stalk, the ear,
And the full corn at length.

Thou canst not toil in vain;
Cold, heat, and moist, and dry,
Shall foster and mature the grain,
For garners in the sky.

Thence, when the glorious end,
The day of God is come,
The angel-reapers shall descend,
And heaven cry—'Harvest home.

A Hindoo Temple, and an invalid on the Banks of the Ganges.

DEATH OF HINDOOS ON THE GANGES.

The Ganges, which flows through Hindostan, is considered a sacred river, by the natives of that region, and is supposed to possess properties even more miraculous than those of the river Jordan, in which Naaman, the Syrian, washed away his leprosy. Whatever diseases afflict the Hindoos, their universal remedy is sought in its waters; which, therefore, to these poor heathen, supply the place of our panaceas and patent medicines—and, certainly, at a much more reasonable rate. It might be termed, indeed, an immense stream of doctor's stuff, flowing through the whole country, and offering its virtues to all who need them, without money and without price. Such is their faith in its efficacy, that, if the sick can but drag themselves to the banks of the Ganges, or be borne thither by their friends, they often neglect all remedies, except to bathe in its waters, and drink them. In many cases, perhaps, this simple treatment is the best that could be adopted for their diseases; and it is probable that numerous cures are wrought by the imagination of the patient, which it is well known, can convert water into a really powerful medicine. But, undoubtedly, thousands die upon the banks of the river for want of proper care. This, however, can hardly be considered a misfortune by the Hindoos, many of whom, while in perfect health, drown themselves in the Ganges, and expect thus to be cleansed from all their earthly pollutions, and be received into the regions of bliss, because they died in the holy river.

The principal figure in the plate represents a dying man, to whom the Brahmin, or Hindoo priest, is administering a draught of the sacred water. Should this fail of performing the cure, as seems most likely from the desperate condition of the patient, the Brahmin will proceed to fill his mouth and eyes with mud from the banks, and thus hasten the termination of the poor man's misery. The women, shrouded in their robes, one of whom is kneeling at the feet of the expiring Hindoo, while the other stands somewhat apart with her son, are his two wives. The kneeling wife clasps his hand, and appears in great affliction; the other, having a son to comfort her, is less overcome by the expected loss of his father. But Hindoo wives, it must be recollected, have often cause to lament their husbands with much sincerer grief than widows in more civilized countries, from a dread of being immolated on their funeral piles.

Several persons are seen bathing in the Ganges, and others are bearing away its waters, to serve for medicinal purposes, or to purify their souls by washing their face and hands. On the right is the temple of a Hindoo god, at the threshold of which we observe a dying man, with his head turned towards the door, so that his last breath will be offered at the shrine of a senseless idol. Happy are they, to whom has been revealed a surer trust for their dying moments.

ON THE FORCING OF THE STRAWBERRY.

We are indebted for the following article to the American Gardener's Magazine—a work, the general circulation of which would be like scattering the seeds of fruits and flowers.

The high estimation in which the *Fragaria*, or strawberry (as its name imports, from the very apparent qualities it possesses as a superiour table fruit), has been held for many years, renders it needless, in this place, to bestow any encomiums on its recommendation; as a table fruit, it may be considered of the first order, and in the confectionary department it is used in various ways, as creams, jams and jellies. To these may be said that it is of a very wholesome quality, and recommended by the facul-

ty, in many cases of sickness, in their catalogue of pleasant remedies, in which it is said to dissolve the tartareous incrustations on the teeth, promote perspiration, and sweeten the breath.

PROPAGATING THE STRAWBERRY FOR FORCING.

Rooting the Plants. The method mostly adopted, and which, I think, most recommendable, is, to plant out some stools purposely, either in the Spring or Fall, on a rich plot of ground, in a western aspect. They may be planted three feet apart, and the ground well worked between them by digging in the Spring and Summer. When the flower trusses or stems begin to show, they should be nipped off, between the finger and thumb, which will strengthen the plants, and cause them to send out runners early; when the runners begin to grow, they are to be laid out in a regular manner, that the young plants may have a free circulation of air, and receive the sun. As the principal object is to obtain early plants, they may be greatly facilitated, by laying the joints, as they protrude from the plant; and if a quantity of well-rotted manure is occasionally thrown over them, the better: water may also be applied, to aid their early rooting, which is one grand object, in order to forward the plants in a vigorous, healthy, manner.

Potting the Plants. When a portion of the plants are thus rooted, they are to be potted in the following manner: A quantity of pots may be procured of the following dimensions: six inches deep, and about the same in diameter on the top [No. 4.], which may be filled with compost before or after plunging.

Compost. The compost that I can best recommend, is two thirds of good sandy loam, and one third of leaf mould and horse manure, of equal quantity; this should be procured three months before planting, and well mixed, and incorporated together, with which the pots are to be filled, previous to planting.

Plunging the Pots. A situation for plunging the pots should be chosen in a western aspect, where the sun does not have its full influence, but where a free circulation of air can be obtained in every direction. The spot of ground being selected, prepare it for plunging the pots, by laying out beds three or four feet wide, or in such a manner as to admit of four, six or eight rows of pots in the bed across: the length may be in proportion to the quantity required. The bed may be laid out by marking with a spade, by a line each side, when the earth is to be taken out to the depth of the pots, that their rims may be even with the surface of the ground. The pots are then to be placed in a regular manner in the bed, and filled (if not done before plunging) with the prepared compost; and, in such case, the vacancies between them will require to be filled with the earth taken from the bed, which is the most economical method, if the compost is not plentiful: on the other hand, the filling of the whole, when the pots are plunged, is the most ready method; therefore the choice of the best method must depend on circumstances. The pots being filled, the whole of the bed is to be well watered, to settle the earth in the pots; and in the evening (which is the best time), the plants are to be dibbled into the pots.

Planting the Strawberry. The young plants are to be taken from the vines, and dressed in the usual way, by shortening the roots, and taking off the dead leaves.

The plants are to be inserted in the pots with a dibble, in the usual method of planting, one, two or three in a pot. The number to be inserted depends on the time and strength of the plants, the object being to fill the pot with roots and a good crown, before wintering the plants; therefore in early planting, one in the centre of the pot, is best for the strong growing varieties, as Keen's seedling, Wilmot's superb, and the like; and two plants in a pot of the smaller varieties, as the Early scarlet, Roseberry, and so on. In late setting out, they may be put accordingly thick, as two plants of the larger varieties, and three of the smaller in a triangular manner. When they are thus planted, they will require a good watering every evening, until their roots begin to be well established, when they may have every attention, to render them vigorous plants; and in the month of October, if one or two waterings of manure water are applied, they will be greatly benefited, in the process of forcing, by the soil in which they grow being of a richer quality.

Shading the plants is, by many, recommended, and in many cases, perhaps, very judiciously, although I must precaution the young forcer that it weakens the plants, and therefore should be much as possible evaded.

Protecting the plants in the Winter. When the winter commences, the pots are to be taken from the beds, and protected in cold frames, pits, sheds, or the like, in such a manner that they will not be too severely frozen, which will not only break the pots, but also injure the plants.

OPERATION OF FORCING THE STRAWBERRY.

Before I proceed to detail the manner of forcing the strawberry, it will be proper to make a few cursory remarks on the subject. The strawberry, in all cases of forcing, requires to be placed near the glass, in its first stage particularly. The process, at the first commencement, requires a very moderate temperature. The plants, when in bloom, need much water; but care must be taken not to wet the flowers. Shading is also requisite to the plants, when in flower, from eleven to one o'clock of every sunny day. At the time of swelling and ripening the fruit, air and heat are also requisite, in order to forward and give it colour and flavour. In contradiction to the above remarks, if the strawberry is placed far from the glass, it will grow slender, and throw up but few trusses of flowers, and those weak and puny. Rapid forcing at the first commencement, will produce the same effect; keeping the pots dry when the plants are in flower, retards and destroys the blossoms, from setting their fruit; and wetting the blossoms, in the act of watering the plants, destroys the pollen, and blinds the flower. Lastly, if the sun is admitted to the flowers at midday, with its full power, they will be blinded by its influence in a confined state, and hence the necessity of shading.

Operation of Forcing. The strawberry is forced either in frames, pits or houses. Frames are

perhaps too troublesome to become generally in use for the purpose, and houses too expensive for their culture, with the exception of large establishments, where they are moved from one house to another, as from the cherry house to the pinery, &c. But the most economical, as well as the best adapted method that I am acquainted with, in the forcing of the strawberry, is forcing them in pits, and which can be easily converted into frame or house culture, by any intelligent person. The pits may be of any dimensions, from three to ten feet wide in the clear, and, for this purpose, it may be worked with flues, in the usual method of forcing-houses, or partly by bottom heat, from manure and tan, and partly by flues. The first method requires a flue to run round the front and ends of the pit. The staging must be erected under the glass, at the distance of about a foot or eighteen inches from it, on which the pots of strawberries are to be placed and forced.

But the system that I can best recommend, is to force the strawberry in a pit, with a flue in the front, and a quantity of leaves and manure worked in a moderate temperature of heat; on the top of this, about two feet thick of old tan may be added, into which the pots are to be plunged to the rims. Having the pit prepared, by putting in the manure, the tan is then to be laid on to within eighteen inches or two feet of the glass; the pots are to be plunged therein to the rim, when the heat becomes moderate, which requires great precaution, or the plants will run up in a slender manner. At the first commencement of forcing, the pit should have plenty of air during the day, and the temperature through the night may be kept from 35° to 40°, fire heat, and through the day to 45° or 50°. This heat may be gradually increased from 40° to 45° during the night, and 50° to 60° during the day, with plenty of air. The plants may be gradually watered, and every means used to bring them on in a strong healthy manner; when they begin to throw up their trusses of flower stems, plenty of water must be applied, and air, as much as possible, be admitted to the flowers as they open. The temperature may be at this time kept as near as possible to 50° through the night, and 60° through the day, with plenty of air. The plants will be benefited, if, at this time, they are divested of some of their leaves, which will give strength to the blossoms.

In the middle of the day the pit will require to be shaded, when the sun shines, from eleven to one o'clock: this is more essentially necessary to the strawberry than any fruit I am acquainted with: the sun shining powerfully, as before observed, on the blossoms, when in a confined heat, often blinds or destroys the female part of the flower, which is the cause of blindness or barrenness.

Swelling the Fruit. When the fruit is perfected, and beginning to swell, the shading may then be omitted; and the plants will require to be well watered whenever the earth becomes the least dry.

The temperature of the pit may at this time be kept as near as possible from 50° to 55°, fire heat, during the night, and from 60° to 75°, with sun heat, and plenty of air, during the day.

Ripening the Fruit. When the fruit is nearly swollen to its proper size, the watering may then be in a measure suspended; and the pots may be removed into the stove, pinery, or any warm situation, to forward its ripening, as the strawberry will bear almost any heat, when the fruit is properly set; but in all cases, the pots should be so placed as to obtain the full influence of the sun, in order to give flavour to the fruit; when it is fully ripe, some pots may be taken to table with it on, which has a very pretty effect, besides a very nice dessert. When it is all gathered, the pots of plants may be set out to obtain a Fall crop, or for a new intended plantation, which see, under the head of *Propagation of the Strawberry.*

The strawberry requires to be potted every year from young plants, as the old stools do not force well.

COMPARATIVE LONGEVITY.

In the French *Revue Encyclopedique*, we find some interesting statements on longevity and the proportion of deaths to the population, in the different countries of Europe. It thence appears that the duration and value of human life varies as much between one European nation and another, as it does between people of different races, and inhabiting different quarters of the globe. The number of deaths varies more than the number of births; in respect to the latter, there is never a difference of more than one half between any two countries; while the mortality of one is sometimes nearly triple that of another.

If we were asked what land, of all others on the face of the globe, we should fix upon as the most favourable to human life, our thoughts would probably turn to the sunny clime of Italy, whither consumptive patients go from all parts of the world, to inhale the balm of its atmosphere as their only chance of prolonged existence. Yet this would be a vast mistake; the air may be beneficial as a medicine; but it is apparently too delicious and exhilirating for constant use. It is not in the bleak and almost arctic region of Norway, nor in dreary Iceland, which is literally a land of ice, that human life has its briefest span—but in sunny Italy itself. Perhaps there is a feverish excitement in the blood, which causes the frame to wear out quickly in a southern clime; while, in colder countries, it is preserved from decay by its torpidity. The British islands, and especially Scotland, are very favourable to the life of man; in a million of inhabitants, the annual deaths are somewhat more than eighteen thousand. Sweden and Norway are also salubrious climates; there are only two deaths in that part of Europe for three in the southern countries. In Denmark and the greater part of Germany, the proportion is about the same. Russia and Poland, where the mass of the inhabitants have scarcely the necessaries of life, and can barely claim the rank of civilized people, are astonishingly favourable to the continuation of existence. The population, consisting of sixty-six millions lives, on an average, half as long again as the Italians, and exactly twice as long as the inhabitants of Vienna, the capital city of Austria. The mean rate of mortality is in Swit-

zerland, in the provinces of the Austrian empire, and in Spain, in which countries the annual deaths are about one in every forty. France, Holland, Belgium and Prussia, do not vary much from the same proportion. In other parts of Europe, the deaths are one in thirty, and often more, in the countries that border on the Mediterranean sea.

In all Europe, which contains two hundred and ten millions of inhabitants, about five millions and a half die annually, being one fortieth part of the whole; but these deaths are distributed very unequally between the northern and southern countries. In the former, death takes but one man in every forty-four; in the latter, he lays claim to one in thirty-six. In the north of France there are 22,700 deaths a year, and in the south 27,800 for each million of inhabitants; this is a striking difference, within the limits of one country.

Two great causes are assigned, which influence the duration of life and the number of deaths; these are CLIMATE and CIVILISATION. A cold and rigorous climate is eminently favourable to existence; and likewise a low or moderate temperature, in the neighbourhood of the sea. In Russia, it is the climate alone that prolongs life, without any aid from civilisation; but, in more temperate regions, civilized habits, are absolutely necessary to produce a similar good effect. Between the tropics, the duration of life varies according to the different breeds of men. Thus in Batavia, the annual amount of deaths, taking all the inhabitants together, is one in twenty-six; but of this amount, the Europeans lose one in eleven, the slaves one in thirteen, the Chinese one in twenty-nine; and the Javanese, who are the natural inhabitants of the country, lose only one in forty-six. In the West Indies, the whites lose one third more, according to their numbers, than the blacks.

The effects of civilisation may be perceived, by contrasting the diminished mortality of the present day with that of former times. In Sweden, it has lessened one third in sixty-one years; in Switzerland one third in sixty-four; in the Pope's dominions, one third in sixty-two; in Prussia, one third in one hundred and six; and in Austria, one third in the short space of seven years. This latter fact, if it be correctly stated, is marvellous, and must have some extraordinary cause. In France, the mortality has diminished one half in the course of a century and a half. In Russia and Norway, during the last thirty years, it has remained at a stand; and in Naples it has increased. In the manufacturing city of Manchester, in England, it has diminished more than one half in sixty-four years, and in Birmingham, nearly one half in ten years. Taking the whole of Europe together, it is supposed that the mortality is less by one third than it formerly was.

The principal causes of a heavy average of deaths may be enumerated as follows;—the dampness of marshy tracts, especially in warm countries; —the want of sufficient food among the lower classes, and of comfortable clothing;—pestilential diseases;—great and sudden changes of the weather;—the insalubrity of private dwellings, prisons, and hospitals, owing to a too confined space, and neglect of cleanliness;—drunkenness, or the habitual use of alchohol;—unhealthy occupations, or too constant labour, especially in the case of children and youth;—war, not merely as producing death in battle, but by fatigue, forced marches, exposure, and an unhealthy mode of life in camp and field. On the other hand, the causes of a diminution of mortality are the drying up of marshes, and the embankment of rivers and streams; —the increased facilities of earning a livelihood; the greater abundance and better quality of food; attention to the wants and comforts of children; vaccination, which has almost eradicated one of the most fearful diseases of past times;—health-regulations at sea-ports, and the general enforcement of cleanliness;—the decreased prices of merchandise and manufactures, which place within the reach of every class those conveniences of life which were formerly confined to the wealthy;—the useful inventions, which have created new comforts. Thus we see that the life of man is not only embellished, but prolonged by civilisation; nor can it be doubted that the process will go on, and that our posterity will live longer, and with less torment of disease, and in a world of greater physical enjoyment, than ourselves. It is not, we hope, irreverent to say, that the Creator gave us our world, in a certain sense, unfinished, and left it to the ingenuity of man to bring it to the highest perfection of which final and physical things are susceptible.

We have not at hand any statements similar to the above, in regard to our own country. It is reasonable to suppose, however, that, within the vast limits of the United States, there is as great a difference in the length of life and number of deaths, as among the nations of Europe. The average of mortality in our cities has generally been stated at one in forty, which is the same as in Europe at large; and as the number of deaths is always greater in cities than elsewhere, this would indicate that the new world is more favourable to human life than the old. The situation of America, in a transition-state from a wild land to a cultivated one, affords opportunity for the solution of many problems, as to the causes which effect the health and longevity of man. It is desirable to know—and we should be glad to state it in this Magazine—what are the different averages of existence, when spent in a clearing of the primeval forest, in a long cultivated part of the country, and in a crowded city;—whether the felling of the western woods and the miraculous growth of towns, operates for good or evil on the old settlers;—what has been the influence, in this respect, of canals, and especially of the Erie Canal, in the long tract through which it drags its torpid current;—what is the effect of the increasing use of coal instead of wood, as fuel. Many other questions might be proposed; but the answers, we fear, would scarcely come to hand while we sit in the chair editorial; since, to be accurate, they must be formed by the comparison of distant communities, and of the present generation with its ancestors and posterity. And whatever may be the duration of this earthly existence, let it ever be in our minds, that another comes hastening on—which is eternal.

Of the sixty-eight years of the reign of Louis the Fourteenth, fifty-six were spent in war.

FRAGMENTS OF THINGS.

[From a Correspondent of the Cincinnati Journal, at Malta.]

In passing a street the other day, a church was pointed out to me, which I had not noticed; and I was told that it was the church to which at a certain time in each year, the Maltese took their mules and asses and such sort of animals, and had them sprinkled with holy water and blessed. They attach much importance to it, as keeping off disease and accidents, and putting the poor animals in a more safe condition.

Baptizing a dead Child. The other evening I took tea with an English family, the lady of which appeared to be a truly pious person. She informed me that a good many years ago, she and family were at Cadiz in Spain; one of her children took sick and died, quite an infant—there was no Protestant burying ground, or if there was she did not know of it. She applied to have it buried in the common burying ground, but this was objected to, on the ground that it was a Protestant's child. The Priest however, told her, that if she would allow him to open the coffin and baptize the dead child, he would have it buried in the church-yard; but on no other condition, could she have it buried. She, as perhaps most persons would in such a situation, let the Priest baptize it, knowing that it was wholly a superstitious notion of the Priest.

Maltese Spinning. The state of the arts, even those in most common use in life, is most imperfect at Malta. Take for instance that of spinning. The Maltese raise a good deal of cotton,—manufacture some of it. The wheel they chiefly make use of, is of the most imperfect kind; it is on the plan of the *big-wheel*, formerly much in use in western Virginia, and perhaps generally in the United States. Although on the plan of the big wheel, it is not so large as the small wheel in the United States. Two rude uprights are fixed in a piece of wood, which lies on the ground; they never think of getting a wheel on legs—the wheel part is fixed between these uprights, a spindle is attached to it, and they sit down by it, perhaps on the floor,—hold the cotton in their hand, turn the wheel from time to time with the hand.

Their Ploughs. Most of the field labour is done by hand—but you may sometimes see what passes for a Plough. But a few days past I was walking out some miles from town, to take tea with an English family, and passed a plough. I had the curiosity to examine it; there was *no iron about it.* It was made of two pieces, the long main beam had a *bend*, which made a considerable angle—at this angle another piece was let in, and made fast,—this second piece was of very hard wood, was crooked, and so set as to place the lower end, or point, very much forward; this point was carefully trimmed, so as to make the edge about as thick as the end of the finger, enlarging from the point—the fore part of the long beam, is tied with a rope to the yoke of the oxen or mules, that may be used—the hind part is held to guide the plough. If the bend does not raise the end of it high enough, to serve as a handle, a single piece of wood may be fastened to it, to serve for a handle. It is very manifest that ground cannot be worked with much effect with such implements.

The Maltese often sleep in the streets. It is very common at Malta, in the warm weather, for persons to take a loll in the middle of the day. In walking the streets about that time, you may see hundreds of the poorer people—the porters, the idlers, the market and fruit men and women, lying in the piazzas, and on the shady sides of the streets—at some private places, you may see little congregations of them. But this is not all: I have seen many of them as late at night as I have been out, lying on the cold hard pavement asleep; sometimes they have a mat to lie on, but very often have nothing but the scanty clothes which they wear by day. Possibly this is the case only, or chiefly during the summer, while the heat is so great. Many of their rooms, are cellars or small rooms badly ventilated, and must be most uncomfortable in midsummer, and this may induce them thus to prefer the street.

RELIGION IN THE WEST, BY REV. DR. BLACKBURN.

[From the New York Evangelist.]

I have watched the progress of religion in the West from the time when they were only 6000 white inhabitants, to the day when they number more than five millions. About the year 1788, I went, then a youth, to what is now Tennessee, then a part of North Carolina. There were at that time only three Presbyterian ministers in it. About the year 1792, I was licensed to preach, when the number was increased to six. Now the population of the State is upwards of 500,000, with 80 Presbyterian ministers, and upwards of 9000 professors in their churches. I have worshipped there when I had to carry my gun with the rest of the men, when we placed the women in the centre, with armed men all around, and I set my gun by the root of a tree, and stood by it and preached. Such was the ferocity of the manners of the inhabitants. I preached in one place where there was not a single professor in the place; and in one year, though they had only occasional preaching, there was a church of 115 members.

In Nashville, I preached the first sermon ever preached by a Presbyterian, when the place had 200 inhabitants, and no professors of religion in it, but two old ladies.—Now there are seven churches, well filled.

In what is now the State of Alabama, the first settlement was on Cox's claim, at the Muscle Shoals, on the Tennessee river. When there were but 50 families, I preached at Capt. Hunt's log cabin under a poplar tree, on the top of the hill, and organized a church of five members. Some years afterwards, when the tree had been cut down, I administered the communion on the stump to 130 members. The town of Huntsville, on the same spot, now has three or four churches, with respectable congregations. And the State has forty Presbyterian ministers, 3000 Presbyterian professors, and 400,000 souls.

In the State of Mississippi, the town of Natchez was settled early, but there was very little gospel there. I preached there before there had ever been a settled minister in the State. Now in Mississippi, Louisiana and Arkansas, there are twenty-five Pres-

byterian ministers, and at least one thousand professors. I know the worth of your missionary in Arkansas, as I taught him myself, and can testify to his fidelity. You may repose full confidence in him.

In the State of Missouri, I preached in 1813, when there was no settled Presbyterian minister in it, and not many Americans. Now there are 360,000 people, 21 Presbyterian ministers, with 2000 professors, and the country is brought under the influence of moral instructions, and the young Missouri College is rising to great usefulness.

In the same year, 1813, I likewise visited the State of Illinois, where I now reside, and where there are from 250,000 to 300,000 souls. When I preached there in 1813, there was no minister of our order, now there are 56, and upwards of 2000 professors, and 40 or 50 young men in a course of education, who are looking forward to the gospel ministry. In the year 1821, I was invited there, and met upwards of 100 professors of religion, gathered from a great distance round, in the woods, on a Sabbath, and it was a day of the right hand of the Most High. The Spirit of the Lord was with us indeed under those shady trees. That day opened the way for a number of churches, and was the beginning of much good. I can certify to all that is said in the report about your agent there; for I have travelled with him. I went with him eight weeks, last season, when we travelled extensively over a region containing 100,000 inhabitants, preaching every day and night that we could, and administering the sacrament every Sabbath, and we never met in a house capable of holding fifty people but once, and that was in Quincy, on Mississippi river, where there is a good brick church.

In Indiana, when I first visited the State, there was no settled Presbyterian minister that I knew of.—Now there are 350,000 souls, and 4000 professors in Presbyterian churches.

In these seven States, I have seen society rise from the beginning under the influence of the gospel. These five millions of souls have about one Presbyterian minister to 25,000 souls. But this is a beginning, and if we look with the eye of faith, we may be sure that, by the Word of God and prayer, the field will richly repay all your cost.

ORIGINALITY.

We shall find, if we examine, that a smooth expanse of water always represents the scenery actually around it, so that it is a lively instance of *reflection*, borrowing her beauties from local nature. A loch in Scotland can never represent the banks of a pond in America, any more than it can roll the waves of our Lake Superior. The waters of all countries are at least original; whether they return from their bosoms the peaks of some barren mount, the arid wastes of Palestine, the steppes of central Asia, or, frozen by a northern winter, the stars of a Polar night. Such are the Lakes; and such should be the poets and moral writers of every tongue and people. Such *must* be the character of all those pages, which are destined to last, because they are felt to profit and to please. It is the writer, who takes his scenes and characters, his incidents and images, fresh from life; and life as modified in his own land, that will attract readers by mixing the useful with the sweet. I should have no doubt that my book would float to a literary immortality, if I could only make it as original as the waters of our Lakes.—*The Puritan.*

THE MARINER TO THE FIRST-SEEN MOUNTAIN, ON APPROACHING HIS NATIVE COAST.

[Original.]

Hail misty Mountain!—raising dim
O'er yon lov'd coast, thy lofty head;
How welcome is thy sight to him,
So long by star and compass led'—
Speck tho' thou art, and wrapt in haze
Right pleasant 't is on thee to gaze.

I've seen the lordly Teneriffe
Lift its rough forehead from the sea,
Gay songsters warbling on its cliff
Their strains of dulcet melody,—
But none I heard, with note so bland,
As thy wild birds, dear native land.

I've sail'd where Chimborazo towers
High o'er the Andes' giant chain,
And where the bright Brazilian flowers
Pour breathing fragrance o'er the plain,—
Yet nought was e'er so fair as thee,
My own blest land of liberty.

I've roam'd where Himmaleh aspires
With snowy breast o'er Indian vales,
And where, perfumed from spicy groves,
The freighted vessel spreads its sails,—
But most my heart doth joy to climb,
Thy breeze-swept hills, dear native clime!

Hartford, Feb. 12. L. H. S.

EXERCISE OF THE BRAIN.

[Combe, on the Constitution of Man.]

Many persons are able, from experience, to attest the severity of the punishment that follows from neglecting to exercise the nervous and muscular systems, in the lassitude, indigestion, irritability, debility, and general uneasiness that attend a sedentary and inactive life. But the penalties that attach to neglect of exercising the *brain* are much less known, and, therefore, I shall notice them more at length. How often have we heard the question asked, what is the use of education? The answer might be illustrated by explaining to the inquirer the nature and objects of the various organs of the body, such as the limbs, lungs, eyes, and then asking him if he could perceive any advantage to a being so constituted, in obtaining access to earth, air, and light. He would, at once, declare that they were obviously, of the very highest utility to him, for they were the only conceivable objects, by means of which these organs could obtain scope for action, which action we suppose him to know to be pleasure. To those, then, who know the constitution of the intellectual and moral powers of man, I need only say, that the objects introduced to the mind by education, bear the same relation to them that the physical elements of nature bear to the nerves and muscles; they afford them scope for action, and yield them delight. The meaning which is commonly attached to the word *use* in such cases, is, how much *money*,

influence, or *consideration*, will education bring; these being the only objects of strong desire with which uncultivated minds are acquainted; and they do not perceive in what way education can greatly gratify such propensities. But the moment the mind is opened to the perception of its own constitution and to the natural laws, the great advantage of moral and intellectual cultivation, as a means of exercising the faculties, and of directing the conduct in obedience to these laws, becomes apparent.

But there is an additional benefit arising from healthy activity of brain, which is little known. The brain is the fountain of nervous energy to the whole body, and different modifications of that energy appear to take place, according to the mode in which the faculties and organs are affected. For example, when misfortune and disgrace impend over us, the organs of Cautiousness, Self-esteem, Love of Approbation, &c. are painfully excited; and then they transmit an impaired or a positively noxious nervous influence to the heart, stomach, intestines, and thence to the rest of the body; the pulse becomes feeble and irregular, digestion is deranged, and the whole corporeal frame wastes. When, on the other hand, the cerebral organs are agreeably affected, a benign and vivifying nervous influence pervades the frame, and all the functions of the body are performed with more pleasure and completeness. Now it is a law, that the quantity of nervous energy increases with the number of cerebral organs roused to activity. In the retreat of the French from Moscow, for example, when no enemy was near, the soldiers became depressed in courage, and enfeebled in body; they nearly sank to the earth through exhaustion and cold; but no sooner did the fire of the Russian guns sound in their ears, or the gleam of their bayonets flash in their eyes, then new life seemed to pervade them. They wielded powerfully the arms, which a few moments before, they could scarcely carry or trail on the ground. No sooner, however, was the enemy repulsed, than their feebleness returned. The theory of this is, that the approach of the combat called into activity a variety of additional faculties; these sent new energy through every nerve, and while their activity was maintained by the external stimulus, they rendered the soldiers strong beyond their merely physical condition. Many persons have probably experienced the operation of the same principle. When sitting feeble and listless by the fire, we have heard of an accident having occurred to some beloved friend, who required our instantaneous aid, or an unexpected visitor has arrived, in whom our affections were bound up, in an instant our lassitude was gone, and, we moved with an alertness and animation, that seemed surprising to ourselves. The cause was the same; these events roused Adhesiveness, Benevolence, Love of Approbation, Intellect, and a variety of faculties, which were previously dormant, and their influence invigorated the limbs. Dr. Sparmann, in his voyage to the Cape, mentions 'that there was now again a great scarcity of meat in the wagon; for which reason my Hottentots began to grumble, and reminded me that we ought not to waste so much of our time in looking after insects and plants, but give a better look-out after the game. At the same time, they pointed to a neighbouring dale overrun with wood, at the upper edge of which, at the distance of about a mile and a quarter from the spot where we then were, they had seen several buffaloes. Accordingly, we went thither; but though our fatigue was lessened by our Hottentots carrying our guns for us up a hill, yet we were quite out of breath, and overcome by the sun, before we got up to it. Yet, what even now appears to me a matter of wonder is, *that as soon as we got a glimpse of the game, all our languor instantly vanished.* In fact, we each of us strove to fire before the other, so that we seemed entirely to have lost sight of prudence and caution.'

It is part of the same law, that the more agreeable the mental stimulus, the more benign is the nervous influence transmitted to the body.

If we imagine a man or woman, who has received from nature a large and tolerably active brain, but who has not enjoyed the advantages of a scientific or extensive education, so as to feel an interest in moral and intellectual pursuits for their own sake, and who, from possessing wealth sufficient to remove the necessity for labour, is engaged in no profession, we shall find a perfect victim to infringement of the natural laws. The individual ignorant of these laws, will, in all probability, neglect nervous and muscular exercise, and suffer the miseries arising from impeded circulation and impaired digestion; in entire want of every object on which the energy of his brain might be expended, its stimulating influence on the body will be withheld, and the effects of muscular inactivity ten-fold aggravated; all the functions will, in consequence, become enfeebled; lassitude, uneasiness, anxiety, and a thousand evils, will arise, and life, in short, will become a mere endurance of punishment for infringement of institutions, calculated, in themselves, to promote happiness and afford delight, when known and obeyed. This fate frequently overtakes uneducated females, whose early days have been occupied with business, or the cares of a family, but which occupations have ceased before old age had diminished corporeal vigour; it overtakes men also, who uneducated, retire from active business in the prime of life. In some instances, these evils accumulate to such a degree that the brain itself gives way, its functions become deranged, and insanity is the result.

It is worthy of remark, that the more elevated the objects of our study, the higher in the scale are the mental organs which are exercised, and the higher the organs the more pure and intense is the pleasure; and hence, a vivacious and regularly supported excitement of the moral sentiments and intellect is highly favourable to health and corporeal vigour. In the fact of a living animal being able to retain life in an oven that will bake dead flesh, we see an illustration of the organic law rising above the purely physical; and in the circumstance of the moral and intellectual organs transmitting the most favorable nervous influence to the whole bodily system, we have an example of the moral and intellectual law rising higher than the mere organic.

No person after having his intellect and sentiments imbued with a perception of and belief in, the natural laws, as now explained, can possibly de-

sire idleness, as a source of pleasure; nor can he possibly regard muscular exertion and mental activity, when not carried to excess, as any thing else than enjoyments kindly vouchsafed to him by the benevolence of the Creator. The notion that moderate labour and mental exertion are evils, can originate only from ignorance, or from viewing the effects of over-exhaustion as the result of the natural law, and not as the punishment for the infringement of it.

USES OF HORN.

[Babbage 'On the Economy of Machinery and Manufactures.']

Amongst the causes which tend to the cheap production of any article, may be mentioned the care which is taken to allow no part of the raw produce, out of which it is formed, to be wasted. An attention to this circumstance sometimes causes the union of two trades in one factory, which otherwise would naturally have been separated. An enumeration of the arts to which the horns of cattle are applicable, furnishes a striking example of this kind of economy. The tanner who has purchased the hides, separates the horns, and sells them to the makers of combs and lanterns. The horn consists of two parts, an outward horny case, and an inward conical-shaped substance, somewhat intermediate between indurated hair and bone. The first process consists in separating these two parts, by means of a blow against a block of wood. The horny exterior is then cut into three portions by means of a frame-saw.

1. The lowest of these, next the root of the horn, after undergoing several processes, by which it is rendered flat, is made into combs.

2. The middle of the horn, after being flattened by heat, and its transparency improved by oil, is split into thin layers, and forms a substitute for glass in lanterns of the commonest kind.

3. The tip of the horn is used by the makers of knife-handles, and of the tops of whips, and for other similar purposes.

4. The interiour, or core of the horn, is boiled down in water. A large quantity of fat rises to the surface; this is put aside, and sold to the makers of yellow soap.

5. The liquid itself is used as a kind of glue, and is purchased by the cloth-dressers for stiffening.

6. The bony substance, which remains behind, is then sent to the mill, and being ground down, is sold to the farmer for manure.

Besides these various purposes, to which the different parts of the horn are applied, the clippings, which arise in comb-making, are sold to the farmer for manure at about one shilling a bushel. In the first year after they are spread over the soil they have comparatively little effect, but during the next four or five their efficiency is considerable. The shavings which form the refuse of the lantern-maker, are of a much thinner texture: a few of them are cut into various figures and painted, and used as toys; for being hygrometic, they curl up when placed in the palm of a warm hand. But the greater part of these shavings are sold also for manure, which from their extremely thin and divided form, produces its full effect upon the first crop.

Casting in Wax. This mode of copying, aided by proper colouring, offers the most successful imitations of many objects of natural history, and gives an air of reality to them which might deceive even the most instructed. Numerous figures of remarkable persons, having the face and hands formed in wax, have been exhibited at various times; and the resemblances have in some instances been most striking. But whoever would see the art of copying in wax carried to the highest perfection, should examine the beautiful collection of fruit at the house of the London Horticultural Society; the model of the magnificent flower of the new genus Rafflesia—the waxen models of the internal parts of the human body which adorn the anatomical gallery of the Jardin des Plantes at Paris, and the Museum at Florence or the collection of morbid anatomy at the University of Bologna. The art of imitation by wax does not usually afford the multitude of copies which flow from many similar operations. This number is checked by the subsequent stages of the process, which, ceasing to have the character of copying by a tool or pattern, becomes consequently more expensive. In each individual production, form alone is giving by casting; the colouring must be the work of the pencil, guided by the skill of the artist.

THE MATHEMATIC FUNERAL.

The following lines were written in 1703, by John Dunton, a crack-brained bookseller, on the death of Dr. John Wallis, who was Professor of Mathematics in one of the English Universities. We cannot say much for the poetry; but the measure, at least, ought to be good, as they are certainly written with all the art of numbers.

I'll have the solemn pomp and stately show
In Geometrical Progression go.
Sage Algebra with eyes cast down,
By Cubes and Roots encompassed round,
Shall lead the Van; and by her widowed side,
A gentle band of Fluxions glide;
Equations, with affected pace,
Shall gravely next take place,
Tall Axioms then shall march, upon whose state
Long Corollaries shall await.
This learned and lamenting tribe
A huge Ellipsis shall describe,
Whose two Focuses shall be
Algebra and Geometry.
Geometry, which mighty Queen
Shall in robes the next be seen;
Her Mathematic Guard among,
Slow Cylinders shall roll along,
And all her Curves, and Squares, and Circles join'd,
In figures properly combin'd,
Shall make her up a flowing train behind.

Thunder Storms are attracted by forests. If the storm approaches the forest very obliquely, it glides along its borders. If it comes directly upon it, or if the forest be very narrow, it is turned aside from its previous direction. If the forest be broad, the tempest may be wholly arrested in its onward progress; in which case, remaining stationary, it exhausts its fury on one particular spot. If it pass over the forest, it is greatly weakened. Storms follow the direction of a river or valley; but an abrupt turn, or the intervention of a wood, causes them to take another course.

THE FRENCH SOLDIERY.

France, under Napoleon, seems to have been set up by Providence for the instruction of the world, as an example of the misery that must inevitably be diffused through the whole body of a nation, which makes war and conquest a part of its settled policy. The interruption of peaceful pursuits—the ruin of commerce—the waste of so large a portion of her products to be burnt as gun-powder, or otherwise thrown away in munitions of war—the conversion of the chief strength of her population into unproductive soldiers, whom her worn-out labourers were to feed, and who, for her own good, had far better have been kept in one great alms-house, than sent forth to ravage the world—the dreadful slaughter of her sons, so that, in the burning deserts of Africa, on the frozen plains of Russia, all over Europe, and in three quarters of the earth, a ghastly army of the slain would have arisen, had any trumpet-call been loud enough to rally them—the demoralization of those who escaped the bullet and the sword, and brought their ruffian habits back to their native soil—the broken constitutions and lingering deaths of hundreds of thousands, in succeeding years—the tears of parents, the blasted prospects of affection, the domestic grief in every shape—the deep taint of the national character, which has been left by her drunkenness of blood, and which is visible in every rank of society and department of morals—such were some of the consequences, to France herself, of twenty years of war and glory. While ravaging the other nations of the earth, she avenged them in the very act. Her bonfires of victory cost her as dear, as if her own dwellings had been torn down to kindle them. The annals of her brilliant achievements were written in the best blood of her veins. And this incalculable amount of misery would have been the same, even had her conquests been followed by none of the reverses that snatched them all away; nor would she have derived any more solid benefit, than a gallery of pictures and statues, plundered from vanquished nations, in her capital; and a few triumphal arches, and proud monuments, inscribed with the great N of Napoleon le Grand. But even these poor rewards were torn from her grasp; and Europe trampled on her, and left her in the dust—a signal instance of what must be the inevitable doom, sooner or later, of every people that pursues military glory for its own sake, and without a superlative regard to the cause in which they fight.

The process by which Napoleon brought into the line of his army almost every young Frenchman, who had strength to march, was called the Conscription. In each municipality throughout France, the male inhabitants, between the ages of twenty and twenty-five, were summoned, at stated intervals, to register their names at the town-house. If any person, liable to the Conscription, failed to give in his name, not only he, but his whole family, were subject to a criminal prosecution. Whenever the carnage of one of the Emperour's great victories had made a fresh supply of soldiers necessary, the Minister at War gave notice of the number of thousands that would be required, and a portion of the names of the persons, who were registered in the several municipalities, were immediately drawn, as in a lottery. As many of the first drawn numbers, as made up the amount which the War Minister had demanded, were marched off at a moment's warning; while the others were to follow, at the next summons. The most ignominious punishments were inflicted on those conscripts who did not immediately obey the call. Incurable asthma, confirmed spitting of blood, and the early stages of consumption, did not absolutely free the patient from his liability to the Conscription; if the summons were urgent, he might still be made to march, though it were only to die in the bivouac. On arriving at the depôts, the recruits were distributed among the various corps of artillery, cuirassiers, dragoons and infantry, or sappers and miners, according to their strength and stature. In this way, the whole youth of France, as they reached the age of manhood, were enrolled as soldiers, and remained such, during the pleasure of government. It is said that the average height of the present generation of Frenchmen, who were born under the rule of Napoleon, is considerably less than in former times; owing to the strongest and tallest young men having been slain, or otherwise restrained from marriage; while the business of keeping up the population was left to an inferiour class. And yet, so deeply seated was her warlike frenzy, that, when the Great Captain fell, poor battered France deemed it her chief misfortune, that she must now cease to fight for glory!

These remarks have been suggested by the examination of some cuts of the different corps of the French army, part of which were given in the last Magazine, and a few more are added in the present number. It will perhaps be interesting to the American people, just at the present crisis, to receive what little information we can bestow as to the men, who may possibly, before another year, attempt to find room for a bivouac on our own seaboard. The first figure shows the ancient garb and weapons of a grenadier, in the reign of Louis XIV, another glorious Despot; of whom, however, France had grown so intolerably weary, that, when his funeral pomp was passing from the palace of his ancestors to their tomb, the people hooted and reviled their dead monarch, till his attendants were glad to hide him in the dust and darkness. The first grenadiers carried an axe, a sabre, and a leathern bag, containing twelve or fifteen hand-grenades—a murderous little globe of iron, stuffed with gunpowder, which, being thrown among a group of soldiers, was likely enough to kill or mangle half a dozen of them. The grenadier in the cut holds his burning match in one hand, and in the other his lighted grenade, wherewith he appears to be meditating slaughter. [See cut on next page.]

The next figure is a grenadier of Napoleon's famous Old Guard, a body of the most gallant and perfect soldiers that ever followed, like slaves, at any conquerour's heels. Their life, like that of the soldiers of Wallenstein,

> Was but a Battle and a March;
> And like the wind's course, never-ceasing, restless,
> They stormed across the war-convulsed earth.

Men, armed and accoutred like this figure, strode

Grenadier of 1667.

victorious in their day, through the streets of every capital on the continent of Europe. Wherever their Emperour fought a battle, there they lay in heaps; they would have rushed to certain death, at the motion of his finger. They did so rush, at Waterloo, and made such an Aceldama of that dreadful field, that the English farmers imported their bones by ship-loads, to manure their crops. Such was the final destiny of the Old Guard—to nourish, with the marrow of their bones, the wheat that was to feed Napoleon's bitterest enemies!

Grenadier of 1812.

The third figure is the Grenadier of the present day, the very man whose bayonet may shortly be levelled at our own breasts. He is evidently the true son of his father, fonder of the drum than of the fiddle—these two ridiculous instruments being able, at any time, to set a Frenchman mad with fun or fury. His moustaches and bent brows give the fellow a most grim aspect, and to do him justice, he has already proved, at Antwerp and Algiers, that he possesses the whole stock of military virtues proper to his nation. [See cut, next column.]

The French *Cuirassiérs* are a body of cavalry, who have retained, in part, the ancient custom of defensive armour, which has been generally laid aside, from the time that gunpowder created a very important change in the science of war. A few

Grenadier of 1833.

hundred years ago, the knights and men-at-arms were iron from head to foot; their caps were of cast-iron, somewhat like a porridge-pot; their coats and breeches of iron plates, which had to be riveted together by a blacksmith, before the warriour was ready for the field; their boots were also of iron, and their gloves, or gauntlets, were covered with iron scales. In the iron plate that covered the face, there was a cross-slit over the mouth and nose, and two holes for the eyes, through which the knight peeped, like a prisoner out of his dungeon. In fact, he was one of the most miserable of prisoners; for, after he was once hammered into his iron panoply, he could not possibly get out, without assistance; and unlike all other captives, except a snail, he was compelled to carry his dungeon on his back. These men of iron—they may well be called so, since their hearts were iron, as well as their garments—mounted on horses that wore iron breast-plates, rode boldly into the battle and laid about them on all sides, conscious that neither sword, spear, arrow, nor club, would inflict the least damage on such a mass of rusty metal as they presented. Sometimes they tumbled from their horses, and lay like land-tortoises in their shells, unhurt by the trampling of contending armies over them. The only death in battle, to which they were liable, was by smothering.

After the invention of fire-arms, this heavy defensive armour became, in many cases, worse than useless. A cannon-ball would, of course, smash it all to pieces, and even a musket-bullet, fired point-blank, would generally pierce the breast plate, and sometimes carry fragments of the iron into the wound. The whole system of defensive armour had been calculated for wars in which the only artillery was the bow-and-arrow, and where the fortune of a battle was to be decided by hand-to-hand conflicts, with sword and spear. This state of things being done away, the heavy-armed gentry found it convenient to come out of their shells. But a regiment, or more, of cuirassiers, have always been retained in France; rather, perhaps, under the old Bourbon monarchy, as contributing to the splendour of the royal household, than as an important portion of the army. They did, however, distin-

guish themselves, during the wars of Louis XIV, and his successor. Under the consulate of Bonaparte, three new regiments of cuirassiers were added to the one that had previously existed, and soon after his coronation as Emperour, these were increased to twelve. At the present day, there are ten regiments. Their defensive armour is a polished steel breast-plate and helmet, the latter on the ancient Roman pattern; their principal offensive weapon, a sabre; for though they carry pistols at their saddle-bow, it is not with these that they ever do any important execution. Their mode of fighting is to charge in line, with the point of the sabre advanced, as is seen in the first cut, representing a cuirassier under Napoleon.

Cuirassier of 1812.

These regiments are composed of the largest and strongest men in the service, and when mounted on horses of corresponding size and vigour, (which, however, are seldom found in France,) their onset must be tremendous. One would suppose, that, by the mere weight and momentum of steeds and men, even without the use of the sabre, the steel-breasted line would trample down and annihilate a body of ordinary cavalry. Napoleon specially intended them to break the squares or masses, into which infantry throw themselves to repel a charge of horse. They failed to do this at Waterloo; and great credit has been claimed for the British infantry, on account of their gallant defence with the bayonet; but a writer in the United Service Journal states, that no real contact took place, on that occasion, between the French horse and the masses of infantry. The French would come on at the gallop, as if they intended to plunge headlong into the midst of the foe, but, when within a few yards, would discharge their pistols, and ride round the masses, seeking, it seems, for some point that was not bristling with bayonets. The English writer, a military man, gives it as his opinion, that a square of infantry could not, with merely the musket and bayonet, defend itself against a resolute charge of heavy horse. These cuirassiers, it is said, were more than a match for the light cavalry of the British, but were mastered, in their turn, by the heavy dragoons, who rode over the French, like a troop of monkeys mounted on goats. The cuirassier of 1834, of whom we subjoin a cut, differs little from his predecessor.

Cuirassier of 1834.

The next corps, whom we shall pass in review, are the *Lancers*. These were created by Napoleon, as opponents to the Hulans and Cossacks, a sort of light cavalry in the service of the Emperour of Russia. Napoleon's first regiment was formed at Warsaw, in 1807, and composed of Poles, who were afterwards incorporated into the Imperial Guard, still retaining the lance.

Polish Lancer of 1807.

A second and third regiment were afterwards added. Their lances were poles, ten or twelve feet long, made of black ash, and terminating in a steel blade with three sides. A small flag was also attached to the lance, not as an ornament, but to affright the enemy's horses. Besides this weapon, they had a fusil and bayonet, an hussar-sabre, and

pistols. They were doubtless well calculated to oppose the wild Cossacks, who likewise carried lances, and never charged in line, but came on tumultuously, each warriour trusting to his own skill in the management of his horse and weapon. We have seen different opinions expressed, as to the efficiency of the lancers, when opposed to cavalry armed merely with the sabre.—Some of the English officers affirm, that, as the steel points of the French lances stuck out two or three yards beyond the horses' heads, their own dragoons lost a third more men than the enemy, in every charge; the steel was in their breasts, before they could come within sword's length. Others ridicule the accoutrements of the lancer, and say, that, by bending forward on his horse's neck, at the same time warding the lance upward with his sabre, the dragoon had the gentleman of the long pole at his mercy. We have read, that the French lancers did little service at Waterloo, except to ride over those parts of the field whence the fury of the conflict had eddied away, and thrust their lances down the throats of the wounded British soldiers. 'What!'—they would cry, as the prostrate foe turned himself in his blood, at the sound of their horses' tramp—'You are not dead yet!' And before the word was out of the ruffian's mouth, the steel head of his lance had saved the surgeon a labour. We may reasonably conclude, that, if Napoleon had judged this corps fit for any better service against regular troops, than to kill dead or disabled men, he would have armed a more considerable portion of his cavalry with the lance. Since 1831, there have been six lancer regiments in the French army.

Lancer of 1834.

The discipline of the French soldiers is perfect in its way, but differs from that of the troops of any other nation. In this particular, they form a singular contrast to the Prussians, whose army is an immense machine, composed of a hundred thousand, or more, of individual machines, none of which are good for any thing in their separate capacities. The same remark may be applied to the British, though not in an equal degree. The drill of the Prussians has always been unmercifully severe; and Dr. Moore, father of Sir John Moore, relates, that, whenever a dragoon chanced to fall from his horse, though every bone in his body might be broken, yet, if he escaped with his neck, he was sure to be flogged, the moment that he came out of the hospital. Such a system was suited to the heavy and sluggish character of the German soldiery, who needed a settled rule for every movement; they could not march, but at a measured step, nor discharge their muskets, except in the regular routine; and if any thing deranged their clock-work, the battle was irretrievably lost. But a Frenchman is as different from a German, as quicksilver from lead. It is impossible to make a machine of him. To a certain extent, he must be allowed the liberty of individual action, and be free to fume, and fret, and dance, and work off his superfluous vivacity, while other troops stand as motionless as the leaden soldiers of a toy-shop. Gentlemen, who have seen their infantry regiments, say, that they form hardly so straight a line as our militia at a brigade-muster, even when the latter have neither a stone-wall nor a plough-furrow to dress by. But it must not hence be concluded, that our militia could stand a moment, in the open field, before the charge of these most gallant troops; or that the soldiership of the French has not been pushed to the highest perfection of which it is susceptible. The French discipline seems to hang loose about the soldier, but, to all desirable purposes, it is as strong as iron; it resembles an ancient shirt of chain-mail, flexible to all the motions of the body, yet woven with links of steel. Their system cherishes a martial enthusiasm, and makes victory depend upon it; the soldier's spirit is not broken by rigid forms, nor are his violations of duty punished by aught of ignominy; if he have committed a military crime, a platoon of his comrades are drawn out, and he dies a military death. Owing to these causes, and also to their natural character, the French soldiery must be acknowledged a gallant and chivalrous set of men. In good spirits, and under a leader whom they idolize, (for if they do not idolize, they despise him,) they are a terrible foe. They pour their irregular masses down upon the hostile ranks with the shock of a tornado; and firm must be the embattled line that can resist it. Yet, if resisted, the conflict is half won. The first shock is the fiercest, and every succeeding wave breaks more feebly against the rocky barrier which it cannot overthrow.

It is now twenty years, since France's broken sword was wrested from her by the strength of Europe. During all that period, she may be said to have been at peace; for, though, here and there, her trumpet has sounded, yet no event has occurred that could fully rouse up the martial spirit of the people. In this long interval, there is reason to believe, that she has learnt a wiser interpretation of that pernicious phrase, 'La Gloire,' and has discovered that her true glory consists in the welfare of her children; and that even the laurel is a plant of peaceful growth, and withers when the soil is kept continually wet with blood. We would fain

hope so. And if France has ceased to be a warlike power, and to dream of victory on foreign fields, and of captive kings paying court to their conquerour in her capital, then, indeed, the millenium is at hand, and the nations may beat their swords into ploughshares and their spears into pruning-hooks, and cast their cannon into church-bells, and ring an exulting peal throughout the earth. This, perhaps, is too great a miracle for prudent men to count upon. Her martial fire still lives, under the ashes that have been heaped upon it. Even now there needs but a strong breath, to blow it into a flame, which should leap across the Atlantic, and set all the world a-blaze. Her young men were nurslings of War. From earliest childhood, they have stood at the knees of Napoleon's grim veterans, and heard them tell of those hundred victories, the least of which would have immortalized the Man of Destiny, who won them all. And as they listened, their hearts have burned. It irks them, that they walk so peacefully through life, and have never felt the battle-frenzy, nor seen the cannon-smoke sweep heavily away, and disclose the spectacle of a hard-fought field.

A few weeks since, it was far within the limits of allowable speculation, that such a field might be fought, where we should hear the booming of the artillery. Heaven has averted the calamity from our Land of Peace. But had it come—doubt it not, my countrymen!—posterity would have seen no tokens of the French Invasion, save when the plough should pass over some ancient battle-ground, and turn up the rusted steel of a lance, a battered helmet, or a ball-pierced cuirass.

THE PURITAN: A SERIES OF ESSAYS, CRITICAL, MORAL, AND MISCELLANEOUS.

We know of no recent work, which we can so conscientiously recommend to that portion of the public, with which we are concerned, as this excellent series of Essays. They contain much wisdom—and wisdom of such a nature, and so expressed, that we hardly see how it can fail to arrest the reader's attention, and produce a practical result. The author has a vein of humour, which, being largely mingled with strong sense and shrewdness, is never like the 'crackling of thorns under a pot.' It makes us smile, but thoughtfully. It appears to us, that this writer, more appropriately than any other, may be taken as the representative of the intellectual character of New England.

The first of the following extracts is one of the truest passages that ever was written, in reference to republican institutions; yet nobody, that we know of, has ever thought of saying it before. The young lawyers, and long-winded elderly gentlemen, who lengthen out the sessions of our legislatures, should thank the Puritan for setting their labours in so favourable a light.

'Republicanism is a car, which can only accomplish its journey, by going slow enough. The people will generally be right, if you can only keep them in pause long enough to think. For this reason, in all our proceedings, we should avoid hasty decisions. A great deal has been said about long speeches, irrelevant repetition, and a needless consumption of time, in our State legislature. This is a preservative evil in republicanism. I had rather be vexed with long speeches, than ruined by rash legislation. I have sometimes thought it would be wise, to hire ten long-winded tribunes, to consume the day for the preservation of our laws, and to save us from the evils of perpetual innovation.'

We extract the next paragraph for the sake of its cautious shrewdness. Whether it be possible that practical politics should ever be a cool concern, unless banefully cooled by indifference, is nothing to the purpose.

'I am sure that politics, in themselves, are very cool concerns. Separate them from their unfortunate attendants,—interest and ambition—and the problems of mathematics are hardly more remote from touching the passions. The great question in politics is, how much alleviation of human infelicity can come from government. This is the great problem of statesmen; and it is from losing sight of it, or not solving it, that all political errors originate. It is a complex question which must be worked out like the equations of Algebra. There is a certain line drawn by the great Founder of society, to which the evil waves of social life must come; and all attempts to beat them back, is like stopping the tide. If you seem to expel them in one point, they will break in upon you in another. The very question now before the public mind, of imprisonment for debt, may be taken as an example. To imprison an honest man because he is poor, is doubtless a great evil, and the government ought to relieve him, *if it can*. But here comes the question, —*Will* it be any relief to deny the creditor this security for his loan? and *will* not the poor man suffer as much from being never trusted, as from thirty days confinement in the yard of a prison? And as to making a distinction between the honest debtor and the fraudulent; *will* it not impose an entangling question on your courts of law, which no human sagacity can ever decide? I merely propose these questions. I do not answer them. They are merely specimens of the great problem, How much can government do for us? So no government can supersede the necessity of individual industry and self-exertion; no government can feed all its population; no government can give prosperity to the profligate and idle; no government can raise all the ambitious to office and renown. There is a certain degree of rigour necessary in imposing taxes and punishing crimes; because a lenity, which forgets justice, is sure to end in greater pain. In removing human ills, you can level down to a certain base; beyond which, if you think to go, your efforts become forever impotent and vain. They are worse than vain; for under the mockery of relief, the evil breaks in upon you in another form and in a greater degree. The old evil is measured and known; but the new has all the indefinite horrours of an untried experiment. Now I ask, what have passion and pride to do in settling these complex problems: It is one of the coolest subjects which can possibly meet the human mind. There should be nothing to stir the passions, for it is a point in which all men have one interest. Nothing is wanted but a few cool heads to sit down and compare the items until they can come to a result.—Such are politics in the abstract.'

The third extract presents the Puritan as a fireside philosopher, employing deep thought on domestic concerns, and uttering his wisdom in the homely phrase appropriate to the subject. We may picture him as a clergyman, in the autumn of his age, paying

a pastoral visit to a young couple whom he has recently joined in matrimony. He takes the wife apart, and gives her these golden lessons as to her married duties.

'I hope I am not fanciful in what I am about to say; but I will say it, because there are some little truths which will only be told by little men. *Good Bread*, then, is an important article in keeping men temperate. Half the dyspeptical cases which exist in our cities, arise from bad bread. Some physicians have recently said, that drunkenness is wholly a physical vice, originating from a disordered stomach or bad digestion. This is overstated; for physical causes never can be more than powerful temptations. But powerful temptations they are; and let every wife see to it, that her husband eats the manna, made by her own clean hands, or, at least, under her careful supervision. Transfer your attention from pound-cake and mince-pies, to the original gift of nature. No woman, rich or poor, has done her utmost to make or keep her husband temperate, until she knows how to make or cause to be made, without failure or intermission, Good Bread.

'If your husband is temperate, it should be your study to keep him so; and if not, to reclaim him. You know the seductive power of bad company. It should be your object to induce him to spend as many evenings at home, as is consistent with his necessary engagements. Not that you should be jealous or chiding every time that business calls him away; but you must make home agreeable. I have no hesitation in saying that it is your duty to be handsome. But what? can we controul a quality which is the gift of nature? Yes—you can; for the ugliest face that ever deformed the workmanship of God, comes from some bad passion corroding in the heart. I say again, it is your duty to be handsome. Not by paint or artifice; but by benevolence; good nature; a face arrayed in smiles, and an eye that sparkles with love; the beauty of expression, which is the best of all beauties. Let your person be arrayed in the neatest apparel; let there be a cheerful fire; a well-ordered parlour; a swept hearth and welcoming hand, whenever your husband returns home; and let him learn, that however the world may oppose or business perplex him, there is one faithful heart whose felicity is identified with his own.

'Be very punctual in all your engagements. If you are going out, be always ready at the hour; let your family move in the strictest order; let dinner and breakfast be ready at the appointed time; have a place for every thing, and let every thing be in its place.

'There are moments when every man puts his vigilance asleep, and resigns himself to the careless relaxation of a mind, dropping its purposes, and floating at random like a chip on the sea. The greatest men are most prone to this; for the tension of business in important cases, leads to the most perfect remission. Then they are under the influence of a wife. In all common matters, they take her suggestions, and follow her rules. Now, in such cases, if, through ignorance or mistaken tenderness, she presents the dangerous liquor in the sparkling glass, she may become accessary to her own ruin; she may accuse herself, when she sees character gone, health undermined, poverty approaching, and destruction near.

'The state of female education has been very unhappy in our land; and many an artless girl has been sent into life, totally ignorant of the part she was to act. I have, in my own conception, a peculiar idea of a republican lady; she is a plant which can grow only on our own soil. She must be more comprehensive in her aims than the fickle beings who dance in the court of St. James; she must know how to preside in her parlour, and regulate her kitchen; to unite the plain utilities of life, with all that is graceful and lovely; and to resemble the conserve rose, which retains its best qualities, when its beauty is lost. As fortunes are uncertain in our country, she must be prepared for exertion, even should she become poor. She must be prepared to meet and adorn all stations in life, and thus become the noblest specimen of human nature.'

THE SOUTH-WEST; BY A YANKEE.

This is an amusing, as well as instructive book. The author has the talent—not a very common one—of bringing before the mind's eye the actual life of the scenes which he describes.

'*A Fire in New Orleans.*—We had finished our late supper, and, toasting our bootless feet upon the burnished fender, were quietly enjoying the agreeable warmth of the glowing coals, and relishing, with that peculiar zest which none but a smoker knows, a real Havana,—when we were suddenly startled from our enjoyment by the thrilling, fearful cry, of 'Fire! Fire!' which, heard in the silence of midnight, makes a man's heart leap into his throat, while he springs from his couch, as if the cry 'To arms—to arms!' had broken suddenly upon his slumbers. 'Fire! fire! fire!' rang in loud notes through the long halls and corridors of the spacious hotel, startling the affrighted sleepers from their beds, and at the same instant a fierce, red glare flashed through our curtained windows. The alarm was borne loudly and wildly along the streets—the rapid clattering of footsteps, as some individual hastened by to the scene of the disaster, followed by another, and another, was in a few seconds succeeded by the loud, confused, and hurried tramping of many men, as they rushed along shouting with hoarse voices the quick note of alarm. We had already sprung to the balcony upon which the window of our room opened. For a moment our eyes were dazzled by the fearful splendour of the scene which burst upon us. The whole street,—lofty buildings, towers, and cupolas,—reflected a wild, red glare, flashed upon them from a stupendous body of flame, as it rushed and roared, and flung itself toward the skies, which, black, lowering, and gloomy, hung threateningly above. Two of those mammoth steamers which float upon the mighty Mississippi, were, with nearly two thousand bales of cotton on board, wrapped in sheets of fire. They lay directly at the foot of Canal Street; and as the flames shot now and then high in the air, leaping from their decks as though instinct with life, this broad street to its remotest extremity in the distant forests, became lurid with a fitful reddish glare,

which disclosed every object with the clearness of day. The balconies, galleries, and windows, were filled with interested spectators; and every street and avenue poured forth its hundreds, who thundered by towards the scene of conflagration. I have a mania for going to fires, I love their blood-stirring excitement; and, as in an engagement, the greater the tumult and danger, the greater is the enjoyment. I do not, however, carry my 'incendiary passion' so far as to be vexed, because an alarm that turns me out of a warm bed proves to be only a 'false alarm,'—but when a fire does come in my way, I heartily enjoy the excitement necessarily attendant upon the exertions made to extinguish it. You will not be surprised, then, that although I had not had 'sleep to my eyes, nor slumber to my eyelids,' I should be unwilling to remain a passive and distant spectator of a scene so full of interest. Our hotel was a quarter of a mile from the fire, and yet the heat was sensibly felt at that distance. Leaving my companion to take his rest, I descended to the street, and falling into the tumultuous current setting towards the burning vessels, a few moments brought me to the spacious platform, or wharf, in front of the Levée, which was crowded with human beings, gazing passively upon the fire; while the ruddy glare reflected from their faces, gave them the appearance, so far as complexion was concerned, of so many red men of the forest. As I elbowed my way through this dense mass of people, who were shivering, notwithstanding their proximity to the fire, in the chilly morning air, with one side half roasted, and the other half chilled—the ejaculations—

'Saeré diable!' 'Carramba!' 'Marie, mon Dieu!' 'Mine Got, vat a fire!' 'By dad, an its mighty waarm.'—'Well, now the way that ar' cotton goes, is a sin to Crockett!'—fell upon the ear, with a hundred more, in almost every *patois* and dialect, whereof the chronicles of grammar have made light or honourable mention.

'As I gained the front of this mass of human beings, that activity which most men possess, who are not modelled after 'fat Jack,' enabled me to gain an elevation whence I had an unobstructed view of the whole scene of conflagration. The steamers were lying side by side at the Levée, and one of them was enveloped in wreaths of flame, bursting from a thousand cotton bales, which were piled, tier above tier, upon her decks. The inside boat, though having no cotton on board, was rapidly consuming, as the huge streams of fire lapped and twined around her. The night was perfectly calm, but a strong whirlwind had been created by the action of the heat upon the atmosphere, and now and then it swept down in its invisible power, with the 'noise of a rushing mighty mind,' and as the huge serpentine flames darted upward, the solid cotton bales would be borne round the tremendous vortex like feathers, and then hurled away into the air, blazing like giant meteors—would descend heavily and rapidly into the dark bosom of the river. The next moment they would rise and float upon the surface, black unshapely masses of tinder. As tier after tier, bursting with fire, fell in upon the burning decks, the sweltering flames, for a moment smothered, preceded by a volcanic discharge of ashes, which fell in showers upon the gaping spectators, would break from their confinement, and darting upward with multitudinous large wads of cotton, shoot them away through the air, filling the sky for a moment with a host of flaming balls. Some of them were borne a great distance through the air, and falling lightly upon the surface of the water, floated, from their buoyancy, a long time unextinguished. The river became studded with fire, and as far as the eye could reach below the city, it presented one of the most magnificent, yet awful spectacles, I had ever beheld or imagined. Literally spangled with flame, those burning fragments in the distance being diminished to specks of light, it had the appearance, though far more dazzling and brilliant, of the starry firmament. There were but two miserable engines, to play with this gambolling monster, which, one moment lifting itself to a great height in the air, in huge spiral wreaths, like some immense snake, at the next would contract itself within its glowing furnace, or coil and dart along the decks like troops of fiery serpents, and with the roaring noise of a volcano.

'There are but few 'fires' in New Orleans, compared with the great number that annually occur in northern cities. This is owing, not wholly to the universal prevalent style of building with brick, but in a great measure to the very few fires requisite for a dwelling-house in a climate so warm as this. Consequently there is much less interest taken by the citizens in providing against accidents of this kind, than would be felt were conflagrations more frequent. The miserably manned engines now acting at intervals upon the fire, presented a very true exemplification of the general apathy. To a New Yorker or Bostonian, accustomed to the activity, energy, and military precision of their deservedly-celebrated fire companies, the mob-like disorder of those who pretended to work the engines at this fire, would create a smile, and suggest something like the idea of a caricature.

'After an hour's toil by the undisciplined firemen, assisted by those who felt disposed to aid in extinguishing the flame, the fire was got under, but not before one of the boats was wholly consumed, with its valuable cargo. The inner boat was saved from total destruction by the great exertions of a few individuals, 'who fought on their own hook.'

'The next morning I visited the scene of the disaster. Thousands were gathered around, looking as steadily and curiously upon the smouldering ruins as if they had possessed some very peculiar and interesting attraction. The river presented a most lively scene. A hundred skiffs, wherries, punts, dug-outs, and other non-descript craft, with equally euphonic denominations, were darting about in all directions, each propelled by one or two individuals, who were gathering up the half-saturated masses of cotton, that whitened the surface of the river as far as the eye could reach. Several unlucky wights, in their ambitious eagerness to obtain the largest piles of this 'snow drift,' would lose their equilibrium, and tumble headlong with their wealth of cotton into the water. None of them, however, were drowned, their mishaps rather exciting the

merriment of their companions and of the crowds of amused spectators on shore, than creating any apprehensions for their safety.

'The misfortune of one shrivelled-up old Portuguese, who had been very active in securing a due proportion of the cotton, occasioned no little laughter among the crowd on the Levée. After much fighting, quarrelling, and snarling, he had filled his little boat so completely, that his thin, black, hatchet-face could only be seen protruding above the snowy mass in which he was imbedded. Seizing his oars in his long, bony hands, he began to pull for the shore with his prize, when a light wreath of blue smoke rose from the cotton and curled very ominously over his head. All unconscious, he rowed on, and before he gained the shore, the fire burst in a dozen places at once from his combustible cargo, and instantly enveloped the little man and his boat in a bright sheet of flame; with a terrific yell he threw himself into the water, and in a few moments emerged close by the Levée, where he was picked up, with no other personal detriment than the loss of the little forelock of gray hair which time had charitably spared him.

'In one instance, two skiffs, with a single individual in each, attracted attention by racing for a large tempting float of cotton, which drifted along at some distance in the stream. Shouts of encouragement rose from the multitude as they watched the competitors, with the interest similar to that felt upon a race course. The light boats flew over the water like arrows on the wing. They arrived at the same instant at the object of contest, one on either side, and the occupants, seizing it simultaneously, and without checking the speed of their boats, bore the mass of cotton through the water between them, ploughing and tossing the spray in showers over their heads. Gradually the boats stopped, and a contest of another kind began. Neither would resign his prize. After they had remained leaning over the sides of their boats for a moment, grasping it and fiercely eyeing each other, some words were apparently exchanged between them, for they mutually released their hold upon the cotton, brought their boats together and secured them; then, stripping off their roundabouts, placed themselves upon the thwarts of their boats in a pugilistic attitude, and prepared to decide the ownership of the prize, by an appeal to the 'law of *arms*.' The other cotton-hunters desisted from their employment, and seizing their oars, pulled with shouts to the scene of contest. Before they reached it, the case had been decided, and the foremost of the approaching boatmen had the merit of picking from the water the conquered hero, who, after gallantly giving and taking a dozen fine rounds, received an unlucky 'settler' under the left ear, whereupon he tumbled over the side, and was fast sinking, when he was taken out, amid the shouts of the gratified spectators, with his hot blood effectually cooled, though not otherwise injured. The more fortunate victor deliberately lifted the prize into the boat, and, fixing a portion on the extremity of an oar, set it upright, and rowed to shore amid the cheers and congratulations of his fellows, who now assembling in a fleet around him, escorted him in triumph.'

Creoles.—'There is at the North a general misconception of the term 'Creole.' A friend of mine who had visited Louisiana for his health, after a residence of a few months gained the affections of a very lovely girl, and married her. He wrote to his uncle in Massachusetts, to whose large estate he was heir-expectant, communicating the event, saying that 'he had just been united to an amiable *Creole*, whom he anticipated the pleasure of introducing to him in the Spring.' The old gentleman, on receiving the letter, stamped, raved, and swore; and on the same evening replied to his nephew, saying, 'that as he had disgraced his family by marrying a *Mulatto*, he might remain where he was, as he wished to have nothing to do with him, or any of his woolly-headed, yellow-skinned brats, that might be, henceforward.' My friend, however, ventured home, and when the old gentleman beheld his lovely bride, he exclaimed, 'The d—l, nephew, if you call this little angel a *Creole*, what likely chaps the real ebony Congos must be in that country.' The old gentleman is not alone in his conception of a *Creole*. Where there is one individual in New England correctly informed, there are one hundred who, like him, know no distinction between the terms *Creole* and *Mulatto*. '*Creole*' is simply a synonyme for *native*. It has, however, only a local, whereas *native* has a general application. To say 'He is a *Creole* of Louisiana,' is to say 'he is a *native* of Louisiana.' Contrary to the general opinion at the North, it is seldom applied to coloured persons. *Creole* is sometimes, though not frequently, applied to Mississippians; but with the exception of the West India islands, it is usually confined to Louisiana.'

☞ OUR PREDECESSOR.

The present number of the American Magazine, has been prepared by a new hand. In assuming the charge of this Journal, it is due to more than courtesy to pay a tribute of respect to him whose place we occupy—a writer long and well known in the solid literature of New England, and whose editorial labours, for so many months, have met with good acceptance from the public. Under his care, the work has redeemed the promise of its title, and been emphatically a Magazine of Useful Knowledge. In proof of the late Editor's extensive and various reading, practical information, and sound opinions, it is sufficient to refer to what he has accomplished. A mind stored with historical reminiscences has given interest to the pages.—This praise it is fit that he should receive from others; but there is a better commendation which he may safely seek within himself—that, in a moral and religious point of view, the hurried toil of a periodical writer has not drawn from him a single line, which he need wish to blot: And for ourself, the best success, that we can anticipate, must be won by following out the principles which have guided our Predecessor.

☞ Arrangements will hereafter be made, to give a page of Music with every number of this Magazine. Should accident at any time prevent this, two pages will be given with the succeeding number.

APRIL.

The Sybyl's Cave, Hoboken.

HOBOKEN.

For the following description, we are indebted to the same hand that drew the admirable sketch which it illustrates.

The village of Hoboken which is situated on the Jersey shore, immediately opposite the city of New York, is a favourite promenade of the New Yorkers: And deservedly so; for a more lovely spot they certainly could not have chosen. For luxuriance and variety of foliage it would be difficult to find its superiour perhaps, in the world; and in the Summer season the worthy descendants of the Knickerbockers find in its shady groves, and sequestered

walks, a convenient and delightful retreat from the hot and crowded city. In this age of utilitarianism the woodman's axe frequently makes sad havoc with scenes of natural beauty—but it is the good fortune of this charming spot to have fallen into the hands of a man* of taste and refinement, one who appreciates, with the feelings and judgment of an artist, the beauties of nature, and who spares neither trouble or expense to heighten those beauties by the graces of art.

We present our readers with a Cut, engraved from a sketch taken on the spot, of one of the most interesting features of the place. The Sybyl's Cave as it is designated, is hewn from, and excavated through the solid rock to the depth of thirty feet, and as our readers will perceive it is fashioned in the Gothic style, after a design of its accomplished proprietor. About five feet within the interior of the Cave, there is a spring of water slightly impregnated with magnesia, which is a pleasant and healthy beverage; and many thousand glasses of it were sold at a trifling price, during the last Summer.

* W. L. Stevens, Esq.

PRESERVATION OF THE DEAD.

The last American Journal of Science gives an account of the invention (by Segato, an Italian) of a new method of preserving the bodies of the dead. The facts are drawn from a pamphlet, published at Florence. Segato has visited Africa, for the purpose of constructing a map of its northern regions. Among the sands of the desert, he discovered a carbonized substance, which, on close examination, proved to be animal matter. He afterwards found the entire body of a man, about a third smaller than the size of life; it had been carbonized by the heat of the sand, and was partly black, and partly of the colour of soot. It occurred to Segato, that it might be possible to imitate this natural process, by means of art; and on his return to Italy, he began the necessary experiments, and appears to have been completely successful in converting animal substances to stone. His method of operation is not given; but the following are some of the results.

Entire animal bodies may be as readily subjected to the process as small portions. They become hard, and acquire properties precisely similar to those of stone. The skin, muscles, nerves, veins, and blood, all undergo the same change; nor need the viscera be removed. The colour, form, and general appearance, remain unchanged. Offensive substances lose their smell. Putrefaction is checked at once. If the process be carried only to a given degree, the joints are perfectly flexible. The bones of skeletons, which have undergone this operation, remain united by their natural ligaments, which, though pliable, are solid and stony. Moisture and insects can do no injury to animals thus preserved. The hair does not fall off, but retains a natural appearance. The size of the body, after the process, is a little less than in its natural state; but no alteration takes place in the weight. The eyes, in most of the animals that have been thus embalmed, sparkle, and lack only the power of motion, to appear just like life.

As proofs of the efficacy of his invention, Segato shows a canary-bird, which was preserved ten years ago, and has not undergone the slightest change; also, the eggs of the land-turtle, water-snakes, toads, fishes, snails, and insects. It has likewise been successfully tried on various portions of the human body. The inventor possesses the emaciated hand of a lady who died of consumption; a foot, retaining the nails; the liver of an intemperate man, as hard and lustrous as ebony; an entire human brain, with all its convolutions; a girl's scalp, with the hair hanging in ringlets; and the head of an infant, partly destroyed and discoloured by putrefaction, which had begun its work before the experiment was made. But Segato's greatest curiosity is a table, inlaid with two hundred and fourteen pieces of stone, (or what appears such,) of splendid and variegated hues, admirably polished, and so intensely hard, that a file can scarcely make the slightest scratch upon them. These stones, which would be mistaken for specimens of the most precious marbles, are different portions of the human body—the heart, liver, pancreas, spleen, tongue, brain, and arteries. Thus a multitude of men and women, once alive, have contributed fragments of their vital organs to form Segato's inlaid table; a poet, perhaps, has given his brain, an orator his tongue, a hypochondriac his spleen, and a love-sick girl her heart—for even so tender a thing as a young girl's heart can now be changed to stone. In her lifetime, it may be all softness; but after death, if it pass through Segato's hands, a file can make no impression on it.

The limited means of the inventor have not hitherto permitted him to try the process on an entire human body; although the expense would be only one-tenth as great as that of embalming in the ordinary way. It is confidently believed, that dead persons may thus be preserved for ages, with precisely the aspect that they wore, when Death laid his hand upon them. We can perceive no reason why these stony figures, which once were mortal, should not last as long as a marble statue. Instead of seeking the sculptor's aid to perpetuate the form and features of distinguished men, the public may henceforth possess their very shapes and substance, when the aspiring souls have left them. The statesman may stand in the legislative hall, where he once led the debate, as indestructible as the marble pillars which support the roof. He might be literally a pillar of the state. Daniel Webster's form might help to uphold the Capitol, assisted by the great of all parties, each lending a stony arm to the good cause. The warriour—our own old General—might stand forever on the summit of a battle-monument, overlooking his field of victory at New Orleans. Nay, every mortal, when the heart has ceased to beat, may be straightway transformed into a tombstone, and our cemeteries be thronged with the people of past generations, fixing their frozen stare upon the living world.

But never may we—the writer—stand amid that marble crowd! In God's own time, we would fain be buried as our father's were. We desire to give mortality its own. Our clay must not be baulked of its repose. We are willing to let it moulder

beneath the little hillock, and that the sods should gradually settle down, and leave no traces of our grave. We have no yearnings for the grossness of this earthly immortality. If somewhat of our soul and intellect might live in the memory of men, we should be glad. It would be an image of the ethereal and indestructible. But what belongs to earth, let the earth take it.

THE EGYPTIAN PAPYRUS.

The tree from the bark of which the ancient Egyptians manufactured a substitute for writing-paper, was the same as the papyrus-tree of India; it nearly resembled that of Sicily, which probably had its origin in Egypt. Its use as a material for writing was known in the most remote antiquity; a fact of which there is sufficient evidence in Scripture, in Hesiod, the Old Greek historian, and in the epics of Homer. The Egyptians not only converted it into paper, but also made stockings and other garments of it, bandages, mattrasses, mats, and the sails of vessels. It was also, according to Pliny, applied to medicinal purposes; a portion of it was used as food; and the roots made excellent fuel. This admirable tree is now very rarely found in Egypt, where it first originated. It was formerly so abundant there, that, at the commencement of the Roman Empire, the Egyptians drove a great trade in papyrus, both with Europe and Asia. In the time of Augustus, there was a manufactory at Rome, in which this substance was smoothed and polished in a superiour style.

Among the Egyptians, each leaf of papyrus was composed of two very thin layers of the bark of the tree; these were placed together in such a manner that their filaments crossed each other at right angles: they were then made to cohere by a strong pressure. The papyrus, when prepared for writing, was not very smooth, nor of an equal softness over the whole surface. For writing upon it, instead of quills, which would not have been sufficiently strong and stiff, a sort of reed was used. Our metal pens would have found a good market among the Egyptian scribes. The manuscripts, in order to form a volume, were not bound together in the modern fashion, but were done up in large rolls, many feet in length. These were much less convenient to the reader, than books in the shape now used; it being often necessary to unroll the whole bundle of papyrus, in search of a single passage. The original manuscript of the Bible was a roll of papyrus.

In the catacombs of Egypt, at this day, manuscripts of papyrus are found under the coverings of the mummies, most generally between the legs, but sometimes under the arms. In this situation they have been preserved several thousand years. When first brought to light, they are dry and brittle; and if hastily unrolled, the filaments of the papyrus break, with a crackling noise. To render them pliable, they are thoroughly moistened by the application of wet linen cloths, and are then unrolled with the utmost caution. They are found to be written in columns and paragraphs, the letters at the beginning of which are red, and the others black. The characters are of two sorts—hieroglyphics, in which the meaning is expressed by pictures and symbols—and alphabetic characters, analogous to those now in use. The latter are the most common. These manuscripts, when deciphered and interpreted, are often found to contain a life of the dead person, whose mummy had so long kept possession of them. Where the story is told by means of hieroglyphics, the figure of this person is represented in different situations; and thus he manages to tell the tale of his mortal pilgrimage, to remote posterity.

Chinese Magnets.—The Chinese were very early acquainted with the properties of the magnet. Their compass was in the form of a small human figure, turning on a pivot, with one of its arms stretched out and pointing southward; for the Chinese believed that the centre of magnetic attraction was at the south pole. Such magnetic figures might be cheaply manufactured in this country, and would make an excellent toy for children. It is singular that the resources of science are not oftener applied to the construction of toys. If children can ever be beguiled into useful knowledge, it must be in this manner.

A Man-Mountain.—Father Martini, one of the French Jesuits who were formerly sent as Missionaries to China, speaks of a mountain in that country, which has been hewn into the shape of a man. This immense statue is well proportioned, and so large that the features of the face may be distinguished at the distance of some leagues. Father Kircher, another Jesuit, speaks of two mountains, likewise in China, one of which has the figure of a dragon, the other of a tiger. As later travellers have seen nothing of these marvellous statues, their existence is now discredited.

Armed Chariots.—These were invented by the Persians. At the battle of Arbela, in which Darius was defeated by Alexander, the former prince had two hundred of these chariots, each drawn by four horses. At the extremity of the pole of the chariot, there were pikes armed with iron; three sword-blades were fastened on each side of the yoke; and pikes and sword-blades were attached to the wheels, so as to revolve with their motion. Drawn by fiery horses, these chariots must have been well adapted to throw an enemy into confusion, especially where the field of battle was a level plain, presenting no obstruction to their movements. Alexander ordered his soldiers to open their ranks and give them free passage.

Montezuma's Battle-Axe.—After the defeat of the Mexican Emperour, his battle-axe was preserved by the Spanish conquerours, and is now in a royal museum at Vienna. The axe is of basaltic stone, of a greenish colour with white spots, and resembles some that have been found in Ohio. The handle is of hard wood, about three feet long.

The skins of sheep and goats were very early used instead of paper. The finest material of this sort is called vellum.

[Destruction of Tea, in Boston Harbor, in 1773.]

THE BOSTON TEA PARTY.*

In the year 1773, the British government, after a long series of efforts to establish the principle of taxation in the American Provinces, attempted to secure its object through the medium of the East India Company. There were then in the warehouses of that body upwards of seventeen millions pounds of tea, in addition to which quantity, the importations of the current year were expected to be larger than usual. By an act of Parliament, which had been framed with a view to the circumstances of the period, the East India Company, on exportation of their superfluous teas to America, were to be allowed a drawback to the full amount of the English duties. The Company bound itself to pay the duty of three-pence per pound, which Parliament had laid on teas imported into the Colonies. In accordance with the act of Parliament, the Lords Commissioners of the Treasury gave license for the exportation of six hundred thousand pounds of tea; which quantity was to be distributed to various ports along the American coast. So soon as the project became known, applications were made to the directors of the East India Company, by a number of merchants in the colonial trade, soliciting a share of what they conceived would be a very profitable business. Some recommended the establishment of a branch of the East India House in a central port of America, whence minor ramifications might be extended all over the continent. The plan finally adopted was, to bestow the agency on merchants of good repute in the Colonies, who could give satisfactory security, or obtain the guaranty of London houses. Among these, Richard Clarke and sons, Benjamin Faneuil, and Joshua Winslow, were appointed agents for the disposal of the tea in Boston.†

The East India Company, and those who solicited or accepted an agency in this affair, considered it merely in a commercial light. They appear not to have understood or felt, that the Americans would object to the proposed measure, on the ground of abstract principle. Whatever doubt was entertained, respecting the profitable nature of the concern, arose from the fact, that large quantities of tea were smuggled from Holland, and might possibly be bought lower than the Company could afford to put their own, when burdened with the colonial duty. It was hoped, however, that the English exporters might be able to undersell the Dutch, even with the duties annexed, or at least to come so near their prices, that the difference would not compensate the risk of smuggling. But no sooner did the news reach the Colonies, than an opposition sprung up, on grounds which had nothing to do with the high or low price of the commodity. The people at once penetrated the design of the British ministry, and saw that, if successful, it would leave them without a plea against any extent of taxation that Parliament might choose to inflict. In anticipation of the arrival of the tea-ships, public meetings were called at several sea-ports, resolutions were passed to prevent the landing of the cargoes, and the Consignees were enjoined to refuse their agency in the disposal of them.

Boston, especially, which had always led their colonial defence against the ministerial aggressions, here again took a prominent part. Soon after the names of the agents were made known, Mr. Richard Clarke and his son were roused from sleep, in the dead of night, by a knocking at their door. Looking forth from the window, they saw in the courtyard, where the moon shone very bright, the figures of two men, one of whom told the Consignees that he had brought them a letter from the country. A servant received it from these midnight messengers. It proved to be a formal summons, in the name of the Freemen of Massachusetts, commanding Richard Clarke and son to appear at Liberty Tree, at high noon on the ensuing Wednesday, then and there to make a public surrender of their trust, as agents for the disposal of the tea. A letter in the same terms was likewise delivered to each of the other Consignees. The next morning, printed notifications were seen at all the corners and public places, calling on the Freemen of the Province to assemble at Liberty Tree, and witness the public resignation of the agents. At eleven o'clock in the forenoon of the appointed day, the bells of all the churches began to ring, and continued their peal for a full hour; while the town-crier went from street to street, summoning the people to the place of meeting. A multitude accordingly assembled, among whom were the selectmen of the town. The Consignees, however, shut themselves into one of their warehouses, and would neither obey the summons, nor give any satisfactory reply to a committee, who were sent to them from the Freemen at Liberty Tree. Various other meetings were held, and such a spirit manifested, as convinced the agents, that the patronage of the powerful East India Company ought by no means to have been solicited as a favour, but rather deprecated as a calamity. They now wrote to London, expressing their doubts whether the commission could be executed.*

All these proceedings were anterior to the arrival of the tea. The first of the vessels entered the harbour of Boston on Sunday, the twenty-eighth of November, and was followed, in the course of the same week, by two others. On the twenty-ninth, a meeting was convoked at Faneuil Hall, and adjourned, on account of the overflowing multitude, to the Old South Church, where the Consignees were required to appear, and pledge themselves to send back the ships, without payment of the duties

* The writer of this sketch has not had the pleasure of hearing Mr. Thacher's lecture on the same subject; nor would he have felt himself at liberty to take an easy advantage of that gentleman's original research, until its results were given to the public, through the press.

† The quantity of tea consumed in Massachusetts was estimated at 2400 chests per annum; and in all America at 19,400 chests; or upwards of six millions of pounds. It was supposed, that, of three millions of inhabitants, one third were in the habit of drinking tea twice a day.—Bohea was the kind principally used.

* The Consignees appear subsequently to have crept out of the business, by refusing to receive the teas of the owner and masters of the vessels. The latter made them a formal offer of the cargoes, and drew up a protest, on their declining to meddle with them. The people then considered Mr. Rotch, the ship-owner, as responsible for the disposal of the teas.

Griffin's Wharf, mentioned in the next paragraph, is now called Liverpool Wharf.

which had accrued by their entry at the port. These demands were not complied with. A committee, appointed by the meeting, took possession of the ships and moored them at Griffin's wharf, in charge of a volunteer watch, consisting of a captain and twenty-five men. If molested in the daytime, they were to give notice by ringing the bells; if at night, by tolling them. Six persons were appointed to raise the surrounding country, in case the government should seek assistance from the troops at Castle William, or the vessels of war which lay in the harbour. The meeting of Monday was continued by adjournment to Tuesday, the thirtieth, when Mr. Sheriff Greenleaf read a proclamation from the Governour, requiring the people to disperse, at their utmost peril. This produced no other effect than a general hiss. A pledge was exacted from Mr. Rotch, the owner of one or more of the vessels, that the tea should be returned to England in the same bottom in which it came. Mr. Rotch, after protesting against the people's proceedings, yielded to what he considered the necessity of the case, and gave the required promise. After the adjournment of this meeting, nothing of a decisive nature took place, till about the middle of the ensuing month. Mr. Rotch, who had been observed to be dilatory in his preparations for sending back the vessels, was then again summoned before a great assembly at the Old South Church, and enjoined forthwith to demand a clearance from the Collector of the Customs. The result was to be communicated to the people the next day at ten o'clock, till which hour the meeting was adjourned. It was now necessary that prompt measures should be adopted, because, were the duties to remain unpaid beyond twenty days from the arrival of the ships, the Collector would be authorized to seize their cargoes.

At the appointed hour, on Thursday, the sixteenth of December, Mr. Rotch made his appearance at the Old South, and declared himself unable to obtain a clearance, until all the merchandise liable to duty should be landed. He was directed to enter a formal protest against the Collector of the Customs, and then to demand a passport from the Governour. To await the success of this latter application, the people adjourned till three o'clock of the same day.

At this crisis of our narrative, we may take a momentary glance at the various parties, whose feelings or interests were affected by the circumstances which we have related. The affair had now arrived at that point, where the whole weight of official responsibility was made to press upon Governour Hutchinson. His situation must have been a most irksome one. He was of course a loyalist, a partisan of the ministry in its most offensive measures, and had already suffered, as well as acted, in its behalf. But he was also a New England man, and possessed the sentiments proper to his birth. The tone of his writings proves him to have been deeply imbued with native patriotism, which, had he come to office in earlier times, when there was yet no conflict between the power of Britain and the rights of the Colonies, would have made him as good and just a ruler as New England ever had. A writer of his country's annals, he must have shrunk from the idea, that future historians would pourtray him as one of those few colonial Britons, who had shown themselves more English than American. It was undoubtedly with inward trouble, that Governour Hutchinson made his choice between the will of his king and the interests of his country, and with painful reluctance, that he hardened his heart to incur the whole odium of ministerial tyranny. His adherents were scarcely more at ease. The favourite Councillors, the officers under the Crown, the Judges, the tory gentlemen; all, in short, who seemed to have the power of the realm on their side, were now cowering beneath the acknowledged supremacy of the people. No advocate of despotism dared speak above his breath; none but the aristocratic dames, who, sipping a decoction of the forbidden herb from diminutive china cups, and snuffing up its exquisite fragrance, declaimed more bitterly against the disloyal mob, with every snuff and every sip.

In estimating the situation of the provincial metropolis, we must not forget the military and naval force, which was as completely at the Governour's command, as if the armed ships had been moored within pistol-shot of Griffin's wharf, and the troops quartered in the churches, or their tents pitched upon the Common. The officers and men, feeling no interest in the country which they were sent to overawe, would smile at the rising tumult of affairs, and nourish, perhaps, an idle hope, that the audacity of the people might not be quelled without the glitter of bayonets in the streets, and at least a volley over their heads. Looking townward from their vessels and the ramparts of Castle William, they ridiculed alike the menaces of the mob, and the imbecility of the Governour for not crushing the sedition with a word and a blow.

We cannot better describe the circumstances of the people, than by resuming our narrative from the point at which we left it. The Freemen of Massachusetts, in public assembly, at the Old South, were awaiting the arrival of Mr. Rotch, with the Governour's ultimate decision on their demands. Would that we might picture them, as if we leaned from the gallery of the sacred edifice, looking down upon a dense mass of visages, old and young, all expressive of the stern determination which made but one heart throughout that great multitude! Perhaps, standing so much nearer to our Puritan forefathers than we do, they had a more imposing mien than their descendants will ever wear. The old original spirit was potent within them. Had it been otherwise, they could not, for a series of years, have braved the threats, and been neither depressed nor maddened by the injustice of Britain, and at length have been forced into an attitude of defiance by the efforts of her strong arm to bend them upon their knees. In that attitude—not upon their knees, but offering a bold front to the oppressor—we find them now.

Mr. Rotch had been directed to re-appear before the assembly, at three o'clock. At that hour, the people had again met, expecting the Governour's reply. If favourable, it would have given a truce to the Colonial troubles. On the other hand, there was probably, a general understanding, that, should

their demands be negatived, the Freemen were to enforce their will by some immediate act. Wild spirits were among them, doubtless, whom one inflammatory word of their leaders might have excited to burn the vessels at the wharf. But it was the noble characteristic of all the movements of our fathers, by which they wrought out our freedom, that, possessing the energy of popular action, they yet secured the result of sage and deliberate councils. The will of the wisest among the people was universally diffused, and became the people's will. There was an example of this truth, even on the verge of the meditated act of violence. As the afternoon declined, and the early December evening began to shed its gloom within the meeting-house, there were murmurs at the delay of Mr. Rotch, who had already long exceeded the time allotted for his absence. The leading men restrained the impatience of the people, by representing the propriety of doing all in their power to send back the tea to England, nor proceeding to a more violent measure, till it should be undeniably the sole alternative. Light being brought, an address from Josiah Quincy filled up the interval of a third hour. At last, after a course of patient determination, which, had it been rightly interpreted, might alone have taught the ministry to despair of subduing such a people, there went a whisper that Mr. Rotch was crossing the threshold. It was a moment of breathless interest. Would the Governour yield? Then might the British king have had one other loyal shout from his New England subjects, such as greeted his ancestors of the Hanover line, when it was proclaimed in Boston, that they had elbowed the Stuarts from their throne!

But that huzza was never to be heard again—'Long live King George' was a cry of departed years—no echo there would answer it. Mr. Rotch announced, as Governour Hutchinson's ultimate reply, that, for the honour of the king, the vessels would not be permitted to leave the port, without a regular settlement of the custom-house dues.

It was a singular proof of the just estimation in which Mr. Rotch held this assembly, that he dared to appear in the midst of it, with so utter and decisive a negative to its demands. Nothing of injury or insult was offered him. But the dead hush, that pervaded the multitude after hearing the Governour's resolve, was suddenly broken by what seemed an Indian war-cry from the gallery. Thitherward all raised their eyes, and perceived a figure in the garb of the old forest-chiefs, who had not then been so long banished from their ancient haunts, but that a solitary survivor might have found his way into the church. The signal shout was immediately responded by twenty voices in the street. That loud, wild cry of a departed race must have pealed ominously in the ears of the ministerial party, as if the unnatural calmness of the mob were at length flung away, and savage violence were now to rush madly through the town. By the people, such a signal appears to have been expected. No sooner was it given, than they sallied forth, and made their way towards the tea-ships with continually increasing numbers, so that the wharves were blackened with the multitude.

Already, when the crowd reached the spot, a score of Indian figures were at work aboard the vessels, heaving up the tea-chests from the holds, tearing off the lids, and scattering their precious contents on the tide. But it was the people's deed, they had all a part in it; for they kept watch while their champions wrought, and presented an impenetrable bulwark against disturbance on the landward side. Three hours were thus employed, under the batteries of the armed vessels, and within cannon-shot of Castle William, without so much as a finger lifted in opposition. In this passive acquiescence, the government chose the wisest part. Had the troops been landed, the green at Lexington would not have been hallowed with the first blood of the Revolution; and perhaps another royal Governour might have been sent to prison, by the same law of the people's will that imposed such a sentence on Sir Edmund Andros.

Thus were the tea-ships emptied. Their rich cargoes floated to and fro upon the tide, or lay mingled with the sea-weed at the bottom of the harbour. Having done their work, the Indian figures vanished, and the crowd, with a thrill, as if ghosts had walked among them, asked whither they had gone, and who those bold men were. The generations that have followed since this famous deed was done, have still asked who they were, and had no answer. Perhaps it is better that it should be so—that the actors in the scene should sleep without their fame—or glide dimly through a tale of wild, romantic mystery. We will not strive to wipe away the war-paint, nor remove the Indian robe and feathery crest, and show what features of the Renowned were hid beneath—what shapes were in that garb, of men who afterwards rode leaders in the battle-field—or became the people's chosen rulers, when Britain had sullenly left our land to its freedom. But, of those whom the world calls illustrious, there are few whose marble monuments bear such a proud inscription, as would the humblest grave-stone, with only this simple legend under the dead man's name—He was of the Boston Tea-Party!

ST. JOHN'S GRAVE.

St. Augustin relates, that some Ephesians assured him that St. John, though buried at Ephesus, was not dead, but that, as the bed-clothes move up and down by the breathing of a man asleep, so does the earth of the grave where Saint John lies buried. Doubtless, this fable was imagined in honour of the 'beloved apostle;' but we honour him more by the belief, that he spends no such dreary night in the grave—that he left only his dust in Ephesus, and went straight to Heaven. We do wrong to our departed friends, and clog our own heavenward aspirations, by connecting the idea of the grave with that of death. Our thoughts should follow the celestial soul, and not the earthly corpse. Sepulchral monuments, from the costliest marble of Mount Auburn to the humblest slate in a country graveyard, are but memorials of human infirmity—of affection grovelling among dust and ashes, instead of soaring to the sky.

COMMODORE DALE.

Richard Dale, a distinguished naval officer of the Revolution, was a native of Virginia, and born in Norfolk county, in the year 1756. He early showed that strong predilection for the sea, which appears to be an innate propensity in most of those who are destined to signalize themselves by maritime exploits, whether of battle or discovery. At the age of twelve, he made a voyage to Liverpool, and from that period, till the war opened a more congenial field for his activity, he continued in the merchant service. In 1776, he was appointed lieutenant of an armed ship which had been fitted out by the state of Virginia. While cruising in James river, in one of the boats of this vessel, he was captured by a tender of the Liverpool frigate, and put on board a British prison-ship, at Norfolk.

Dale was at this time but twenty years old, and having spent his youth and part of his boyhood on the ocean, can scarcely be supposed to have studied the great principles of the Revolution with that reflective spirit, which influenced the conduct of elder patriots. He had drawn his sword for liberty in the heat of an ardent and adventurous temperament, that made him rush into the conflict, without much caring on which side he fought. It is not therefore a matter of surprise, that, under great temptations, he should, for a brief period, have wavered in his fidelity to the righteous cause. While imprisoned at Norfolk, he was visited by Bridges Gutteridge, an old schoolmate, who, like himself, had followed the sea, and now commanded a tender in the British service. Gutteridge found little difficulty in persuading his friend to make a cruise with him up the Rappahannock. But Dale was soon punished for his inconstancy. In an engagement with a fleet of pilot-boats, several of Gutteridge's men were killed, and our hero was severely wounded by a musket-ball, which hit him in a part where wounds and death are generally synonymous—the head. Dale seems to have taken this rap on the cranium as a strong hint to reflect seriously on his past conduct; which he accordingly did, and resolved never again, as he expressed it, to 'put himself in the way of the balls of his country.'

After his recovery, being doubtful of his reception among the friends of liberty, he sailed for Bermuda, but was captured on his passage by Commodore John Barry, of whom we gave a notice in the last number of the Magazine. After an explanation with the Commodore, Dale reentered the American service as a midshipman. Not long afterwards, he was taken by the British frigate Liverpool, and having been exchanged, was appointed to the United States ship Lexington. The latter vessel, on her passage from Morlaix in France to America, fell in with an English ten-gun cutter, which, though inferiour in size, proved an over-match for the Yankee ship. Such was the criminal and almost incredible lack of preparation on board the Lexington, that, while traversing a sea that was thronged with the enemy, her cannon were not in a state to be fired; nor, in the beginning of the engagement, could they be discharged, except by the flash of a musket. These difficulties were so far remedied during the battle, as to enable the crew to fire away all their shot, besides a large quantity of old iron; when, the slaughter having been great, especially of officers, the Americans were compelled to strike their flag. They were carried to England and confined in the Mill Prison at Plymouth, where all, officers and crew together, were implicated in a charge of high treason. So severe was the treatment to which they were subjected, in common with the other American prisoners, that a general sympathy was excited; and sixteen or seventeen thousand pounds were subscribed, to supply them with some of the comforts of life.

After a confinement of considerable length, Dale, in company with Captain Johnson, his former commander, contrived to escape, and travelled from Plymouth to London. They there took passage on board a trading vessel, bound to Dunkirk, and were proceeding down the Thames, when their progress was stopped by a press-gang, who had been sent expressly in pursuit of the fugitives. Dale and Johnson were now carried back to the Mill Prison and thrown into the Black Hole; a noisome dungeon, well worthy of its name. After a durance of forty days, they were restored to the same footing with the rest of the prisoners; but Dale, whose spirit nothing could break or depress, was sentenced to another term in the Black Hole, for the crime of singing 'rebellious songs.' Finally, in 1779, the bold mariner again made his escape, and, by dexterous management, procured a passport for his passage to France. On arriving at the port of L'Orient, he became acquainted with the famous John Paul Jones, who, recognising Dale as a kindred spirit, immediately received him as master's mate, and soon after appointed him his first lieutenant in the Bon Homme Richard. This was an old East Indiaman, unfit for a fighting vessel in her best days, and now almost unseaworthy; but any ship would have been a ship of war, while John

Paul Jones walked her quarter-deck. If she possessed no fighting properties, that valiant adventurer could create them.

The Bon Homme Richard sailed from L'Orient, in the Summer of 1779, and cruised in the North Sea, spreading alarm along the western coast of Scotland, where Paul Jones had been born and spent his youth. In company with Jones were the Alliance, the Pallas, and the Revenge; but the squadron appears not to have acted in concert, or, at least, to have acknowledged neither of the captains as its commodore. On the nineteenth of September, off Flamborough Head, on the northeast coast of England, they discovered a fleet of several hundred sail, homeward bound from the Baltic, under convoy of the frigate Serapis, and the Countess of Scarborough, a sloop of war. On perceiving the enemy, the frigate made signals to the merchant vessels, which immediately scudded for the neighbouring coast, leaving the Serapis and her consort to fight it out with Paul Jones and his companions. Captain Cottineau, of the Pallas, engaged the Countess of Scarborough; but the Alliance kept aloof during the greater part of the conflict which ensued; and when she did interfere, it was so clumsily, that her shot struck the Bon Homme Richard quite as often as the Serapis. Paul Jones was therefore matched single-handed with the Serapis, a superiour ship in weight of metal, and manned with a first-rate crew; while the Bon Homme Richard's having been recruited in a French port, were a rabble of all nations, many of whom could not understand each other's language.

The battle began at dark, and was more full of strange and impressive incidents, of sudden changes of fortune, and acts of desperate valour, than any other engagement between two single ships, that is recorded in naval annals. The vessels were lashed so close together, that, in loading the cannon, the rammers of each protruded through the port-holes of the other; and thus they discharged their shot against an enemy who stood almost within arm's length. Several times, the vessels were set on fire by the wads of the guns, and threw up sheets of flame, which, ascending above the smoke that enveloped their hulls, seemed about to involve both parties in one destruction. The gun-deck of the Bon Homme Richard was blown up by the bursting of some of her cannon; an accident which cost many of her crew their lives. The Serapis was equally unfortunate, in the explosion of a large quantity of powder on her deck. At one period, the Bon Homme Richard being reported as sinking, the master-at-arms let loose all the prisoners from the hold, who accordingly broke forth among the crew, some half-dead with fear, others ready to bear a hand in the battle, and all contributing their share to the terrours of the scene. On both sides, the boarders made desperate assaults, and were as desperately repelled. This terrible business went on till midnight, when the Serapis struck the flag which she had so gallantly defended; and the American crew being removed on board the conquered ship, the Bon Homme Richard soon after sunk, going down victorious to the depths of ocean, which alone could cleanse her blood-stained deck. Each ship had lost forty-seven men killed and sixty-four wounded. Whatever glory may be won in naval war, should crown the victors in this battle; and even the vanquished should wear a greener laurel than the conquerors in most other fights.

Lieutenant Dale distinguished himself, and received a wound, which he scarcely felt till the excitement of the contest was over. He next served under Captain Nicholson, on board the Trumbull of thirty-two guns, which vessel was soon captured by a British frigate and sloop of war. Dale was again wounded, and found himself for the fifth time a prisoner. Being exchanged, he sailed as chief officer, and afterwards as captain of the Queen of France, an armed merchantman; and continued in the command of her till the close of the Revolution. In 1794, he was one of the six captains who were appointed from the merchant service to the navy of the United States. In 1801, he had command of the Mediterranean squadron, in which capacity he protected the American commerce from the meditated depredations of the Barbary corsairs. Having returned to the United States in 1802, he was again appointed to the Mediterranean station, but under circumstances which, he conceived, would have rendered it injurious to his honour to accept the command. He therefore retired from the navy.

The active, bold, and enterprising character of Commodore Dale may be estimated from the numerous incidents, which we have been compelled to crowd into the foregoing hasty narrative. The decline of his life was as peaceful as his youth had been stirring and adventurous, and he died in 1826, at the age of seventy years.

AN OURANG OUTANG.

Mr. Jesse, in his gleanings in Natural History, gives the following account of an Ourang Outang, which was in the possession of a particular friend of his,—

'On its return from India, the vessel which conveyed the poor little Ourang to a climate always fatal to its race, stopped sometime at the Isle of France, to take in fresh provisions. The Ourang accompanied the sailors in their daily visits to the shore, and their calls upon the keepers of taverns, and places of the like description. In one of these, kept by an old woman who sold coffee, &c. for breakfast, the Ourang was accustomed to go, unattended, every morning; and by signs, easily interpreted, demand his usual breakfast, which was duly delivered. The charge was scored up to the captain's account, which he paid before his departure.

'There was but one person on board the ship of whom the poor Ourang seemed at all afraid. This man was the butcher. The Ourang had seen him kill sheep and oxen in the exercise of his duty, and most probably anticipated from his hands a fate similar to that of his equally dumb, but not so intelligent companions. However, in order to conciliate the friendship of this dreaded dispenser of death, he made every advance, although it must be owned in a very singular manner. He would, for instance, approach him with great caution, examine his hands minutely, finger by finger, and, finding no weapon, proceed by every little artifice to attract

his notice. With the rest of the sailors he was on terms of intimate friendship, and no doubt felt himself entitled to all the attendant privileges, not unfrequently to the annoyance of his companions, from whose hammocks he took such portions of bedding as he deemed necessary for his own comfort, and which he would by no means give up without a hard contest.

'His conduct at table, to which he was familiarly admitted, was decorous and polite. He soon comprehended the use of knives and forks, but preferred a spoon, which he handled with as much ease as any child of seven or eight years old.

'On his arrival in England, he soon began to sicken. During his illness he was removed to Bruton Street, where one of his favourites, I believe the cook, attended as his nurse. He would raise his head from his pillow, and turn his eyes on his attendant, with an expression as if entreating him to do something for his relief. He would at the same time utter a plaintive cry, but he evinced nothing like impatience or ill-temper, and was compassionated by all who saw him.

'He lingered on a few days, and gradually grew worse and worse till he died, not without the regret of his nurse, and the sympathy of us all.'

DISTANT SOUNDS.

Dr. Arnott relates, that, when a ship was sailing parallel to the coast of Brazil, but far out of sight of land, the persons on board distinctly heard sounds as of church-bells, ringing as if for some day of rejoicing and festival. These, certainly, were strange noises upon the wide and solitary ocean. It was further observed, that the bells could only be heard at a particular part of the vessel. All the crew and passengers assembled at that point to listen, and still they heard the peal of the bells—ding-dong, ding-dong—as plainly as if the steeples of the churches had been visible on the landless horizon. But no sooner did they remove from that precise part of the ship, than all was silent again. No one could imagine a plausible solution of the mystery. But, many months after, it was ascertained, that, on the day of this phenomenon, the bells of the Brazilian city of St. Salvador had been ringing in honour of some Saint's day, or other festivity. The sound, blown from the land by a gentle wind, had come across a wide tract of sea to this ship, which was then sailing opposite St. Salvador. The fact of its being heard only at one particular spot, on the deck, was accounted for by the accidental position of a sail, which concentrated the sounds, and made them audible. Hence was drawn the philosophical inference, that an instrument might be constructed, which should bear the same relation to sound that the telescope does to sight.

BATH FOR HORSES.

[From 'Bubbles from the Brunnens of Nassau.']

At the Kochbrunnen, or boiling spring, at Wiesbaden, in Germany, the water is of so high a temperature as to break the glasses into which it is given out from the well. It is celebrated for its virtues in every part of the world, and is particularly efficacious in gout and rheumatism; but for consumptive patients it is said to be highly injurious. Horses have a bath appropriated to them in this place, and a recent traveller gives the following amusing account of their immersion.

'Three or four times a day, horses, lame or chest-foundered, were brought to this spot. As the water was hot, the animals, on first being led into it, seemed much frightened, splashing, and violently pawing with their fore feet as if to cool it; but being at last more accustomed to the strange sensation, they very quickly seemed exceedingly to enjoy it. Their bodies being entirely covered, the halter was then tied to a post, and they were thus left to soak for half or three quarters of an hour. The heat seemed to heighten the circulation of their blood, and nothing could look more animated than their heads, as, peeping out of the hot fluid, they shook their dripping manes, and snorted at every carriage and horse which they heard passing.

'The price paid for each bathing of each horse is eighteen kreutzers, and this trifling fact always appeared to me to be the most satisfactory proof I could meet with, of the curative properties of the Wiesbaden baths; for though it is, of course, the interest of the inhabitants to insist on their efficacy, yet the poor peasant would never, I think, continue for a fortnight to pay sixpence a-day, unless he knew, by experience of some sort or other, that the animal would really derive benefit.

'One must not, however, carry the moral too far; for even if it be admitted, that these baths cure in horses strains and other effects of *over-work*, it does not follow that they are to be equally beneficial in gout, and other human complaints which we all know are the effects of *under-work*, or want of exercise.'

UNRECORDED CRIMES.

In a speech of Lord Morpeth, about a century ago, on the impeachment of the Earl of Macclesfield for illegal practices in his office of Chancellor, we find this striking passage.—'My Lords, there have been crimes so unexampled, and of so horrid a nature, that the malefactors have been tried at midnight, and immediately drowned, and the journal-books burnt, in compassion to mankind, that the memory of the proceeding being destroyed, the crime itself might not be propagated.' It would be a blessed thing for the world, if the necessity of unvarying laws, and of established precedents, would permit the crimes of each successive age to pass into oblivion, and leave to the next generation the task of contriving its own modes of iniquity. But now, much of the evil of the past remains as an inheritance to the future; there are whole libraries, the volumes of which contain nothing but crime. It is not good to read such books; for, to our sinful nature, guilt is contagious, and may be said to communicate its contagion to the paper on which it is recorded. The extensive circulation of criminal trials is both a sign of something evil in the public mind, and a cause of new evil.

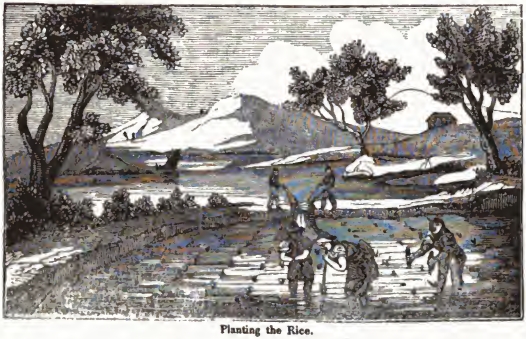
Nothing is so agreeable during a certain time, says Madame de Staël, as the decline of any government whatever; for its feebleness takes the aspect of mildness; but the ruin which ensues is terrible.

THE CULTURE OF RICE.

The least reflection on the products of the different parts of the globe, compels us to admire the goodness of that Providence, which, in each climate, has regulated its bounties according to the wants of the inhabitants. In the burning regions of the tropics, the animals destined for the subsistence of man, are few in number, and their flesh is of a very inferiour quality to that of the same species in the temperate zones. Belzoni relates, that, in the country which extends between the Nile and the Red Sea, the weight of a sheep does not exceed fifteen pounds. All, who have paid attention to this subject, know the pernicious effects of a too great indulgence in animal food, in these hot climates; and it is doubtless for this reason, that Providence has not permitted such nutriment to be abundant there.

The different species of grains, distributed over the face of the earth, follow the same law; a truth, of which the subject of this article is an example. Rice, by its natural dryness, is less liable to fermegtation than either wheat or barley, and is therefore an aliment more suitable to hot countries. The same may be said of Indian corn, the qualities of which bear some similarity to those of Rice. The culture of this grain occupies a large part of the population of the East, especially in India, China, Sumatra, and the neighbouring isles; at the Phillipines, also, Rice is extensively cultivated. Rice grows abundantly in Egypt, Spain, and parts of Italy. In America, it is an important product of some of the southern States.

Harrowing the Rice Field.



Planting the Rice.

The manner of cultivating Rice varies according to climate and local circumstances. We shall give the details of the method employed in China, where vast tracts of land, in the middle and south of that great empire, are devoted to the culture of Rice. Each year, the low lands are overflowed by the Kiang and the Yellow river, when those streams are swollen by the abundant rains of the Himalaya mountains, where they have their source. When the waters abate, they leave a thick bed of mud, which fertilizes the soil as much as the best manure. The patient and laborious Chinese begins his toil by surrounding the tracts, which he intends to cultivate, with raised banks of argillaceous earth. It

is necessary that the Rice-field should be in the neighbourhood of a rivulet. The earth is then harrowed several times over, as is seen in the first cut; and while it is undergoing this process the seed-rice is macerated in water, mixed with a certain quantity of marl. The growth is thereby quickened to such a degree, that the young shoots sprout above the soil, in two days after they have been deposited there.

During the early part of the season, and until the grain is formed, the root of the plant must be kept constantly under water. To attain this end, various means are used; two of which, the chain-pump and a bucket at the end of a lever, are represented in the next cut.

Watering the Rice.

When the young plants are six or seven inches high, the tops must be cut off, the roots are carefully watered, and the whole is again planted in ranks a foot asunder. From time to time, they are sprinkled with lime-water to destroy the insects; the weeds and useless herbs are pulled up. An European cultivator cannot form an adequate idea of the perseverance and minute attention, which the Chinese bestow on these details. Two crops are obtained yearly—the first in May or June, the second in October or November. The sickle, employed for harvesting the Rice, is in the form of a crescent, like our own, with the edge toothed like a saw. The straw and stubble are burnt to enrich the earth. It is threshed with a flail, in the ordinary way; and the thin skin, which surrounds the grain, is gotten rid of by bruising it in a kind of mortar. This process may be seen in the following cut.

Bruising the Rice.

It is then winnowed, as is represented in the next engraving, which also shows the method of grinding it in a mill, the moving power of which is neither wind, water, nor steam, but the united force of several men.

Winnowing and Grinding the Rice.

This grain, prepared in different ways, forms the chief nutriment of the Chinese. They are not acquainted with the use of spoons, but they have little skewers, with which they toss the rice very skilfully into their mouths. A sort of wine is obtained by the fermentation of the grain. By distilling it, they make an intoxicating liquor, called *rak*, or arrak, which speedily causes drunkenness. When mixed with sugar and spices, it is a very palatable drink. In China, the flour of Rice is also used as starch; and by compressing it in moulds, when it has been well baked, they make images and other ornaments, which are extremely durable, and of an admirable whiteness.

In Sumatra, the method of cultivating Rice is so different from that of which we have been speaking, that it may be proper to say a few words respecting it. This immense island is covered with thick forests, which are almost inexhaustible; and among these, in the Spring, the inhabitants choose a space which they call *laddaug*. They cut the trees at about ten feet from the earth, and when sufficiently dry, they set fire to them. The conflagration sometimes lasts a month. They then wait for rainy weather, which, if it comes too soon after the cutting of the trees, and before they are dry enough to be burnt, greatly retards the crop.

At this time, the natural credulity of the islanders is taken advantage of by impostors, who are generally Malay adventurers. They pretend to have the power of assembling and of dissipating clouds; and their services are recompensed by a tax of at least a dollar on each family. The juggler abstains, or pretends to abstain, from sleep and nourishment, during several days and nights; he passes the whole time in the open air; and whenever he sees a cloud, he runs about with all his might, puffing tobacco, and blowing out the smoke with the whole force of his lungs. As soon as the rains begin, holes are dug at equal distances, and a number of grains are deposited in each, without any other attention being given to the crop, till harvest-time. Often in consequence of this negligence, the entire seed is devoured by birds. This carelessness, however, is not universal in Sumatra. In some parts of the island, they construct small machines of wood, which are placed around the field, and are all connected together by cords, in such a manner, that a child, by pulling a string, can put the whole in motion. These contrivances, when properly managed, put the birds to flight. The method of harvesting, of threshing and bruising the Rice, and also of cooking and eating it, is pretty much the same at Sumatra as in China and Cochin China, at Tonquin and in India.

In Europe, the cultivation of Rice has been attempted, but has been attended with many inconveniences, probably, because the business is not well understood. Many efforts have been made to introduce it into France, but without success, on account of the mephitic exhalations which are diffused from the Rice-fields. In Spain, there is a law against cultivating Rice, within a less distance than a league from the cities. In Italy, the same ill effects are experienced, and are attributable to the same cause,—an improper method of preparing the ground. In China, India, and Egypt, the Rice-fields do not exhale unhealthy vapours. It is supposed that this is owing to the heat of the climate, which occasions a quick evaporation; but it would rather appear, that the true cause is to be found in the situation of the Rice-fields, and in the mode of management. The water, in which they are immerged, is not often enough renewed, and becomes stagnant and putrid; whereas there should be an almost continual current, and the situation of the fields should be such, that it could be rendered entirely dry, in the space of a few days. This is the mode in India, and the harvest is generally made on a dry soil. After the harvest, the stubble and roots are pulled up, exposed to the sun, and burnt, to fertilize the field. In the countries where the Rice-fields infect the air, it is because the water is not changed often enough, and is not wholly drawn off, even during the harvest. The result is, that the straw and roots become rotten, and a miasma is exhaled from them, which corrupts the air.

We will conclude with two facts, which appear worth relating. One of the last Emperours of China, having noticed in his gardens a stalk which produced better Rice than ordinary, cultivated it himself during many years. When he had ascertained by experience that the Rice was really better than any other, he made a proclamation, announcing the discovery to his people, with a botanical description, and caused seed to be distributed to every applicant.

In India, ten days after the birth of an infant, the priests go through the ceremony of giving him a name; for which purpose, they lay him in a cloth containing Rice, and there shake him. When he has been sufficiently rolled from one side to another, they give him his name. Two months after, they present him to the Brahmin in the Pagoda. The Brahmin puts leaves of the sandal-wood and of the camphor-tree on his head, with cloves and other perfumes; then, extending his hand solemnly, he says—'Go; and if thou wouldst be happy, be wise.' But whether this be a wise admonition, we cannot tell.

FORMER TEMPERATURE OF THE EARTH.

Geology informs us that the temperature of the earth was, at former periods, much higher than at present, and that the poles were once hotter than the equatorial regions are now. Owing to the gradual cooling of the earth, many species of gigantic animals have become extinct, and such as still exist have dwindled down to a much inferiour size. Both animals and vegetables have reached their maximum of size, at periods and in countries where there was the greatest abundance of heat and moisture. That this is the fact, may be seen by the superiority of the animals and vegetables of the tropics over those of temperate climes. The elephant is a native of the torrid zone, and can never thrive in any other. Of vegetable productions, what are merely bushes in our climate become trees between the tropics. Herbs, as we should call them, grow there to such a magnitude as to afford shelter from the sun. In the southern parts of the United

States, vegetable nature is on a grander scale than we northerners can readily conceive; the trunks of the forest-trees are taller by fifty feet than our's; and the leaves of wild-flowers are sometimes large enough to write love-letters upon. And in some long-forgotten time, the earth was covered with immense vegetables, in comparison with which the largest, that now grow, would dwindle down to shrubs. It was necessary that the herbage should be on this grand scale, for the support of the huge animals who fed upon it.

That such animals and such vegetables did exist, is proved by the discovery of their remains imbedded in rock, or buried at various depths in the earth. A mammoth—a creature of such immense bulk, that the hottest and most fruitful region of the earth would now be too cold and barren to sustain his life—has been found undecayed beneath the polar snows. When that animal was alive, therefore, the vicinity of the arctic circle must have been warmer than our present tropics. But while the poles were so hot, the tropics were proportionably hotter; and those who dwelt near the equator—if the earth had human inhabitants in those days—doubtless dreaded a northern winter, no less than their successors do now; although the coldest Winters must have been incomparably warmer than our modern Summers. At a later period, while this cooling process was still going on, but had probably arrived within a few thousand years of its close, animals approached somewhat nearer to the present standard. A tiger was but a third larger than may now be found in the Indian forests; a bear was of the size of our horses; a dog was as big as a modern lion. Thus, the race of living things was already wofully degenerated, since the days when the lizards used to be larger than our whales. And as the earth's temperature still continued to fall, entire species of the largest animals became extinct, and those which survived were not only smaller in bulk, but much less numerous. The larger the animals were, the sooner and the more entirely did they vanish from the earth.

At the period when such enormous creatures existed, a very large portion of what is now dry land, was covered by the sea; and thus there was a plentiful supply of moisture in the atmosphere. It is probable also, that the soil of the earth being then fresh and unexhausted, its vegetative powers were beyond any comparison that we can form. While the world, therefore, if we reckon only the dry land, was much smaller than at present, it was enabled to support numbers of gigantic beasts, a single herd of which would now eat up all the sustenance of a country. As the ocean continued to recede, and the temperature of the earth to fall, vegetation became more scant; the world was no longer a fit pasture for such enormous cattle; they were gradually thinned away, till only their bones are left for the wonder of our pigmy times. Those species, which were fortunate enough to survive, were only the miniature likenesses of their predecessors.

An illustration of the fact, that the vegetative power of the earth bears a proportion to its heat and moisture, may be seen by tracing the progress of vegetation up a mountain. At the base, the forest is dense, and the trees gigantic; as you ascend, they dwindle both in bulk and height, and become mere saplings; at a still more elevated region, trees of the growth of centuries are nothing but bushes; and finally, at the summit of the mountain, the only vegetable production is a kind of dry moss that clings to the rock. It is stated that animals, living on the sides of mountains, are smaller in proportion to their distance above the base. In going from the equator to the poles, we perceive a similar gradation in the vegetative powers of the world, as in ascending a mountain. At the equator, there is still a vast luxuriance of fertility, with which, as you go northward, more and more of barrenness is intermixed; until, in Lapland, there are but one or two species either of plants or animals. Now, in tracing the course of animal and vegetable life, from the periods of highest temperature downward, we perceive a similar gradation as in ascending a mountain, or passing from the equator to the arctic region. It is probable that the fertility of the tropics, in the earlier ages of the world, as much exceeded their present fertility, as the latter does that of Greenland.

It should be observed, that this cooling process has long ago ceased. During countless ages, the temperature of the earth has been at its present standard; nor is it known that any considerable change has taken place since the existence of man.

Enormous Still.—A condenser for the distillation of gin was made in 1830, for Mr. Hodges of London, the height of which was fourteen feet six inches, and the diameter eight feet. It distilled ten gallons of gin per minute, six thousand per day, and one million eight hundred and seventy-eight thousand per annum. Such a stream of alcohol, one would think, would overflow the land. Some stills in Scotland, however, produce eighty gallons every three and a half minutes—which is indeed an amazing quantity to be added to the sin and misery of this world, in so short a time.

'How deep a wound to morals and social purity has that accursed article of the celibacy of the clergy been! Even the best and most enlightened men in Romanist countries attach a notion of impurity to the marriage of a clergyman; and can such a feeling be without its effect on the estimation of the wedded life in general? Impossible!—and the morals of both sexes in Spain, Italy, France, &c. prove it abundantly.'—*Coleridge's Table Talk.*

Watches.—The durability of common watches, when well made, is very considerable. One was produced, in '*going order*,' before a committee of the House of Commons to inquire into the watch trade, which was made in the year 1660; and there are many of more ancient date, in the possession of the Clock-maker's Company, which are actually kept going.—*Babbage.*

Scent of the Plague.—The Plague is said to smell like mellow apples, or, as some think, like May-flowers. We did not know that either apples or May-flowers smelt so plaguy bad.

THE FLAT HEAD INDIANS.

[Translated from the Magasin Universel.]

The Indians who inhabit the shores of the Columbia river, in North America, are distinguished by the oddity of their manners and customs. They are known by the name of Flat Heads, on account of the shape of their skulls. Immediately after the birth of an infant, it is placed in a sort of a cradle in the shape of a trough, the bottom of which is covered with moss. The part on which the head is to rest, is a little more elevated. A piece of pine bark, covered with a cushion to preserve the skin from bruises, is then fitted to the child's forehead, and by means of a cord passing through holes on each side of the cradle, the cushion is made to press upon its head. This operation continues a whole year, and causes little pain; but while the process is going on, the appearance of the infant is frightful; and its little black eyes, which the pressure of the bandages squeezes almost out of their sockets, look like those of a mouse in a trap. By the time the ligatures are taken off, the head has attained the requisite degree of flatness; the upper part is rarely more than an inch thick; and it never recovers its rotundity. In the eyes of the Indians, this deformity is a grace that cannot be dispensed with. They justify the custom by saying that their slaves have round heads, and therefore free people ought to have flat ones. In fact, all the children who are born in slavery, unless adopted by the Flat Heads, inherit not only the degradation of their parents, but also the rotundity of their skulls. It can hardly be conceived what a repulsive ugliness this detestable custom gives to the Indians. Nor have they naturally so much beauty, that they need put themselves to the trouble of lessening it by art. The men, indeed, are of good stature and pretty well shaped; but the women are five or six inches shorter, and have flat noses and large open nostrils. Their mouths, which they have not wit enough to keep shut, display short and ill-shaped teeth, set in uneven rows, and never cleaned. These red-skinned ladies are invariably bandy-legged; their feet are broad and flat, their ears slit, their nostrils bored, their hair coarse and thick; and the better to set off their charms, they anoint their skins plentifully with fish-oil. As to their character, the Indians of this part of the New World are certainly cunning, sober, and patient; but generally also they are thievish, idle, and cruel.

The Flat Heads believe in the existence of a good and an evil Genius, as well as of rewards and punishments in another life. According to their creed, the righteous, after death, go to a land of bliss, where they enjoy a perpetual Spring, where they again dwell with their wives and children, where the rivers are full of fish, and the plains are covered with bison, the flesh of which forms their principal nourishment. There they give themselves up to the pleasures of the chase, fearing neither the rigours of winter, nor hunger, nor the horrours of war. The wicked, on the other hand, are transported to a country which is covered with perpetual snow, and where the cold penetrates to the marrow of their bones. From the midst of their torment, they are condemned to see their righteous brethren in the delightful fields, chasing the game, or reposing themselves with their families; but the poor frozen sinners cannot stir one step towards that sunny region. Nevertheless, their misery has an end; it is longer or shorter, according to the degree of their guilt; and after its expiation, they are permitted to become inhabitants of the Indian Paradise.

If nations which call themselves civilized and enlightened are overrun with charlatans and empirics, we need not wonder that they play a very successful part among the savages. Each village has its quack doctor. When a native is seized with any malady whatever, this Æsculapius is immediately called in, and begins his course of treatment by stretching the patient on his back. While he is in this position, his kinsfolk and friends, who are all furnished with two sticks of unequal length, beat time to the measure of a melancholy chant, which the Doctor sings through his nose. At intervals, they unite their voices to his. Sometimes a slave is ordered to mount on the top of the hut, where he accompanies this strange harmony by striking on the roof with a great club, and singing with all his might. The quack, in the meantime, kneels down by the sick person, and presses both fists heavily upon his stomach. This violent pressure compels the patient to utter dolorous cries; but the noise of his complaints is drowned by the uproar and racket of the doctor and his assistants, who shout and thump so much the louder. At the close of each stanza of the hymn, the operator takes both hands of his victim and blows upon them; and thus continues to squeeze his stomach and blow upon his hands, till the patient ejects a small white stone, which had been thrust into his mouth by the Doctor himself, at the beginning of the operation. This he shows to the family, and, with the unabashed effrontery natural to quack doctors, whether civilized or savage, affirms that all danger is over, and that the sick man will quickly be restored to perfect health.

It often happens, as may well be supposed, that a poor wretch, who might have been easily cured by the most simple remedies, perishes in consequence of this barbarous treatment; but let him live or let him die, the Doctor must not be disappointed of his fee. Such instances of their gullibility well entitle these ridiculous people to be called Flat Heads—or, simply, *Flats*.

An English traveller, who remained a considerable time among this tribe, has given a description of their methods of torturing their prisoners. A chief of the Black Foot tribe having been taken captive, in one of their wars, was condemned to death; and the Englishman repaired to the camp, to witness the frightful spectacle. The prisoner was fastened to a tree. The Flat Heads, after heating an old gun-barrel red-hot, made use of it to burn successively his legs, thighs, stomach, cheeks, and belly; they then cut the flesh round his nails, which they tore out; and afterwards cut off his fingers, joint by joint. During this horrible torment, the prisoner did not shrink in the least, nor testify the slightest emotion; instead of crying for mercy and uttering groans, he endeavoured to excite the barbarous in-

genuity of his executioners by taunts and the most insulting reproaches. One of the Flat Heads rushed upon him, and with his knife, scooped out one of his eyes in an instant, and clove his nose in two parts. But the poor devil did not desist from his provocations:—'I killed your brother!' he cried. 'I tore off the gray scalp of your father!' The warriour to whom he spoke, again rushing upon him, tore off his own scalp, and was about to plunge his knife into his heart, when the voice of his chief forbade him. With his naked skull, his cloven nose, and the blood streaming from the socket of his eye, the intrepid Black Foot offered a hideous spectacle; notwithstanding which, in this terrible condition, he ceased not to shower reproaches and outrageous insults on his foes. 'It was I,' said he to the chief, 'it was I who took your wife prisoner! We tore out her eyes and tongue! We treated her like a dog! Forty of our young warriours'—He had not time to finish what he was going to say; for at the mention of his wife, the fury of the chief broke through all bounds; and seizing his musket, he put an end at once to the insults which the prisoner uttered, and the sufferings he endured. These cruelties were even surpassed by those that were exercised on the female prisoners; and it must be owned that the Flat Head women showed a more fiendish barbarity than the men. The details of the tortures which they inflicted are too horrible to be described, save with a pen dipped in blood.

The Europeans have vainly endeavoured to abolish these atrocious customs. The natives pay no attention to what they say. They answer coolly, that the Black Feet use the Flat Heads in the same manner; that it is one of the laws of war, among the red men, to torture their prisoners; and that nothing can equal the pleasures of vengeance.

THE SLEEP OF PLANTS.

[Translated from the Magasin Universel.]

The greater part of those plants which have *winged* leaves—that is to say, where many small leaves are attached to the same centre—undergo in the night a change of position, which renders it probable that they take advantage of those hours of silence and obscurity, to enjoy a sort of slumber. This phenomenon was first remarked by Prosper Alpin; and among the vegetables on which he saw it operate most strongly, he mentions the acacia, the sesban, and the tamarind. But since vegetable physiology has become a favourite study of botanists, it has been discovered that all plants have their hours of repose. We will cite some of the most curious proofs of this fact.

Bean leaves, for instance, raise themselves every evening, describing a circle of ninety degrees, and press their upper surfaces one against the other. Cassia leaves, on the contrary, lower themselves immediately after twilight, describing a quarter of a circle, or unite themselves back to back. But these nocturnal movements are still more perceptible in the sensitive plant on which Mairan and Duhamel have made many very interesting experiments. The first has remarked that though this plant be set in a dark place, where there is a uniform temperature through the day and night, it never fails to shut up its leaves at dusk and open them in the morning, the same as if it were exposed to the light. Duhamel was desirous of repeating this experiment. One morning in the month of August, he carried a sensitive plant to a cellar, which had no opening to the external air, and which was situated beneath another cellar.—The shaking which the plant underwent, in being carried thither, caused it to close its leaves, nor did it re-open them till ten o'clock the next morning; and then not quite so widely as it would have done in the open air. They remained in this half-opened state, for several days. He then carried the plant from the cellar into the open air, at ten o'clock in the evening, taking care not to shake it. It appears that the sort of half-slumber, in which it had continued for so long a time, had more than satisfied the demands of nature; for it kept its leaves open all that night and the following day, and did not fall asleep again till its usual bed-time. This experiment proves that the sleep of plants is not the effect either of light or heat, as some authors have supposed; and it is rendered more certain by the fact, that, in hot-houses, the sensitive plant goes to sleep at about seven o'clock throughout the year, although in Summer, at that hour, it is broad day-light. Nor is the case altered, even when the warmth of the hot-house, is kept up or increased, by means of stoves.

The botanist Lianē having received the seeds of a species of lotus called bird's foot, he carefully cultivated the plants which they produced, and succeeded in obtaining flowers from them. One evening, visiting his garden with a lantern, he stopped to look at the lotus, and was much surprised to find none of the flowers, which, that very morning, had so abundantly rewarded his pains. He accused the gardeners of negligence, suspected them of having stolen the flowers, and went to bed in great displeasure. The next morning, he would not at first go near the lotus, being loth to renew his sense of the misfortune which had so much afflicted him all night. At length, it was absolutely necessary that he should pass by it. What was his astonishment! There was the lotus in full bloom, dressed out with all the flowers that it had borne the day before, and had so strangely lost at night. The botanist counted them, and found that not a single one was missing. He returned again in the evening, and ascertained that the flowers were still there, but that the leaves were placed in such a peculiar manner as to conceal them; and this singular faculty of the leaves could not be discovered in the day-time. 'My lotus is asleep!' cried the botanist; and this exclamation gave its name to the phenomenon since called the Sleep of Plants.

Great services are like the larger pieces of gold or silver money, which do not often pass from one person to another. Small attentions are like small coin, which is continually passing.—*Diderot.*

When Thebes was burnt, Alexander saved only the house of the poet Pindar. When Buffalo was burnt, the British officers saved only the house of an old woman, as a reward for her brave defence of it with a broomstick.

WARRIOURS, ANCIENT AND MODERN.

We have here a motley troop of warlike figures, whom we propose to display upon the pages of the Magazine, without much regard to military order. They will resemble a company, composed of the shattered fragments of several regiments; or a throng of horse and foot, pursuers and pursued, in the confusion of a lost battle; or perhaps they will remind the reader of the scene on a muster-ground, after dismissal, when soldiers in many different uniforms are mingled together. But here, the old iron-clad knight, who fought under the walls of Jerusalem, will be the comrade of the modern hussar; the man-at-arms of the eleventh century will ride in the same rank with the carabinier of the nineteenth; and every figure that wears a sword, will be liable to the conscription in our troop.

The Crusaders.

Here, in the first place, come a knight and a foot-soldier, both of whom were Crusaders. It will be observed that the defensive armour of the knight is greatly superiour to that of the common soldier. He wears, over all his other garments, a sur-coat, on which are embroidered the arms of his family; beneath this external covering is his hauberk, or shirt of mail, formed of ringlets of steel linked together; under the hauberk, is a cuirass of forged iron, composed of breast-plate and back-plate; and under the cuirass is a gambeson, or quilted coat, stuffed with cotton, to preserve his body from bruises. He also carries a wooden shield, covered with leather and strengthened with iron or brass, which, in time of action, he suspends round his neck, and passes his left arm through two handles on the inside. The defensive armour may be seen to better advantage on the next figure.

This is a man-at-arms, probably a gentleman by birth, but who has not yet attained the dignity of knighthood. He is clad in complete steel from head to foot, except a portion of his face, which can also be covered by closing the vizor of his helmet; when his head will be literally shut up in an iron box. His offensive weapons are a sword, and a heavy lance of ash-wood, which should be represented as eighteen or twenty feet in length. The immense weight of their equipment, and its want of pliability, must have greatly embarrassed the knights and men-at-arms in battle. Their ordinary and best mode of fighting was, to seat themselves firm in the saddle, direct their lances, and then gallop headlong to meet the advancing foe, who came onward in the same style. Sometimes the lances were splintered on both sides, without the overthrow of either champion; but generally, one or other of them was borne off his horse, and measured his length on the field. Here, unless stunned by the fall, or suffoca-

A man-at-arms.

ted by the closeness of his helmet, the warriour lay pretty safe. It is related, that, at a certain battle, in Italy, the vanquished knights could not possibly be slain, but remained stretched on the field like huge lobsters, till several men were set to work upon

each of them with wood-cutter's axes. King James the First, who was a dear lover of peace, remarked, in praise of armour, that it not only protected the wearer, but, by impeding his movements, prevented him from hurting any body else.

The war-horses were almost as heavily armed as their riders; they wore an iron mask over the face, and frequently a breast-plate; their legs were sometimes defended, either by iron or stiff leather. It was likewise the fashion to cover them completely with chain-mail, or with quilted linen. An animal thus accoutred must have been very unwilling to move; nor can we wonder that the knights were compelled to use spurs, the rowels of which were six inches long. Some remnant of the ancient armour may be seen in the next cut, which represents a soldier of Louis the Sixteenth's guard.

Cuirassier of 1776.

Defensive armour was also worn, and probably still continues to be so, by the French carabiniers. The first of the two following figures has a breast-plate under his coat, and his immense boot sufficiently protects the whole leg and thigh. This corps did excellent service in the wars of Louis the Fourteenth.

Carabinier of 1694.

The breast-plates of the Carabiniers are now of burnished copper, as are likewise their helmets, which are surmounted with a red crest.

Carabinier of 1834.

The hussars were probably the first mounted troops who entirely laid aside defensive armour. This corps was formed in 1692, of Hungarian refugees in the service of France. Their uniform was a sky-blue vest and pantaloons, and a bonnet, boots, and scarf, all of scarlet. Each hussar had a right to wear as many plumes as he had cut off foemen's heads.

Hussar of 1692.

The hussars fought without any sort of order, or system of tactics. They charged their adversaries in a confused throng, surrounded them, and affrighted them with their shouts and gestures. If repulsed, they were promptly rallied, and came again to the charge. They were very adroit in the management of their horses, all of which were small and light. About the year 1750, they wore a species of fur cap, called schakos, and a blue pelisse with red trimmings. [See first cut on next page.]

Hussar of 1750.

Until the French Revolution, the hussars had many singular customs; one of which was, to pull the ears and tails of their horses, whenever they made a halt—a process which was supposed to remove their weariness. When the corps was subjected to the same discipline as the rest of the army, all these usages were abandoned. Their dress however, had still a wild and singular appearance.

Hussar of 1795.

There were, at one period, fourteen regiments of hussars in the French service. At the restoration of the Bourbons, these were reduced to six, which is the number retained under the present government. Their uniform, as will be seen by the cut at the head of the next column, has nothing of the stiffness which is usual in the military garb. In this respect, they form the most perfect contrast that could be imagined, to the knights and men-at-arms whose figures lead the van of this article.

It is a sad thought, that men of the sword, whether as individuals or in armies, should hitherto have filled so large space in the annals of every nation. Will the time never come, when all, that pertains to war, shall be merely a matter of antiquarian curiosity?

Hussar of 1834.

BURIAL OF OLIVER CROMWELL.

[Life of Oliver Cromwell.]

His funeral was performed with great pomp on the 23d of November. But the real place of his burial is uncertain; though it is most probable, that his body was buried in Naseby-field. For I find in a collection of MSS. &c. lately published, the following remarkable account. 'That the Regicide Barkstead, being Lieutenant of the Tower of London, and a great confidant of the Usurper, did, among other such confidences, in the time of the Usurper's sickness, desire to know where he would be buried. To which he answered, 'Where he had obtained the greatest victory and glory, and as nigh the spot as could be guessed, where the heat of the action was, in the field of Naseby;' which, accordingly, was performed thus: At midnight, soon after his death, being first embalmed, and wrapped in a leaden coffin, he was, in a hearse, conveyed to the said field, the son of the said Barkstead, attending close to the hearse; and, being come to the field, there found, about the midst of it, a grave dug about nine feet deep, with the green sod carefully laid on one side, and the mould on the other; in which the coffin being soon put, the grave was instantly filled up, and the green sod laid exactly upon it; care being taken that the surplus mould was clean taken away. And soon after, care was taken that the said field was entirely ploughed up, and sown three or four years successively with wheat. Thus Oliver and his friends, apprehending the restoration of the Stuart family, and that all imaginable disgrace, upon that turn, would be put upon his body, as well as memory, he contrived his own burial, as averred by Barkstead, having all the theatrical honours of a pompous funeral paid to an empty coffin, into which afterwards was removed the martyr;* that if any sentence should be pronounced, as upon his body, it might effectually fall upon that of the king. Accordingly, it being ordered by the House of Commons, soon after the restoration, that Oliver's body should be taken from the tomb, where it was supposed to lie, in Westminster-abbey, and from thence

* King Charles the First.

to be conveyed, with the bodies of some of his associates in the murder of the king, to Tyburn, and there to be publicly hung on the gallows; the Sergeant of Horse saw their commands executed; but some, with greater curiosity, viewing the spectacle on the tree, observed the remains of a countenance, which they little expected to find there; and, untying the cord, discovered *a strong seam about the neck*, by which the head had been, as was supposed, immediately after the decollation, fastened again to the body. This being whispered about, and numbers that came to this dismal sight hourly increasing, notice was immediately given of the suspicion to the attending officer, who despatched a messenger to Court, to acquaint them with the rumour, and the ill consequences the spreading, on examining it further, might have; on which, says my author, the bodies were immediately ordered down, to be buried again, to prevent any infection. Certain it is, they were not burnt, as in prudence, for that pretended reason, might have been expected; as well as, in justice, to have shown the utmost detestation of their crimes, and the most lasting mark of infamy they could inflict on them.'

ANCIENT PILGRIMS.

In the year 1407, some heretics having spoken against the popish custom of making pilgrimages to the shrines of Saints, and particularly objecting to the merry music which accompanied the march of the pilgrims, the Archbishop of Canterbury made the following reply. We give it with all its antique diction, and uncouth and disorderly spelling—

'When one of them that goeth barfote striketh his Too upon a stone, and hurteth hym sore, and maketh hym to blede, it is well done that he or his Felow begyn then a songe, or else take out of his Bosome a Bagge-pype, for to drive away with soche Myrthe the hurte of his Felowe. For, whith soche solace, the Travell and Werinesse of Pylgremes is lightely and merily broughte forthe.'

We are inclined to take the side of the jovial Archbishop against the heretics, who, by the way, were soon after burnt for their misbelief in regard to this, and other sacred matters. It would have been almost worth while to live in those old days of papistry, for the sake of riding in the company of Chaucer's pilgrims, beguiling the way with tales mirthful or melancholy; or even to go on foot, dancing along to the sound of the bag-pipe, with the comfortable idea that every step of this merry journey was a step towards heaven. Sometimes, it is true, the pilgrims walked with peas in their shoes, or crept over the stony roads on their bare knees—modes of travelling which the merriest music could hardly render tolerable. But generally, a pilgrimage, though imposed or undertaken as a religious penance, must have been a very pleasant interlude in a man's life. On such occasions, all the daily cares, that harassed him at home, were thrown aside, and it was inevitable that his disburdened mind should grow cheerful and frisky. And except to visit the distant shrine of a saint, it was seldom, in those times, that people strayed a dozen miles from their birthplace; so that these pious journeys afforded them almost their sole opportunities for seeing the world; and when completed, the pilgrim was a travelled man, and had a stock of fireside stories for the remainder of his days. Should the Romish faith, as some forebode, be established in America, there is no part of its rites, ceremonies, and customs that our locomotive countrymen would more readily adopt, than this of pilgrimages. But it would not be the same thing now, as in those good old times. The pilgrim would neither provide himself a staff, nor seek out a good stout horse—he would simply put down his name at the coach office, or get on board a steamboat, with a vallise under his arm—or, perchance, he would do his pilgrimage in a rail-road car. No bag-pipe nor song would enliven his way; he would be graver than the ancient pilgrims, but with earthly cares, not heavenly meditations—and a pilgrimage, thus modernised, would be as dull as a trip to Saratoga Springs.

SNAKES.

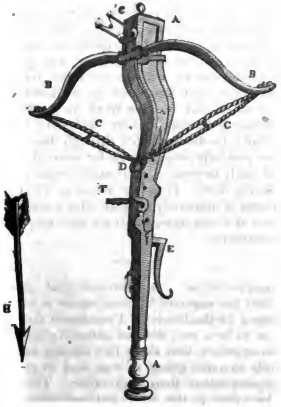
It has been supposed that all snakes produce their young by means of eggs; but a correspondent of the American Journal of Science gives evidence to the contrary. In a water-snake, he found about a hundred young ones of various lengths, and the thickness of a knitting-needle. The same writer observes that the smaller species of snakes cast their skins in the latter part of May or beginning of June; the larger species retain their old garments somewhat longer; but all have got rid of them by the end of September. A rattle-snake, in confinement, was observed to rub his head against the wires of his cage, and thrust it between them, as if endeavouring to escape. By this process, the skin on the back of his head began to cleave away and turn downward on his neck. He then knotted himself into several convolutions, the last of which pressed forcibly on the separated portion of the skin; and shooting his head briskly forward, released another length of his body. In this manner, he gradually crept out of his skin, which was left wrong-side outward. The whole race of snakes are turncoats. The reason of this provision of nature is, that a snake's skin—is a sort of armour to protect his grovelling body from injury in its continual contact with the earth—and this skin is of a texture which cannot accommodate itself to the increased size of the snake. If he were not thus enabled to creep out of it, he must either burst it asunder, or be confined in an intolerably tight waistcoat.

Polemical Divinity. At the siege of a walled town, in one of the Spanish wars, a Catholic priest shot eleven men with a musket, from behind a battlement. Each time that he fired, this good priest made the sign of the cross in the air, with his musket, pronouncing a blessing on the man whom he aimed at—and then let fly. Thus the enemy received, at once, a benediction for his soul and a bullet for his body. Several of the New-England clergy have taken arms, in our Indian wars and in the Revolution: but with less philanthropy than the Catholic priest, they distributed only their bullets to the enemy, and kept their benedictions for their friends.

CROSS-BOW.

The Cross-Bow, or Arbalist, is a very ancient weapon; its invention is attributed by some authorities to the Sicilians, by others to the Cretans. It is supposed to have been first introduced into France by the Crusaders, and is mentioned as having been used by Louis the Fat at the beginning of the twelfth century. Some of the soldiers of William the Conquerour were armed with cross bows, at the battle of Hastings. They afterwards came into general use, but were considered so destructive, that, in 1139, the fathers of the church prohibited all true believers from shooting with the cross-bow, as being an instrument hateful to God and unfit for Christians. This decree was confirmed by Pope Innocent III. King Richard the First of England, however, persisted in the use of them; on which account it was deemed a judgment upon that monarch, when he was himself slain by the shot of a cross-bow, at the siege of the castle of Chaluz in Normandy. It was many hundred years before the weapon was laid aside. The latest period, at which they are mentioned in history, was in 1627, when some of the English were armed with cross-bows, in the expedition against the Isle of Rhee.

Some cross-bows were so large that it required the whole strength of one man to bend them; others could only be bent by a machine. These were used only in sieges. The smaller kind, which were of a size to be carried on the shoulder, are represented in the following cut.



It is composed of a bow of steel, (B) mounted on a wooden stock, (A) and provided with a string, (C) which is fastened near the middle of the stock to a nut or movable wheel (D). The bow-string was loosed, and the arrow discharged, by means of the trigger (E). The sights (F and G) enabled the archer to take aim. Various kinds of arrows were used. The one in the cut (H) was called a *quarrell*, and had a four-sided steel head. Stones and leaden bullets were sometimes discharged from them.

A cross-bow of the ordinary size, aimed point-blank, would kill a man at the distance of from forty to sixty yards; and if elevated, at one hundred and twenty or one hundred and sixty yards. It has been thought by some military men, that this weapon might be used with effect in modern warfare. The whistling of the arrows, it is supposed, would frighten the horses of the cavalry; and the infantry would be discomposed by seeing a cloud of deadly missiles in the air. This once murderous instrument has now passed from the hands of warriours to those of school-boys, who still keep up the good old practice of archery, to a considerable extent. There is, at this day, a manufactory of Cross Bows in Boston.

SONG.

She is not fair to outward view,
As many maidens be;
Her loveliness I never knew
Until she smiled on me,
O, then I saw her eye was bright,
A well of love, a spring of light.

But now her looks are coy and cold,
To mine they ne'er reply;
And yet I cease not to behol!
The love-light in her eye—
Her very frowns are fairer far
Than smiles of other maidens are.

Table Book.

FEDERATIVE GOVERNMENT.

[Murat's 'United States of America.']

If it be true that no government ought to exist except upon condition of promoting the interests of the governed, it is plain that legislation must change as often as these interests shift their ground. The system of centralization does not permit this change to be made. But in a federation like that of the United States, government follows the interests of the mass. No man pays a tax to support a public functionary useless to him; and the charge of defending the country falls upon those who require its defence. If in one quarter crimes are more frequent than elsewhere, it is there that judges, gaols, and gaolers are multiplied, but at the expense of that particular district. One state wants a sea-port improved, another a Guild-hall built; and each supplies its own wants. The rich and the poor contribute to all only according to their respective means, and to the share they enjoy in the works done.

Every thing is found, too, to be better done by those who know the local circumstances; and whatever in remote spots does not affect strangers, may be safely left to the inhabitants, whose interests and taste will in this way be properly respected. Opinions also differ; and it is good to let experiments be made in different neighbourhoods. In one a more convenient tax will be imposed, or an improved prison will be built. The example will become the subject of examination; and the general legislation will gain by individual success. The sum of happiness will be increased by this course, along with national civilisation.

Another great advantage of the Federative system is its effect in spreading intelligence equally over the country. Under it, there is no provincial inferiority. Education, fashion and wealth spring up and animate every part of the land instead of being confined to one city. Where the system of centralization prevails, the capital absorbs all. The men of ability throng to it, with the certainty of great numbers failing to find employment. In regard to intellect, Germany and Italy are federations; and the lights of civilisation are more equally spread abroad there than in France. Out of Paris, there is not to be found a single good college, a single good theatre, and scarcely any where a single man of good taste. Italy presents a striking example of the advantages and disadvantages of these two systems. Before Rome conquered and absorbed all, Magna Græcia was covered with flourishing towns. From the conquest downwards, they have been sacrificed to her, and to centralization. Now, in the south of Italy, Naples is every thing, and therefore the only large city. But in the north of Italy, in Tuscany and Lombardy, the division of the country into small states has raised fine towns everywhere. A common centre for a defensive government against the foreigner, is only wanted to ensure to these countries a glorious career in every object of public honour and national happiness.

This point is illustrated in a remarkable manner by the example of the United States; and it is shown advantageously by the comparison of all countries which possess local municipal administrations, as Holland, Belgium, and England, with France. Industry of all kinds prospers by being allowed room to expatiate in. Particularly are political abilities and honour improved and fostered by exercise in the distant provinces; where men are practised in public local business before they are called upon to guide the affairs of the state. At present in France, it is from Paris that candidates are sent, by the favour of a party, to be deputies for the departments. The stranger is elected, and, as was to be expected, deceives his constituents with whom he has nothing in common. The reverse of this ought to be the rule. Reputation in a Commune ought to recommend a real patriot to the body of surrounding electors; and the vigilance of those who have long known their Deputy, would be his best check against the seductions of the executive government.

WILD TURKIES AND DEER.

At the settlement of a Virginian backwoodsman, a flock of thirty wild turkies came and fed very sociably with his hogs; who, as there was plenty of food for both, manifested no swinish ill-breeding towards their guests. But the backwoodsman took his rifle, and standing in the door of his cottage, shot one of the turkies. The survivors, who knew nothing of the dangers of civilisation, manifested no terror at the report of the rifle, nor seemed disturbed when their companion fell dead among them. In this manner, the backwoodsman shot twenty-seven of the thirty turkies; when the three others, seeing that something was amiss, took flight into the forest. Thus it is that all Nature's wild children are taught, by systematic injuries, to flee from civilized man.

The same backwoodsman had tamed a young deer, which, in the winter, used to feed and sport with his children. In Summer and Autumn, the deer went into the forest, in search of food that she loved better than the bread from the children's hands. At intervals, she would return to visit the backwoodsman's family, accompanied by one or more wild deer, with whom she had become acquainted in the forest and invited them to the settlement. When the wild deer saw the cabin, they would make a stand, snuff the air, and try to satisfy themselves what strange object this might be. Meantime, the backwoodsman had seized his rifle, and getting within sixty or a hundred yards, let fly—and down fell the poor citizen of the forest with a bullet between his antlers. In this way, the treacherous tame-deer—for we cannot help thinking that she was a traitress, and knew what she was about—lured fourteen wild ones to their death.

FORCED ABSTINENCE.

A person was recently confined in one of the Ayrshire coal-mines, in Scotland, by the caving in of the pit; and twenty-three days elapsed before his release. When the place of his imprisonment was discovered, the air was so impure, owing to the gaseous exhalations of the mine, as to cause sickness in those who breathed it. It is supposed that this unhealthy air, by lowering the condition of the vital functions, and thus lessening the waste of the body, was instrumental in enabling the man to subsist so long without food. There was a pool of water in the cavern, whence he drank for the first ten days, but then happened to lie down at a distance from it, and was too weak to reach it again. When found, he was a mere skeleton; the backbone could be distinctly felt through the abdomen. He was carefully nursed, and for several days, appeared likely to recover; but experienced a relapse, and finally died. It is an axiom of Hippocrates, that death is ultimately certain, after a complete abstinence of seven days, whatever care may be taken of the patient.

Combativeness. A phrenological gentleman says, that the organ of Combativeness is so strongly developed in the heads of Frenchmen and Americans, as to be a very decided national characteristic, He hence infers, that these two nations ought most carefully to avoid going to war, and to choose any antagonists rather than each other. This precaution, he avers, is the more indispensable, because the combative organs, on both sides, will increase with indulgence, and finally become quite uncontrollable.

Sir Isaac Newton was born in 1642—the year of Galileo's death.

Florida was discovered by Ponce de Leon, on the 11th of April, 1512.

MODERN JEWISH PASSOVER.

[From the French.]

The feast of the Passover, among the modern Jews, commences on the fifteenth day of the month in which their fathers fled from Egypt, and which is called Nisan. It continues during seven days for the Jews who inhabit Jerusalem and its vicinity, and eight for the Jews in other parts of the world. The Sabbath which precedes the Passover is named the Great Sabbath; and on this day, the rabbin of each synagogue delivers a lecture, in which he explains the rules that are to be observed, on the approach of the feast.—During this time, the Jews are permitted to eat no other than unleavened bread, and must be careful that no leaven remains in their houses. To this end, on the thirteenth day, the most cautious search is made by the head of the family, in all parts of the house. All the leaven that can be found is collected in one vessel, preserved carefully during the night, and burned the next day with the vessel which contains it. Great solemnity is observed in performing this. At the feast of the Passover, no vessel is used which has ever contained leaven; and, for a similar reason, all the kitchen utensils, that are in ordinary use, are put aside and replaced by new ones, or by vessels which are preserved from one Passover to another. Even the kitchen tables, chairs, and floors, are purified, at first with hot water, and afterwards with cold.

When the purification is finished, they prepare the unleavened cakes, which are to be substitued for the ordinary bread. These cakes are kneaded but a short time before baking, in order to prevent all fermentation. They are generally small, round, and full of little holes; they should be made of flour and water only; but the richer class of Jews add eggs and sugar. It is not allowable to eat them on the first day of the feast, nor to drink any liquor made of grain, during its whole continuance. The Jews drink nothing but water, or the unfermented juice of the grape. On the fourteenth day of the month, the first-born of each family is obliged to fast, in remembrance that the first-born of the Israelites were passed over, when the angel of the Lord slew all the first-born of Egypt. On the evening of the same day, the men assemble in the synagogue to prepare themselves for the feast by prayers; and during this time, the females get ready the tables against their return. All the most beautiful furniture that they have, is brought to light on this occasion. On one of the plates, they place a quarter of roast lamb and an egg; and on another, three cakes; carefully enveloped in two napkins. On a third plate, they put lettuce, parsley, celery, and horse-radish. These are their bitter herbs. Near these herbs, there is a vessel of vinegar, salt, and water. There is also a dish, which is supposed to represent, in the eyes of the Jews, the bricks which their ancestors were compelled to make in Egypt; it is a thick paste, composed of apples, almonds, nuts, and figs, moistened with wine.

Around the table on which is served the paschal lamb, the unleavened cakes, and the bitter herbs, the whole family seats itself; and then commences what may be termed a ceremony, rather than a repast. The master of the house pronounces a benediction on what is set before them, and particularly on the wine. Then, leaning on his left arm, with the loftiest air that he can assume, (for he intends to represent the liberty which the Israelites regained, by their flight from Egypt,) he drinks a little of the wine; and this example is followed by the rest of the family. Each person then dips a portion of the bitter herbs in vinegar and eats them, while the chief of the family pronounces a second benediction. He then unfolds the napkins, and taking the middle one of the three cakes which are wrapped up in them, he breaks it in halves, and replaces one of the pieces between the other two cakes. The other piece he conceals under his seat, or under the cushion of his chair, in remembrance of the circumstance related by Moses (Exodus, xii. 34.) 'And the people took their dough before it was leavened, their kneading troughs being bound up in their clothes upon their shoulders.' Then the head of the family lifts the lamb and the egg from the table, while all who are present unite in taking up the plate which contains the cakes, and say, as with one voice:—'Here is the bread of poverty and affliction, which our fathers ate in Egypt; let him who is hungry come and eat; whosoever hath need, let him enter and eat of the paschal lamb. This year, we are here; the next if it be God's will, we shall be in the Land of Canaan. This year, we are slaves; the next, if God permit, we shall be free children of the family, and masters.'

The lamb and the egg are then anew placed on the table; the plate containing the cakes is removed in order that the children may inquire what is the meaning of this rite. If there are no children, some member of the family makes the question in regular form. In answer, an account is given of the captivity, the bondage of the Israelites in Egypt, their deliverance by Moses, and the institution of the Passover on that occasion. This narrative is followed by some psalms and hymns, chanted by all the family. The unleavened bread is then replaced upon the table, and morsels of it are distributed to all. It was formerly the custom to eat the paschal lamb; but this is now laid aside. The Jews assign as a reason, that it is not lawful to eat this holy lamb at a distance from the Land of Canaan, and in a foreign and unsanctified country.

A plentiful supper follows the ceremony, which is repeated, in nearly the same form, on the second evening. On the two first and the two last days of the feast, there is a great solemnity and much pomp in the synagogues; and the Jews abstain from all labour, almost as strictly as on the Sabbath. The four intermediate days are not so strictly observed. The last day terminates with a ceremony called Habdala, during which the head of the family, holding in his hand a cup of wine, repeats several chapters of Scripture, drinks a little of the wine, and passes the cup to the rest.

In India, the system of Nature is on a grand scale. The bamboo, which answers to the reed of other countries, grows to the height of fifty feet, and is eight feet in circumference. Other productions are of proportionate magnitude.

RUBIES.

Among the crown jewels of Pegu, there was formerly a most magnificent ruby. Such was its size and splendour, that the inhabitants of Pegu considered it a subject of national glory, that this inestimable precious stone was in the possession of their king. In the hyperbolical language of the East, it was said that, if the great ruby of Pegu were to be thrown into a river, its intense and brilliant red would turn the water to blood. When the Burmahs conquered Pegu, they searched in vain for the great ruby; nor could they, by any tortures or threats of punishment, discover where it was concealed. The king of Pegu, a small, weak, and paralytic old man, was stripped naked and shut up in an iron cage, in the city of Rangoon. In this situation he continued twelve years, and was never permitted to leave his iron cage, except on occasions of festival, when he was brought out to adorn the triumph of his conquerors. It was observed that the old king held continually in his hand a lump of pitch, which was supposed to be a charm or talisman, such as the superstitious people of that country are in the habit of carrying about their persons. At length he died, and his body was thrown out to be devoured by dogs and birds of prey. A Burmah soldier, perceiving that the hand of the dead king still grasped the lump of pitch, had the curiosity to force it from him with his spear, and examined it. It enclosed the long-sought ruby, which the poor old king had thus preserved for twelve years—prizing it as much perhaps, as he did his kingdom.

The Burmahs set a superstitious value upon rubies. It is, or was, the custom of many of them to make an incision into their flesh, generally in the arm or leg, and to put a ruby in the wound, which soon heals over it. There the gem remains, throughout the possessor's life, and is considered a charm of wonderful efficacy. Whenever the English fought a battle with the Burmahs, they used to examine the dead bodies, and, if they observed a rising in the flesh, would cut into it, in search of rubies.

NORWEGIAN PEASANTS.

Barrow, a recent traveller in Norway, gives a very lively description of the peasantry of that country. The men wear red skullcaps, and a short jacket and trousers; at their waists they carry large knives, in leathern belts ornamented with brass.—These knives are very serviceable instruments. They are used to cut wood, bread and cheese, to make chairs, tables, saddles, carts, and wheels, chests, boxes, bowls, spoons, and all other sorts of wooden ware. They often acquire great skill in carving, and produce excellent specimens of art, with no other tool than the knife. In 1688, when Christian V. visited Tronyem, a cow-herd, who had stood by the roadside to see the king pass, carved a wooden bust of him. In his momentary glimpse of the monarch's features, the self-taught artist had caught so accurate a likeness, and had wrought it out so admirably with his knife, that the bust was sent to the royal museum at Copenhagen, where it is still preserved. Each peasant is his own carpenter, blacksmith, weaver, rope-maker, tailor, and cabinet-maker. Some of them have made such proficiency in the mechanic arts, as to construct clocks, watches, and even church-organs.

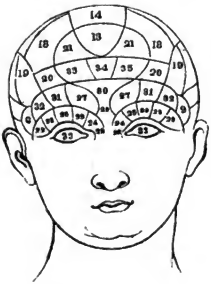
At a rustic feast, the table was a pine-board, well-scoured, on which were heaped great quantities of oat-meal cakes, of enormous circumference, but as thin as a wafer; there was also fish, dried and fresh; and huge bowls of cream, beaten up with eggs and other ingredients. But the most singular delicacies of the feast were two large wooden bowls of butter, in the centre of which was stuck a tallow candle. As the candle burnt down, it diffused rivulets of melted tallow over the surface of the butter, and both were eaten together. Whenever a guest enters a Norwegian cottage, a bowl of butter is set before him, in token of welcome. It is also customary to offer a glass of spirits. We Americans have been said to shake hands more frequently, and on slighter acquaintance, than any other people; but in Norway the custom is so universal, that, when a beggar has received an alms, he holds out his hand to exchange a shake with his benefactor.

Fidelity. Captain Walcot, at his execution for being concerned in one of the plots, in Charles the Second's time, advised his friends, 'that they would neither hear any man speak, nor speak themselves, that which they would not have repeated; for there is no such thing as faith in man to man, whatever there is in man to God: Either the tears of a wife, or a family of little helpless children, something or other, will attempt or provoke men to betray one another.' These are the bitter words of one about to die for a friend's breach of confidence. We do not concur with Captain Walcot, as to the universal faithlessness of mankind:—there are many single men whom we would trust, even when their truth to us might be ruin to themselves; but, to speak frankly, no husbands, no fathers. Not that a man's love of wife or child is stronger than his self-love—but with the former love, he patches up a much more plausible excuse to his conscience.

Curious Discovery. It has recently been discovered, that, if water be permitted to run out, through a hole in the bottom of the vessel which contains it, a vortex will be formed in a direction contrary to the course of the sun. This is said to be invariably the fact; and if the water be forcibly made to whirl round in the opposite course, yet, as soon as the opposing power is removed, it will begin to turn contrary to the sun. The discoverer of this phenomenon imputes it to the rotation of the earth on its axis, and deduces from it a method of finding the latitude of places.

The streets of Paris are daily thronged with twenty-five thousand horses, and fifteen thousand vehicles of all sorts.

The oriental nations wrote from the right side of the paper to the left; the western nations of Europe wrote from the left to the right, as we do; the Greeks wrote one line from the right to the left, and the next from the left to the right.



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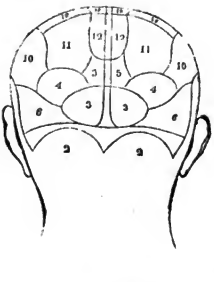


2.

PHRENOLOGY.

In the present state of the science, we cannot advise our readers to expend any considerable part of their time in the study of it. If we take the judgments of philosophers and scholars throughout the world, we shall find that the majority disbelieve its doctrines, while comparatively few give them their unreserved assent. Phrenology, therefore, in reference to the opinion of the wise, must still be ranked among the doubtful sciences. For ought we know, it may hereafter be as irrefragably confirmed as any other doctrine, in physics or metaphysics. On the other hand, the next generation may see cause to reject it, as utterly as we do judicial astrology, or the physiognomy of Lavater. Its strongest advocates have not yet settled the details of the science, nor perhaps its general principles, to their own mutual satisfaction. Let them agree among themselves, before they ask the public to agree with them. In the mean time, and till Phrenology shall have proved itself a branch of Useful Knowledge, we had rather fill our pages with certain and admitted truths, than with controverted theories. It is the business of the professed student to enquire into what is doubtful; the man, who has little time for study, should be sure that he does not waste that little on a worthless subject. He may otherwise find, after months and years, that he has spent half the leisure of his life in filling his mind with trash, which it will take him the other half to get rid of. The brief article, with which we intend to illustrate the above Phrenological Cuts, will comprehend all that it is now worth while to read about the matter.

The cerebral functions are divided by Spurzheim into two Orders:—the Feelings, or Affective Faculties; and the Intellectual Faculties. Both of these orders may be subdivided into several genera, and each genus into several species. Of the Feelings or Affective Faculties some are called *propensities*, and others, *sentiments*. The former are possessed both by man and animals; of the latter, some belong only to man, and others are shared with animals. The Intellectual Faculties are of two kinds—the *perceptive*, which have reference to the external world—and the *reflective*, which relate to the operations of the mind within itself. The subdivisions of these genera it is needless to enumerate. Each and all of the Faculties, both Affective and Intellectual, are supposed to operate by means of organs in the brain. The situation of the different organs may be seen in the Cuts, which represent the front and back view of a Phrenological bust.

I. In the list of Affective Faculties, the first is Destructiveness, the seat of which is immediately above each ear. Dr. Spurzheim speaks rather doubtfully as to the design of Nature in giving us this propensity. It is however universally possessed by man and animals. When strongly developed, it impels people to pinch, bite, scratch, break, tear, cut, stab, strangle, demolish, devastate, burn, drown, kill, poison, murder, and assassinate. II. *Amativeness*, or Physical Love. This organ is situated at the top of the neck, and its size may be known by measuring the breadth of the head, behind the ears. Its manifestations do not require to be described. III. *Philoprogenitiveness*. This organ is largest in females, and generally forms a protuberance on the back of their heads. Its effect is the love of offspring. IV. *Adhesiveness* is situated upward and outward from Philoprogenitiveness, towards each side of the head. Those who are constant in love, and faithful in friendship, are said to possess this organ large. It is larger in women than in men. V. *Inhabitiveness*. The size of this organ determines the decree of attachment to home. It is situated immediately above Philoprogenitiveness. VI. *Combativeness*. This is the organ of quarrelling and fighting—propensities which seem more likely to produce bumps on the head, than to be caused by them. It is situated between Philoprogenitiveness and Destructiveness. VII. *Secretiveness*. Persons in whom secretiveness predominates, delight in mystery; they conceal trifles as well as matters of importance; they pursue their ends by indirect means. The seat of this organ is on the side of the head, immediately above Destructiveness VIII. *Acquisitiveness*. When large, this organ indicates a natural thief; in its more moderate developements, it produces the desire for gain. It is situated above Secretiveness, and between Ideality and Cautiousness. IX. *Constructiveness* indicates a disposition to mechanical arts. Its place is at the temples. X. Next come the *Sentiments*, the firs

of which is *Cautiousness*. This organ, according to its greater or less developement, indicates different degrees of timidity. It is situated on the back part of the head, between Adhesiveness and Acquisitiveness. XI. *Love of Approbation*. This organ, which is sufficiently defined by its name, is situated directly above Adhesiveness. XII. *Self-Esteem* is larger in men than women. It is placed above Inhabitiveness, and bounded on each side by the Love of Approbation. XIII. *Benevolence* extends backward from the top of the forehead, where the hair begins to grow. The vicious and ill-tempered have a flat place or a hollow in that part. XIV. *Reverence*. This organ is situated on the top of the head, immediately behind Benevolence. Eminently devout people are said to possess it very large. XV. *Firmness*, when largely developed, indicates obstinacy; when too small, the character lacks strength. Its seat is on the top of the head, between Self-Esteem and Reverence. XVI. *Conscientiousness*. This organ is situated on each side of Firmness, and next to the Love of Approbation. Its office is, to judge the right or wrong of all our thoughts and actions. XVII. *Hope* is situated on the side of the head, beneath Firmness and above Acquisitiveness. XVIII. *Marvellousness*. People, who possess this organ very strong, seek and find something wonderful in the most ordinary occurrences. It is situated in front of Hope, and is partly bounded by Reverence. XIX. *Ideality*. This is the poet's organ. It produces the sublime in the arts, and causes enthusiasm in every pursuit. It is placed next to Marvellousness, and these two organs frequently act together. XX. *Mirthfulness*. Before a person tries to be witty, he should examine his head in search of this organ. If he do not find a prominence on the side of his forehead, towards the upper part, he may relinquish all hopes of exciting a laugh, save at his own expense. XXI. *Imitation*. This organ is very strong in mimics, and should be so in monkeys. It is essential to success in the arts of drawing, painting, and sculpture. Its position may be seen in the Cut. This completes the list of the Affective Faculties.

Next come the Intellectual Faculties, which are all situated in the forehead or its vicinity. XXII. *Individuality* is immediately above the root of the nose, between the eyebrows. It causes us to take notice of external objects. XXIII. *Configuration*. The size of this organ, when large, is indicated by the distance between the eyes. It disposes us to observe the shape and aspect of things, and to assign figures to our own conceptions;—thus, when we think of Death, we figure to ourselves a skeleton. XXIV. *Size*. Those, in whom this organ is largely developed, form accurate ideas of the size of objects. XXV. *Weight*. This faculty procures the knowledge of the specific gravity of objects. XXVI. *Colouring*, or the organ of distinguishing colours. This varies so much in different individuals, that some have no perception of colours, or can merely tell black from white, while others can accurately discriminate among 750,000 shades of colour. XXVII. *Locality*. The faculty of remembering places. XXVIII. *Order* is situated above the eye, between Colouring and Calculation. Among other good effects, it produces cleanliness and tidiness. XXIX. *Calculation*. In persons possessed of great powers of reckoning, the external angle of the eyebrow is either pressed downward or remarkably elevated. XXX. *Eventuality*. This organ forms a prominence in the middle of the forehead, when largely developed. Individuals who possess it are attentive to all that happens around them. It is essential to secretaries, historians, teachers, and editors. XXXI. *Time*. This faculty enables to conceive of the duration of phenomena, their simultaneousness or succession. XXXII. *Tune*. The organ of Tune bears to the ears the same relation as that of colour does to the eyes. When very large the external corners of the forehead are rounded by it. XXXIII. *Language*. This organ, in a high degree of developement, renders the eyes very prominent. It enables people to find words for their ideas. XXXIV. *Comparison* points out the similitudes, analogies, differences, or identity of things, and comprehends their relations, harmony, or discord. XXXV. *Causality* is situated on each side of Comparison, and, when largely developed, gives a hemispherical shape to the upper part of the forehead. All which man produces by art, depends upon this faculty. Comparison and Causality combined constitute reason.

A Benefactor.—Laud, Archbishop of Canterbury in the reign of Charles the First, was perhaps the greatest benefactor that ever New England had. True; he meant nothing of the kind; yet, without his priestly tyranny, the Mayflower would never have been chartered—the hallowed feet of those old ministers and godly men would never have stepped upon the Rock of Plymouth—and Winthrop and all his associates might have worshipped in the parish-churches where their fathers did. New England would have remained long a wilderness, and at last have been settled by mere worldly adventurers, the most desperate of their generation, instead of the wisest and holiest. Their descendants would not have possessed that distinctive character which brought about the Revolution. Liberty would have had no cradle; and the world would have been hindered in its march, perhaps for centuries, but for the timely aid of the Archbishop. Allowing this estimate of his influence to be greatly overstrained, he yet stands a memorable example of the providence by which Error is made to do for Truth, what Truth could not so well do for itself. Errour fights in the dark, and inflicts the heaviest blows on its own party in the battle; all its strength, as appears by the final result, goes to eke out the weakness of the adversary. For more than errour, in addition to great infirmities of temper, Archbishop Laud does not seem to be accountable. He did not, so far as we can judge from his private diary, sin against his own conscience. At his death, he showed the spirit of a martyr; for, when about to be beheaded, looking through the boards of the scaffold, he saw some of the crowd underneath, and desired that the chinks might be closed up. 'I desire not,' said the fallen Archbishop, 'that my blood should be upon their heads.'

APRIL FOOLS.

It is a curious fact, that the custom of making April Fools prevails in the most widely separated regions of the globe, and that, everywhere, its origin is hidden in remote antiquity. The Hindoos on the Ganges practise it; in all the European countries it exists, in one shape or another; the French make what they call April Fish; and, in America, it is one of the few mirthful customs which our fathers brought from merry Old England. When once such a fashion was established, we should suppose that human nature might be pretty safely trusted to keep it up. It is desirable to have the privilege of saying, on one day in the year—what we perhaps think, every day—that our acquaintances are fools. But the false refinement of the present age has occasioned the rites of the holyday to fall somewhat into desuetude. It is not unreasonable to conjecture, that this child's play, as it has now become, was, when originally instituted, a vehicle of the strongest satire which mankind could wreak upon itself. The people of antiquity, we may imagine, used to watch each other's conduct throughout the year, and assemble on All Fools' Day, to pass judgment on what they had observed. Whoever, in any respect, had gone astray from reason and common sense, the community were licensed to point the finger, and laugh at him for an April Fool. How many, we wonder, whether smooth-chinned or gray-bearded, would be found so wise in great and little matters, as to escape the pointed finger and the laugh.

It is a pity that this excellent old custom has so degenerated. Much good might still result from such a festival of foolery; for though our own individual follies are too intimately blended with our natures to be seen or felt, yet the dullest of us are sufficiently acute in detecting the foolery of our neighbours. Let us, by way of example, point our finger at a few of the sage candidates for the honours of All Fools' Day.

He who has wasted the past year in idleness, neglecting his opportunities of honourable exertion; he who has learnt nothing good, nor weeded his mind of anything evil; he who has been heaping up gold, and thereby gained as many cares and inquietudes as there are coins in his strong-box; he who has reduced himself from affluence to poverty, whether by riotous living or desperate speculations: these four are April Fools. He who has climbed, or suffered himself to be lifted, to a station for which he is unfit, does but stand upon a pedestal, to show the world an April Fool. The gray-haired man, who has sought the joys of wedlock with a girl in her teens, and the young girl who has wedded an old man for his wealth, are a pair of April Fools. The married couple, who have linked themselves for life, on the strength of a week's liking; the ill-matched pair, who turn their roughest sides towards each other, instead of making the best of a bad bargain; the young man who has doomed himself to a life of difficulties by a too early marriage; the middle-aged bachelor who is waiting to be rich; the damsel who has trusted her lover too far; the lover who is downcast for a damsel's fickleness;—all these are April Fools. The farmer, who has left a good homestead in New England, to migrate to the Mississippi Valley, or any where else, on this side of Heaven; the fresh-cheeked youth who has gone to find his grave at New Orleans; the Yankees who have enlisted for Texas; the merchant who has speculated on a French war; the author who writes for fame—or for bread, if he can do better: the student who has turned aside from the path of his profession, and gone astray in poetry and fancifulness:—what are these, but a motley group of April Fools? And the wiseacre who thinks himself a fool in nothing—Oh, superlative April Fool!

But what a fool are we, to waste our ink and

paper in making out a catalogue of April Fools. We will add but one or two more. He who, for any earthly consideration, inflicts a wrong on his own conscience, is a most egregious April Fool. The mortal man, who has neglected to think of Eternity, till he finds himself at the utmost bourn of Time,—Death points at him for an April Fool. And now let the whole world, discerning its own nonsense, and humbug, and charlatanism, and how in all things, or most, it is both a deceiver and deceived—let it point its innumerable fingers, and shout in its own ear—Oh, World, you April Fool! Lastly, if the reader in turning over this page, have not profited by the moral truths which it contains, must we not write him down in our list of April Fools? But if there be no truths, nothing well said, nor worth saying, we shall find it out anon; and whisper to ourself,—'Mr. Editor, you are an April Fool.'

AMERICA AND THE ANCIENTS.

[From the French.]

In 1786, Charles III, king of Spain, sent an expedition to America, to examine the Mexican antiquities, and especially those of Milta and Palenqué. The researches of the travellers produced no important result. Some years later, a second expedition sailed from Spain, with the design of examining more carefully the places which had already been explored. On their arrival in Mexico, they ascertained that there was a deserted and ruinous city, six leagues in extent, situated in the province of Tzendales. They penetrated into the frightful solitude which surrounded it, and were amazed to find themselves in the midst of a city, the solidity of whose edifices, and the magnificence of whose monuments, were no less wonderful than the immensity of its extent. Antique idols of granite or porphyry, pyramids, subterranean sepulchres, foundations of huge stones, bas-reliefs of colossal size, either sculptured on blocks of granite, or modelled in stucco-work, zodiacks, hieroglyphics, and other relics of remote antiquity, met their eyes on all sides. This metropolis, concealed for ages in the middle of a vast desert, had remained unknown till 1750. It was at that period that the Spanish government conceived the first design of the scientific expedition, which was ordered and executed in 1786. This, and two succeeding expeditions, cost Spain a hundred thousand dollars, which, however, were repaid by the advantages that accrued to science.

It is natural to inquire, how came these wonderful works of man in the desert, and who were the people that created them? Numerous proofs, among which we may reckon the form and architecture of the Mexican ruins, leave no room to doubt, that the New World was visited and probably colonized by voyagers from Europe, many centuries previous to the expedition of Columbus. The temples of Mexico are constructed on the same plan as those of Délphi and Pausanias, and were called *Teo-callie*—a word of Greek origin. A Mexican planter has recently discovered a small vault, in which were two ancient swords, a helmet, and buckler, all greatly damaged by rust, and an earthen pitcher of great size. On the hilt of one of the swords was engraved a portrait resembling that of Alexander, and on the helmet was a representation of Achilles, dragging the dead body of Hector round the walls of Troy. On the stone, which covered the vault, was an inscription in Greek, partly obliterated, yet sufficiently legible to show the names of Alexander, king of Macedon, and of Ptolemy, the commander of his fleet. If this story be authentic, we might conjecture that Ptolemy and his fleet were driven into mid-ocean by a tempest, and finally cast on the shores of Brazil, where they founded a now forgotten empire.

Hanging Rock.—Four miles above the mouth of Little Sandy river, (says the American Journal of Science and the Arts,) on the right bank of the Ohio, there is a celebrated cliff of sandstone, called Hanging Rock. The upper portion of the cliff, which is nearly four hundred feet high, projects over the upright face of the rock, like the cornice of a house. It extends also some distance up a creek, which here makes into the bank of the river. The Ohio flows close to the base of the cliff, while, directly beneath the projecting roof of the Hanging Rock, is erected a forge for refining iron. The blasts of its immense bellows, and the thundering strokes of its tremendous hammer, echo and reverberate along the cliff, so as to give a lively idea of the workshop of Vulcan, within Mount Ætna, where he and his Cyclops forged Jupiter's thunderbolts.

Burning Spring.—One of the most remarkable of the gaseous Springs, in the valley of the Kenawha, is called the Burning Spring, and is near the centre of the salines. The gas rises, through the alluvial soil, into a cavity, of about a foot in depth and five or six feet in diameter. It is eight or ten rods from the river. Except in dry seasons, the cavity is partly filled with water, through which the inflammable air makes its way with a considerable ebullition. On being kindled with a firebrand or a candle, it throws up a light, lambent flame, several feet high, which illuminates the neighbouring objects in a singular manner, and gives a ghastly aspect to those persons who surround this Fountain of Fire. The gas has been gushing forth for unknown ages, without any perceptible diminution of the quantity.

Fortitude.—General Pictou was one of the bravest and best officers in the British service. In one of the conflicts that preceded the great day of Waterloo, he received a very severe wound, which broke several of his ribs; but, being aware that a decisive battle was at hand, he concealed the injury from all but his confidential servant, lest he should be intreated to remain under the surgeon's care. At Waterloo, he placed himself at the head of his division, and led a charge against the French. It is supposed that his wound would have been mortal, and that the hand of death was even then upon him; yet, worn out, feverish, and agonized, he still concealed his torment, and was foremost in the charge. While glancing along the line, and waving his sword to encourage his men onward, he received a bullet in the brain, and fell back on his horse—dead.

MARTHA'S VINEYARD.

It is not generally known, that, in ancient times, the Vineyard, with Nantucket and the neighbouring islets, constituted a separate colony, wholly independent of any other jurisdiction in America. This territory was granted by William, Earl of Stirling, to Thomas Mayhew, formerly a merchant in the province of Massachusetts Bay, but whose fame, rather traditionary than historical, has brought him down to posterity under the title of Governour Mayhew. He appears to have had as real and legal a claim to the gubernatorial dignity, as any of the French, Dutch, Swedish, or English potentates, who then bore sway within what are now the limits of the United States and Canada. Governour Mayhew came into office in 1642; at which time, there were a few English families at one extremity of the island, whom Providence had brought thither, while their vessel was wandering along the coast in search of Virginia. The descendants of the Nortons, who were among these early settlers, are now very numerous in the Vineyard. The rest of Governour Mayhew's territory was inhabited by the red men, whose sachems seem to be independent chiefs, yet owed a species of feudal homage to the great Sachem of the Wampanoags, who ruled on the main land. The Governour had been partly induced to emigrate to Martha's Vineyard, by the hope of converting the Indians to Christianity; and contemporary writers give such statements of his success, as we might find it difficult to believe; if the French missionaries had not also proved, at about the same period, that the red man had a soul for the white man's Heaven. Be that as it may, Governour Mayhew undoubtedly gained an influence over the Indians of the isles, which was exerted equally for their good as his own, and that of his countrymen in Plymouth and Massachusetts. During his rule, there were no wars in the Vineyard; by the mild energy of his character, the Indians there were kept quiet, while king Philip was stirring up the savages to their last great struggle with the civilized invader; and when the good old Governour was called away, the martial spirit of the race had long been fled.

We love to dwell upon the history of the little province, and eke out its unwritten portions by the aid of fancy. We wonder whether the inhabitants ever troubled themselves about a constitution, a charter, or a bill of rights? Did they grumble at the sovereignty of Great Britain, and bluster about independence? Did the people send representatives to the General Court of Martha's Vineyard, or was it the custom, as formerly in Massachusetts, for the whole body of the freemen to legislate in person? Or, as appears more probable, was Goverour Mayhew's head the legislative, and his hand the executive branch of power? If so, the good old man must be set down in the list of despots, and, but for a kind and upright heart, might have been as black a tyrant as the worst of them. How large a standing army did this potentate maintain, and what portion of the troops kept guard before his palace-gates, or attended him, when he marched through his dominions? Where did the prison stand, and where the scaffold, and how many traitors, or other criminals, were executed under Governour Mayhew's warrant? What rebellions or intestine commotions disturbed the Vineyard, and what hostilities with the rival powers across the Sound? What were the alliances of this Commonwealth, and what the general system of its foreign policy? For the support of his administration, did the Governour levy taxes at his own pleasure? And did he, like his brethren of Massachusetts, assume the regal prerogative of coining money? On his death-bed, did he nominate his successor?—or was it by Divine Right that Thomas the Second succeeded to his father's chair of state? For certain it is, that the dynasty of the Mayhews was continued in the person of the first ruler's son, who also, we believe, combined Church with State, and was himself the whole clergy of the province. Legislator! Captain-General! Chief-Priest! All that monarchs aspire to be, such were the Mayhews of Martha's Vineyard.*

The separate sovereignty of this little insular nation was more than once disputed by the large provinces in its neighbourhood. In 1644, the Commissioners of the United Colonies (on what pretence, save the right of the strongest, does not appear) annexed Martha's Vineyard to the jurisdiction of Massachusetts. This was during the civil war in England, when an appeal to the King must have been fruitless, and one to the Parliament would have resulted in its sanction of the Puritan usurpation. It is probable, however, as we do not trace its strong character in the early history of the island, that Massachusetts was satisfied with asserting its title, and made no attempt to deprive the Mahews of their just authority. Wherever the energetic government of the Bay-province did actually bear sway, its influence was too perceptible to be overlooked, and too peculiar to be mistaken. In after years, the claim was either withdrawn or forgotten, and the Mayhews ruled the Vineyard in peace, till late in the reign of Charles the Second. The island, without regard to the previous title of Governour Mayhew, was then granted to the King's brother James, and annexed to the province of New York, which had recently been taken from the Dutch. But neither in this case, was the external jurisdiction much more than nominal; and Martha's Vineyard still remained a separate dominion, merely paying the Duke of York an annual tribute of two barrels of pickled cod-fish. His Royal Highness being a Catholic, the object of this arrangement was doubtless to obtain a good supply of fish for his table, in Lent and other seasons of abstinence from flesh. A Whale would have been a tax more honourable to the bold hunters of the deep. The cod-fish subsidy was however done away in 1692, by a final union between Martha's Vineyard and Massachusetts, and the effective exercise of the authority of the latter province within the limits of

* Governour Mayhew died in 1681, at the great age of ninety-three. Gookin says, that Thomas Mayhew, the eldest son of the Governour, was lost on his passage to England, before his father's death. It must therefore have been Matthew, the second son, who succeeded to the family honours and prerogatives. There are many of the name of Mayhew still in the Vineyard, and they appear to feel a proper pride in their origin.

the island. Thus ended the rule of the peaceful Mayhews.*

In time of peace, the jurisdiction of Massachusetts has ever since had the same supremacy in Martha's Vineyard, or Duke's county, as in any of the counties on the main land. But a province, which is indefensible in war, cannot strictly be said to form an integral part of the country with which it is politically connected. It must always be allowed a degree of independence, in holding intercourse with the enemy; it would be its utter ruin, to take an active part in hostilities; and however inoffensive in this respect, it will be likely to suffer more, save in the slaughter of inhabitants, than any other portion of the territory. This has been the case with Martha's Vineyard. We are not informed of the extent to which its prosperity was affected by the old wars between France and England; but in the Revolutionary contest, it was a severe sufferer, without the satisfaction of taking any revenge on its oppressors, or of helping to establish the liberties of America. The sons of the Vineyard were captured, and confined in the British prison-ships, where many of them died. The whaling business was entirely broken up. The island was continually exposed to the ravages of the enemy's cruisers; and in 1779, the English General Gray robbed it of one hundred and twenty oxen and ten thousand sheep, leaving the grass to grow uncropped on its desolate pastures. Before the close of the war, Martha's Vineyard exercised one of its ancient rights, as a separate colony, by sending an agent or ambassadour to London, to represent the proceedings of this wholesale cattle-stealer, and negociate a settlement of the claims which had thereby accrued. About a third of the value of the sheep and oxen was repaid by the British government. The Vineyard long suffered under the depressing influence of its Revolutionary misfortunes, and perhaps had not entirely recovered from them, when they were in some measure renewed by the war of 1812.

Thus much for the history of the island. In regard to its present condition, a month's residence enables us to give a few hasty sketches, which perhaps may entertain the reader; as Martha's Vineyard lies somewhat out of the beaten track of tourists and description-mongers. The settlement nearest to the main land is that of Holmes's Hole; a name familiar to the wives of New England seamen, when, searching the ship-news, they are gladdened with the intelligence that their husbands have arrived thither, and are only awaiting a fair wind to bring them home. The port is separated from Falmouth, on the main, by the Vineyard sound, which is here about nine miles across. It is a small and rather shabby-looking town, with a few streets, which plough through such a heavy sand that the inhabitants have acquired a peculiar gait, by the constant habit of trudging ankle-deep along the sidewalks. The young girls manage to perform it very gracefully. Some of the houses are painted yellow; others have a greenish tinge; but generally they present a dark and weather-beaten aspect, betokening that the inhabitants care little for outward show. The meeting-house has the same neglected look, and might, whether fairly or not, convey the idea that religion has gone somewhat out of fashion. Altogether, the town offers a strange contrast to one of our white inland villages, with the architectural prettinesses of the dwellings, and the neat church, looking as if it were painted anew every Saturday in readiness for the Sabbath. The sandy lanes of Holmes's Hole will as little bear a comparison with a smooth village street, extending between two broad and verdant margins, and overshadowed by lofty elms, which almost intermingle their heavy boughs across it. In fact, there is a terrible deficiency of green grass and tall trees. Behind the town, the land rises in gentle swells, on the side of one of which may be discerned a small company of slate and marble grave-stones, marking the site of an ancient burial place.

There are several shoe-maker's shops in the town, one or two variety stores, a shop for the sale of ready-made clothing, and a post-office, where every mail-day, the whole correspondence of Holmes's Hole and the vicinity is displayed at a window. There are two school-houses, each looking like a church in miniature, with a little tower and cupola; and a bell which jingles as regularly as that of a college chapel. In school-hours, the voices of the children might be heard a long way off, all reciting their lesson together, in a sort of half-musical chant. Several times in the course of a day, a red flag was displayed at the door of an auction-room, and the auctioneer rang a hand-bell with such prodigious emphasis, that at least half a dozen maids and matrons waded through the sand to bid upon his goods. Sometimes, an old fashioned chaise drove into town, or else a wagon toiled heavily along, lugged by a yoke of the fine cattle of the Vineyard. Next, perhaps, the village doctor would be seen on horseback, plodding forth ten miles or more, to spend all the night abroad, for a scanty fee. And now, should there chance to be any passengers to-day—for its arrival depends upon that contingency—now appears the stage-coach from Edgartown, the insular metropolis. Such are the trifles that serve to amuse the stranger, when the sultry sun and the heavy sand compel him to idle away the day at the window of the inn.

There are two wharves at Holmes's Hole; one extending out from the central part of the town, and the other about a mile below, at the entrance of the harbour. It is pleasant, in a Summer morning, to lean against one of the posts at the end of the inner wharf, and watch the boys angling for cunners, eels, scaupog, and other fish with Indian names; or to mark the arrival and departure of the packets, that ply between this port and New Bedford or Nantucket. The masters of these sloops seem to take more pride in them than in their dwelling-houses, if we may judge by the decorations and pretty flourishes of paint about the stern and bows. Before the steam-boat came into competition with them, they had a great run of business, both as to freight and passengers, and still have not much cause to grumble. The flag being set—that is to say, lowered a little from the mast-head, as a signal

* The writer in the Massachusetts Historical Collections, from whom we have drawn most of the foregoing statements, speaks of the cod-fish tax, on the authority of tradition.

of sailing orders—down come the passengers, with their trunks and great-coats, and step hastily aboard. But one old gentleman, bethinking himself that he has left a bundle ashore, entreats the skipper for time to run and fetch it. 'Well, well! But bear a hand!' cries the impatient skipper; and off sets the old man at full speed. Meantime, the mainsail is hoisted; a horn is blown repeatedly to hasten the loitering passenger; the boys, playing about the deck, are ordered to bundle ashore; the moorings are on the point of being cast off—one instant more, and the old man will be too late. 'Stop! Stop!' he bellows from afar, and is now seen at the upper end of the wharf, with his baggage and sea-stores, consisting of a pan of gingerbread and the bundle aforesaid. He tumbles aboard, and the sloop, with her broad sail fluttering and shaking, glides slowly from the wharf; when up goes the jib, and she begins to feel the wind.

Then we turn elsewhere for amusement, and perceive an old whaler standing in the shade of one of the warehouses. He has weathered Cape Horn some half a dozen times, but now makes it his business to catch fish along shore, and this morning, off Gay Head, has captured a prize that may be worth looking at. It is a sword-fish, the body already cut up, but the head entire, and with the sword protruding from the snout, five feet in length, flat, two-edged—an awful weapon! Speak to the old man, and he will explain how he harpooned the monster, and tell us, moreover, that, once upon a time, sitting in the stern of his boat, she was staggered with a sudden shock; and up came a sword through the bottom, directly between the astounded fisherman's legs. The sword-fish is very common in these waters; its meat is dry, but not ill-flavoured, and somewhat resembles halibut.

But the greatest incident of the day, is the arrival of the steamboat from New Bedford, bound to Nantucket. A flag at the lower wharf is the signal of a single passenger, and will call her into the entrance of the harbour; another flag at the upper wharf denotes three passengers or more, and will bring her all the way up to town. Both signals are set to-day. And here she comes round the point, already audible by the distant beating of her wheels, and whiz of steam, which rapidly grows more distinct. Up she drives, right against the wind, nears the wharf, runs foul of a sloop's bowsprit, lands a gentleman, a lady, and a horse, takes on board three or four of the Vineyard people—and is off again! But the curses of the packet-masters follow her, as she goes snorting on her way. 'May her boiler burst!' they say in their hearts; and we say, 'Heaven forgive them!' For our own part, however, we prefer a vessel that voyages in the good old way, by the favour of the wind, instead of one that tears her passage through the deep in spite of wind and tide, snorting and groaning, as if tormented by the fire that rages in her entrails.

If a person can muster resolution to wade through the sands of the village and reach the neighbouring pastures, he may then walk pleasantly on a soil thinly bestrewn with grass, and intermingled with moss, which gives an elastic spring beneath the feet. In a ramble, one Sabbath afternoon, we came to a secluded spot, hidden among the surrounding hills, and found three grave stones, of which the inscriptions were not likely to be often read. Yet one of them was worth reading. It was consecrated to the memory of John and Lydia Claghorne, a young whaler and his wife, the former of whom had perished on the farther side of Cape Horn, about the same time that Lydia had died in childbed. The monumental verse ran thus:—

> John and Lydia, that lovely pair,
> A whale killed him, her body lies here;
> Their souls, we hope, with Christ shall reign—
> So our great loss is their great gain.

John Claghorne has now slept beneath the sea, and Lydia here in her lonesome bed, between sixty and seventy years. One of the rarest things in the world, is an appropriate and characteristic epitaph, marked with the truth and simplicity which a sorrowing heart would pour into the effusion of an unlettered mind; an expression, in unaffected language, of what would be the natural feelings of friends and relatives, were they standing above the grave. It seems to us, that this rude and homely verse may be ranked among the master-pieces of monumental literature.

The general cemetery of Holmes's Hole is at some distance from these three stones, and in open sight of the town, which here looks prettier than elsewhere, especially when brightened by the declining sunshine. On the left appears the sea, the sound, and Falmouth on the main, far enough off to be shrouded with mist; on the right is a salt-water lake, separated from the harbour by an isthmus of sand; and before us, at the foot of the hill, lies the village, its windows kindling cheerfully in the western sun. We stand among the graves, and do not much wonder that the dead people retained their attachment to their native island, through every change of clime, and came back hither to be buried under its sandy sods—all, save those who rest in the caves of ocean. There is here a collection of about fifty grave-stones, and a far greater number of nameless graves, many of which are so old as to be hardly discernible. Some are crossed by an immense foot-path. A few of the monuments were marble, and inscribed with deeply cut letters, which had been painted black, but were now washed nearly white again by the moisture of the climate. The moss soon gathers on a grave-stone here. Many of the stones were admirable specimens of antique sculpture—the antiquity of a hundred years, or more—and were carved all round with a border of funeral emblems, and a death's head or a cherubim on top. All these had been imported from the main-land, or some, perhaps, from England. But there was one rough gray stone which bore scarcely any marks of having been touched by a human hand, except that the initials S. L. and an ancient date, were rudely inscribed upon it. This humble memorial, wrought painfully by Grief herself, and doubtless bedewed with tears, was more honourable both to the mourner and the dead, than the costliest monument that ever was bought and sold. In a spot where there were several children's graves together, almost obliterated by time, a wild rose, red, fragrant, and very small, had either sprouted from

one of the little mounds, or been planted there by the forgotten parents of the forgotten child, and had now spread over the whole group of those small graves. The mother's dust had long ago been mingled with the dust over which she wept—the nameless infant, had it lived would have been hoary and decrepit now—yet, all this while, though marble would have decayed, the rose had been faithful to its trust.—It told of affection still.

ENGLISH PAUPERS AND AMERICAN CONVICTS.

An English writer asks, why the paupers of England cannot be turned to as profitable account as the convicts of America. He adverts to the prison at Sing Sing, which is calculated for one thousand male convicts, all of whom are lodged in separate cells, which are well ventilated, lighted, and warmed with heated air. A whole row of ten or fifteen of these cells are locked by turning a single key. The convicts are well clothed, have sufficient food, good medical attendance, and so many comforts that their situation is no otherwise a punishment, than by the loss of liberty, and of converse with their fellow beings. It will be supposed that the building of the prison, and its maintenance on such a system, would have burdened the State with an immense expense. But the reverse is the fact. The convicts were at first located on the site which had been chosen, where they lodged in wooden huts, and were guarded by soldiers, till they had quarried the gray marble or limestone of which the prison is constructed,—and actually built, with their own hands, the cells that were to immure them from the world. By the various trades carried on in the prison, such as stone-sawing and cutting, carpentry, shoemaking, cabinet-work, smith's work, engraving, tailoring, &c. the convicts maintain themselves, and leave a surplus in the treasury. The English writer proposes, that the paupers of his own country should be managed on a similar system; or at least, that they should be taken in charge by the government and employed on the public works, which are now ill executed, and at a vast expenditure.

Wolfe's Monument.—Before Lord Aylmer, the late Governour of Canada, left Quebec, he caused a monument to be erected to General Wolfe, on the plains of Abraham. The base is seven feet square and three feet high, and is formed of granite boulders, which inclose the very stone against which Wolfe was leaning, when he breathed his last. These masses of granite are united with blue-water cement. On the base is placed a large square lime-stone, which forms the plinth of the column; next, there are polished marble rings, from which rises a circular pillar of polished dark blue marble to the height of about seven feet, and with a diameter of two and a half feet. The height of the whole monument is twelve feet. The inscription is in large capitals, and cut deep into the stone—Here died Wolfe victorious. The monument stands on the left of the city, and at the distance of about one hundred yards. It has been assigned as a reason for not sooner erecting a memorial to a man, whose life and death conferred so much glory on his country, that such a trophy would continually have reminded the conquered Canadians of their defeat and subjection. But now, after a lapse of seventy-seven years, the descendants of the vanquished will not feel sore on the subject. Ought not Montcalm also to have a monument on the field of his honourable defeat and death?

POTATOES.

When a particular kind of potato has become known for its excellence, that kind is used for propagation; but after a few years, it is observed to degenerate, and lose the qualities which at first distinguished it. This is probably owing to the method of propagation. The potatoes themselves—or, in other words, the roots of the plant—are used for seed, instead of the true seed, which is annually produced in the small berries on the stalks. Thus the potato wears out, in a manner analogous to that of the fruit of grafted trees. Varieties of the potato, which have been recently obtained from the seed berries, will admit of being propagated, for several years, by planting the potato itself. The ground, before planting, should be thoroughly pulverized; the manure should be well fermented; the potatoes should be planted whole, and not deprived of their first shoots.

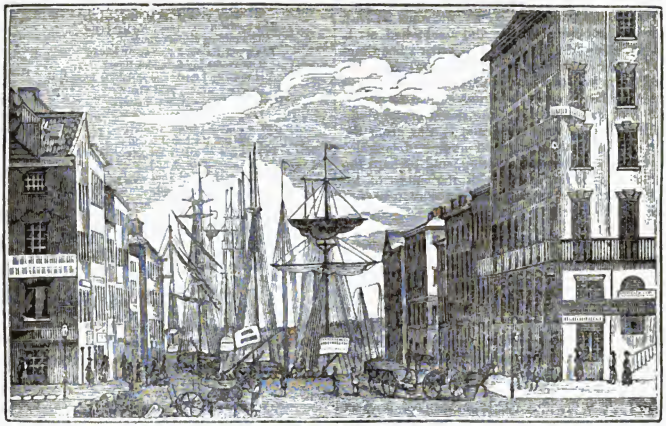
Rot in Sheep.—This disease is thought to be occasioned by the butter-cup, or crow-foot, the acrid qualities of which are well known. This weed is refused by horses, cattle, and even pigs. Geese and sheep, who eat it, are observed to be often affected with diseased livers. For the cure of the rot, an ounce and an half of salt, in a pint of water, is to be given, three successive mornings, on an empty stomach. For its prevention, the sheep should have access to the fresh earth of mole-hills or worm-holes; and its present frequency in England is supposed to be partly owing to the destruction of moles and worms.

Colossal Monument.—The column, recently erected at Petersburgh to the Emperour Alexander, consists of a solid block of granite, eighty-five feet in length, at the summit of which is a bronze statue of twenty feet. The pedestal is twenty-five feet in diameter. The materials were brought from Finland, and a vessel was constructed purposely for the conveyance of the enormous block of granite—the largest, probably, that ever was quarried entire

Horse Shoes.—A new kind of horse-shoe has been invented, which promises fair to supercede those now in use. They are manufactured by steam, at the rate of 3000 an hour, and may be sold at one quarter the price of common horse-shoes.

Mr. Henry Stathart, an iron-founder, of Bristol, England, has invented an apparatus for converting salt-water to fresh, and at the same time cooking provisions for the passengers and crew of the vessel. This is said to be one of the most useful inventions of modern times.

Shades over the eyes, in reading, are considered injurious.



View of Coffee House Slip, New York.

COFFEE HOUSE SLIP.

The engraving represents one of the haunts of business, in the commercial capital of America. Coffee House Slip, so named from its vicinity to the Tontine Coffee House, is situated at the foot of Wall Street. Since the sketch was taken, the Great Fire has swept across this portion of New York, and left smoking ruins in its track, instead of the closely wedged edifices of the day before. It is a singular truth, that the mere shadowy image of a building, on the frail material of paper, which might be annihilated in an instant, is likely to have a longer term of existence than the piled brick and mortar of the building. Take a print like this at the head of our article, and an edifice like the large one on the right hand corner, and the chances are, that, a century hence, the print will be as good as ever; while the edifice, though it may not have crumbled beneath the weight of years, will probably have been torn down to make room for modern improvements, or utterly destroyed by fire. Should posterity know where the proud structure stood, it will be indebted for its knowledge to the wood-cut.

To a person of quiet and secluded habits, whether he live in the country or in a retired street of the metropolis, there can be no pleasanter ramble than to the vicinity of one of the principal wharves. He finds himself, as it were, in a different world, and takes note of every thing around him, with the minuteness of a traveller to far distant lands. The great ships, that have come speeding night and day from the uttermost parts of the earth, and are now moored in the dock, their enormous hulls rusty and sea-stained, and their rigging torn by the gales;—other vessels displaying their snowy canvass and proudly marching from the strand, to visit ports that are half the world's width asunder, or perchance to go down into the ocean-depths:—the packets, with their places of destination announced in huge letters on their shrouds, some landing their freight, some stowing it away in their capacious holds, some mustering their passengers for departure;—the bales and bags of precious merchandise, and puncheons and casks of choice liquors, and barrels of flour stamped with different brands, which lie scattered along the wharf, as if any poor devil might have them for the picking up;—the mounted iron cannon, presenting its gaping mouth at the stranger, as if to utter tales of pirates in the West Indies or of Malays in the East;—the other cannon, which has long ago sent forth its last peal of thunder, and now, with its muzzle in the earth and its breech in the air, is converted into a post;—the rumbling of heavily-laden wagons, the clash and clang of bars of Swedish iron, dragged on trucks over the pavement, the quick rattle of gigs, and the slow rattle of handcarts;—all these particulars, and many more, attract the observer's notice, and enter into his recollection of the scene. He snuffs up the scent of tar, to which his nostrils are less accustomed than are those of a sailor to the perfume of the Spice islands.

He observes also the living features of the scene, as well as its inanimate objects. There is the merchant, with his thoughtful brow and anxious eye, musing on the wealth that he has trusted to the uncertain main—doubtful, perhaps, whether, in three months hence, he will be a man of half a million, or a bankrupt;—there are the slender clerks, comparing a ship's cargo with the invoice;—there the sea-captain, with the flush of the salt-breeze still glowing on his cheek:—there the bronzed sailors, in blue jackets and duck trousers, rolling along like ships over uneven billows, and talking hoarsely, as if with speaking-trumpets;—there the truckmen, in frocks no longer white;—there the day-labourers,

with their Irish look and accent;—and if any female be brought into the sketch, she must be Irish too, with a rough red cheek and unabashed stare, such as befits the mistress of a sailor's boarding-house. The jabber of foreign tongues is heard around, and the stranger almost doubts whether his short walk have not transported him to Lisbon or Madrid, or some port along the shores of the Mediterranean. And now he hears, issuing from the bowels of the earth, a mingled uproar of laughter and oaths, and tuneless singing, and perhaps the squeak of a fiddle, which, with the fumes of tobacco-smoke and strong liquors, are sure tokens of a victualling cellar and grog-shop.

Brazilian Ant-Hills.—In Brazil, the ants build pyramids of clay to the height of ten or twelve feet; so that a traveller on horseback, riding by them, will see their summits considerably above his head. The exterior surface of these hills is a hard yellow clay. If one of them be cut in halves, from the summit to the base, it will be seen that great architectural skill has been employed in the construction of the edifice. It consists of a number of horizontal floors or stories, one above another. The material, of which the interiour is constructed, is a sort of black earth, which sometimes shines as if varnished. There are communications between neighbouring ant-hills, by means of passages under ground, in the formation of which, as much art is displayed as in hollowing the famous tunnel under the Thames. The ants exude a viscous fluid, with which they temper the clay, and render it fit for the purposes of building. They sometimes migrate from the habitations, which it has cost them so much labour to erect; and in their journey they march straight onward, devouring every green thing in their path, and all the cockroaches, spiders and flies.

THE FORGING OF THE ANCHOR.

[From Blackwood's Magazine]

Come, see the Dolphin's anchor forged;
'Tis at a white heat now;
The little flames still fitfully
Play through the sable mound;
And fitfully you still may see
The grim smiths ranking round,
All clad in leathern panoply,
Their broad hands only bare;
Some rest upon their sledges here,—
Some work the windlass there.

The windlass strains the tackle chains,
The black mound heaves below,
And, red and deep, a hundred veins
Burst out at every throe:
It rises, roars, rends all outright,—
O Vulcan, what a glow!
'Tis blinding white, 'tis blasting bright;
The high sun shines not so!
The high sun sees not, on the earth,
Such fiery, fearful show;
The roof-ribs swarth, the candent hearth,
The ruddy lurid row
Of smiths, that stand, an ardent band,
Like men before the foe;
As, quivering through his fleece of flame,
The sailing monster, slow
Sinks on the anvil—all about,
The faces fiery grow—
'Hurrah!' they shout, 'leap out—leap out;'
Bang, bang, the sledges go:
Hurrah! the jetted lightnings
Are hissing high and low;
A hailing fount of fire is struck
At every up-heaved blow;
The leathern mail rebounds the hail;
The rattling cinders strow
The ground around; at every bound
The sweltering fountains flow;
And thick and loud, the shrinking crowd,
At every stroke, pant 'ho!'
Leap out, leap out, my masters;
Leap out and lay on load!
Let 's forge a goodly Anchor;
A Bower, thick and broad;
For a heart of oak is hanging
On every blow, I bode;
And I see the good Ship riding,
All in a perilous road,
The low reef roaring on her lee;
The roll of Ocean pour'd
From stem to stern, sea after sea;
The mainmast by the board;
The bulwarks down; the rudder gone,
The boats stove at the chains;
But courage still, brave mariners—
The Bower yet remains,
And not an inch to flinch he deigns,
Save when ye pitch sky high,
Then moves his head, as though he said,
'Fear nothing—here am I!'

In livid and obdurate gloom,
He darkens down at last;
A shapely one he is, and strong,
As e'er from cat was cast.—
O trusted and trust-worthy guard,
If thou hadst life like me,
What pleasures would thy toils reward,
Beneath the deep-green sea;
O deep sea-diver, who might then
Behold such sights as thou?
The hoary monster's palaces,
Methinks what joy 't were now
To go plumb plunging down amid
The assembly of the whales,
And feel the churn'd sea round me boil
Beneath their scourging tails!

O, Lodger in the sea-king's halls,
Couldst thou but understand
Whose be the white bones by thy side,
Or who that dripping band,
Slow-swaying in the heaving wave,
That round about thee bend,
With sounds like breakers in a dream,
Blessing their ancient friend,—
Oh, could'st thou know what heroes glide
With larger steps round thee,
Thine iron side would swell with pride;
Thou 'dst leap within the sea!

Give honour to their memories,
Who left the pleasant strand,
To shed their blood so freely,
For the love of Father-land,—
Who left their chance of quiet age,
And grassy church-yard grave,
So freely, for a restless bed
Amid the tossing wave,—
Oh, though our Anchor may not be
All I have fondly sung,
Honour him for their memory,
Whose bones he goes among!

Curious Experiment.—If a musket be loaded with ball, and a finger be pressed upon the ramrod, which rests upon the ball, then, if the musket be discharged, the ball will not be thrown out of the barrel. This is accounted for by the feeble velocity of the ball, when it first starts, compared with that which is communicated to it by the expansion of the gases throughout the whole extent of the barrel. But we entreat our friends not to risk the tips of their fingers by making the above experiment; for it is not given on our own authority. We never tried it, nor ever will.

ON EDUCATION.

[From the Westminster Review.]

The moral condition of a people depends in a higher degree upon the state or cultivation among females than is commonly imagined. Their influence over their husbands and children for good and evil is in all cases great, and it is fit that such influence should be directed to good.

This principle has been far too much lost sight of in the Education of Females, and they have been trained, as it were, for one exclusive purpose, to be got rid of in marriage; and not as partners with man in a common lot.

When the attraction of a young face, and the novelty of youthful manners have worn off, there is left little of sympathy with the pursuits of the husband, or acquaintance with those departments of knowledge, on which his habits and occupations naturally lead him to converse. The dry utterance of scientific terms, without a knowledge of the uses and application of the science, or the details of history without the knowledge of its spirit, is to all valueless; and the deficiency is to be supplied only by extensive and various reading. But this is precisely the point where the Education of females fails; they are not taught to read, to analyse and digest the matter read, whether it be novel, history, or biography. If, instead of abandoning all, or nearly all mental occupation at the period of leaving school, a course of study calculated to develope and keep in exercise the reflective faculties were commenced and perseveringly continued for the next four or five years, the wife would have some share of the attractions of the intelligent conversationist, and without trespassing on the field of the dry, dull, political or scientific discourse of the professional person, might supply in actual life some portion of the imaginative and amusing, by which its real cares are driven away. A stupid man would in such cases gain some vivacity, and discover powers that had been enfeebled by the constant reference of his thoughts to mercantile or professional objects.

What this course of study should be for people of means, might be easily determined. When a governess employed to teach the mechanics of education has been dismissed, let a lady of refined taste and good judgment be engaged to carry on a course of reading with the pupil; carefully analyzing every work read; applying all knowledge applicable, and examining new views referred to by the author, and noting fresh facts, taking care throughout all these readings to lead the pupil to talk on the subject, and point out the passages illustrative of her views.

Added to this, the habit of reading well aloud, should be encouraged both to discover whether the meaning be fully understood by the reader, and to produce an accomplishment of more extensive utility to others than even music, that of presenting the views of an author by reading, so as to give them all their force. How few men or women can read! How few therefore are good orators, or good conversationists, or even good writers! How great a blessing to a sick and languid person, too ill to exert his own powers, is that of having a companion who can so read as to bring the pictures presented by written composition, dramatically to the mind's eye! With such powers at any time there need be no lack of society; the very best authors may be brought as it were into personal converse, and the family stock of information constantly relieved of its barrenness.

But the importance of female Education is great, on account of the share of mothers in forming the infant mind. The very young acquire by a sort of involuntary imitation, the language, the habits, failings and manners of their parents, especially of the mother, with whom they most constantly associate; and the labours of the school are more or less lightened in all things, according to the progress previously made during the period of involuntary infant learning.

The scope of Education, in both sexes, must be determined by its object. The grand object is to unite in the highest possible degree the combination of the speculative and practical characters in the same person. The former, when once set a going, proceeds in a far more rapid course of improvement than the latter; the manual or mechanical operations being far slower and less exciting than the mental volition.

From the exclusive attention to intellectual studies, the speculative has far outrun the practical, and lost the power of patient application on which the solidity and completeness of the speculative is dependent. In short, of the whole number of persons trained by the present system of Education, the far greater number are deprived of habits of industry, of bodily or mental application. Hence, though remarkable for refined sentiments and generous emotions, they seldom second these by corresponding efforts. But this in a still greater degree is the case with the power of bodily application. Hence men of genius have become distinguished as men of idleness; often, as dissipated and immoral. They depend upon intellectual excitement, and having no physical toil to subdue the physical excitement, or divert the mind from the more exhausting efforts of intellectual pursuits, their lives are a succession of states of excitation and depression. Wanting energy, physical or mental, they speedily become indolent; fond of dreaming, and mere idle reading, but incapable of either mental or bodily application. This one fault runs through the whole of the general systems of Education. Addressed as they are to the purely intellectual, they fail because the purely intellectual is useless, except in reference to its power over the physical; which power it cannot possess except by a course of discipline, uniting both the intellectual, physical and moral faculties in the same concurrent course of developement. The moral is but the habitual effect of the intellectual and the physical trained to right uses. A moral man is one who has self-control, and therewith, and in consequence thereof, the habitual exercise of what is morally good. But this self-control is dependent naturally and mentally upon physical control, and this again is the result of intellectual control, constantly actuating the physical. To be a moral man is not to be a mere man of sentiment. A man may think all good, and yet be so weak of purpose as to be capable only of evil, which unrestrained physical incitements may force upon him. The whole man must be educated,—the intellec-

tual,—the physical,—the moral; and this is not done by wise saws, but by discipline constantly bending the faculties of the individual to suitable purposes.

SCANTY SUSTENANCE.

An English writer, to prove that, as a general rule, population is in advance of food, adduces facts of which we make the following abstract. The total amount of persons living on the skirts of existence, in a state of constant misery, and liable to starvation, is reckoned at one per cent. of the whole number of inhabitants. This proportion is about the same, whether the country be populous or otherwise. In France, beggars are numerous, and people die of hunger. In fruitful and vine-clad Portugal, a pilot will prostrate himself on the deck of a vessel, in his gratitude for the boon of a hard biscuit. The Arabs, half-starved themselves, devour half-starved sheep. In luxuriant Chili, the inhabitants feed on sea-weed in the intervals of their crops, and those, who are of delicate constitutions, do not survive. In Canada, during the winter, many are starved to death. In Buenos Ayres, numbers live on offals, at the public shambles. In upper Peru, the natives eat animals that die of disease. The Chinese do the same, and likewise convert other disgusting matters into food. Thousands of infants are destroyed in China; nor is it considered a crime; since the babe suffers a less cruel death by its mother's hand, than it otherwise would by starvation. In Norway and Sweden, the people mix their bread with saw-dust. Our own country, according to the English author, is the only one in the world, where some portion of the inhabitants are not liable to starvation, and do not actually starve. We are preserved from this condition by the circumstance that we raise food for export, and therefore there is always a surplus quantity amongst us, in case of emergency.

DANISH MONARCHY.

The Danes, says Madame de Staël, have given the most scandalous example in politics, of which history has preserved the recollection. One day, in 1662, they declared their King legislator and sovereign master of their property and lives. They gave him power to do every thing, except to revoke the act by which they had made him a despot. And when this unreserved donation of themselves was consummated, they added to the deed of gift this singular clause, that, if the kings of any other countries had any privilege whatever which was not comprised in their act, they accorded it in advance, and at every hazard, to their monarch. The protestant religion, and above all, the liberty of the press, have since created in Denmark a strength of public opinion which serves as a moral limit to the absolute power of the king. Since Madame de Staël wrote this passage, the Danish monarch has relinquished his despotic privileges of his own accord—an instance of royal generosity quite as singular, as was the original gift from the people to his predecessor.

INTOLERANCE.

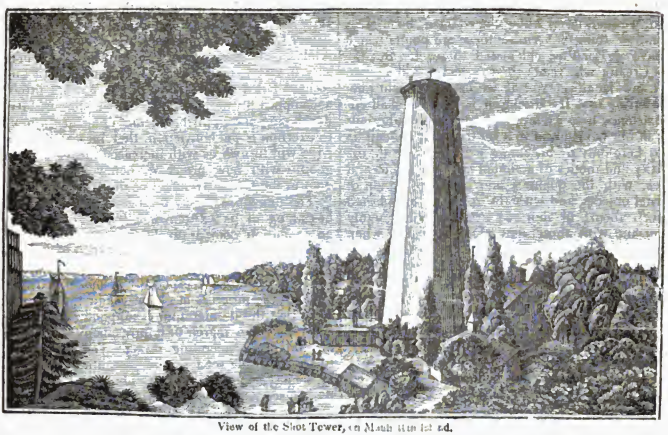
From the time of the revocation of the Edict of Nantes, in 1685, down to 1787, the children of Protestants in France were not considered legitimate. Their possessions were confiscated, and were given to those who denounced them. The children were taken from their parents by force, to be brought up in the Catholic religion. The preachers, and those Protestants who had embraced Catholicism, but afterwards relapsed, were condemned to the galleys or to death; and as it had been declared, by a royal ordinance, that there were no longer any Protestants in France, all who adhered to that faith were considered as relapsed Catholics, whenever it suited the convenience of the government to punish them.

LUCIEN BONAPARTE.

Lucien, having quarrelled with his brother Napoleon, resolved to quit Europe and take refuge in the United States. He went secretly to Civitta-Vecchia, and embarked for Boston in August, 1810, on board a vessel which had been fitted out for him by his brother-in-law Murat, then King of Naples. A storm drove him on the coast of Caglieri in Sardinia. The king of that country refused him an asylum, and the British consul would not grant him a safe conduct. Being compelled to put to sea again, he was taken at the entrance of the port by two English frigates, which carried him to Malta. He resided there four months, and was then removed to England, where he remained prisoner until the treaty of Paris, concluded in April, 1814, restored him to liberty.—*Magasin Universel.*

Indian Corn is of very uncertain origin. Some writers say that it is from the East, others from America. The former sustain their opinion on the grounds that it has long been known in Europe by the name of *Ble de Turquie*, or Turkey grain, and that varieties of it have been brought from the Isle of France and from China. Those who assign its origin to America say, that the early navigators found it cultivated in Mexico, and Brazil, and in all parts where they first landed; and that each region had a name for it, such as maize, flaolli, and others. It is affirmed, that it still grows wild among the Indians in Paraguay. The fact is undisputed, that, immediately after the discovery of America, the cultivation of Indian Corn spread rapidly in other parts of the world. We would willingly vindicate the claim of our own country to the honour of having bestowed this grain on the rest of the globe—esteeming it an invaluable and truly Yankee esculent, whether eaten in the green ear, in Johnny cakes or loaves from the oven, or in puddings, boiled or baked.

The Horse possesses an exquisite sense of smelling. He scents the approach of man, at the distance of a mile and a half. His nose, also, detects water at a great distance. It is well known, that the caravans of Arabs, Tartars, and Mongolians, and also the herdsmen in South America, take advantage of this animal's sensibility of smell, to discover unknown pools of water. Asses and mules possess the same faculty. The Jews, during their forty years' wandering in the desert, often had recourse to the instinct of these quadrupeds, when in want of water. The American horses scratch the earth with their hoofs, above the source of a hidden fountain.—*Magasin Universel.*



View of the Shot Tower, on Manhattan Island.

SHOT TOWER.

This edifice was erected, some years ago, by Mr. George Youle, and is situated on Manhattan island, a few miles from the city of New York. It rises to the height of one hundred and fifty feet, and forms one of the most striking objects amid the picturesque and beautiful scenery with which it is surrounded. The East River, thronged with steam-boats and other vessels, flows at its base. The tower needs nothing but antiquity, and a mantle of clinging ivy, and above all, the charm of legend and tradition, in order to afford as good a subject for the pen of the poet or novelist, as it already does for the pencil of the artist. Or if it were (as might well beseem its stately height) the monument of a hero, or even a light-house, to guide benighted mariners to their haven, nothing would be easier than to surround it with romantic associations. But it is almost impossible to connect the sentiment of romance with a Shot Tower.

When we consider the small size of the article, to the manufacture of which this lofty structure is devoted, the means appear greatly out of proportion with the result. Formerly, in casting shot, the apparatus was merely a plate of copper, in the bottom of which were punched a number of small holes. This was placed a few feet above a kettle of water, into which the melted lead descended, after passing through the holes in the plate. But in falling so short a distance, and being so suddenly cooled and hardened, the shot did not acquire a perfectly globular form,—a desideratum which is now attained by means of Shot Towers. In that of Mr. Youle, the largest size of shot falls from the summit of the edifice to the bottom of a well, twenty-five feet below the surface of the earth, making the whole descent about one hundred and seventy-five feet. The size of the shot is determined by the size of the holes through which it passes. The furnaces, for melting the lead, are situated near the summit of the tower. Three tons of shot is the quantity usually manufactured per day.

This method of casting shot was invented by Mr. Watt, the celebrated engineer, in consequence, it is said, of a dream. He tried the experiment from the tower of the church of St. Mary Redcliffe, and, finding it successful, obtained a patent, which he afterwards sold for ten thousand pounds. There are now several shot-towers in the vicinity of London. The loftiest of these is one hundred and fifty feet high, and gives a fall of one hundred and thirty feet to the melted lead. An iron staircase ascends from the base to the summit of the tower: Arsenic is mingled with the molten lead, in the proportion of forty pounds to one ton. In casting, the metal is not poured through a tube, but descends through the open space of the tower, in a continual stream of silvery drops. As the weight of the lead prevents it from scattering, or being blown about like water-drops, the workmen pass to and fro, without danger, close beside this fiery cascade. The shot is of different sizes, from No. 1, or Swan Shot, to No. 12, which is called Dust Shot. When first manufactured, they are of a dull white colour, without lustre, and are polished by being shaken together in an iron barrel which is made to revolve by machinery. This process gives them their black lustre, and they are then ready for sale.

ADVANTAGES OF MORAL SCIENCE.

[From Combe, on the Constitution of Man.]

Much has been written about the extent of human ignorance, but we should discriminate between absolute incapacity to know, and mere want of information arising from not having used this capacity to its full extent. In regard to the first, or our ca-

pacity to know, it appears probable that, in this world, we shall never know the essence, beginning, or end of things; because these are points which we have no faculties calculated to reach: But the same Creator who made the external world constituted our faculties, and if we have sufficient data for inferring that His intention is, that we shall enjoy existence here while preparing for the ulteriour ends of our being; and if it be true that we can be happy here only by becoming acquainted with the qualities and modes of action of our own minds and bodies, with the qualities and modes of action of external objects, and with the relations established between them; in short, by becoming thoroughly conversant with those natural laws, which, when observed, are pre-arranged to contribute to our enjoyment, and which, when violated, visit us with suffering, we may safely conclude that our mental capacities are wisely adapted to the attainment of these objects, whenever we shall do our own duty in bringing them to their highest condition of perfection, and in applying them in the best manner.

If we advert for a moment to what we already know, we shall see that this conclusion is supported by high probabilities. Before the mariner's compass and astronomy were discovered, nothing would seem more utterly beyond the reach of the human faculties than traversing the enormous Atlantic or Pacific Oceans; but the moment these discoveries were made, how simple did this feat appear, and how completely within the scope of human ability! But it became so, not by any addition to man's mental capacities, nor by any change in the physical world; but by the easy process of applying individuality, and the other knowing faculties, to observe, causality to reflect, and constructiveness to build; in short, to perform their natural functions. Who that, forty years ago, regarded the small-pox as a scourge, devastating Europe, Asia, Africa, and America, would not have despaired of the human faculties ever discovering an antidote against it? And yet we have lived to see this end accomplished by a simple exercise of Individuality and Reflection, in observing the effects of, and applying vaccine inoculation. Nothing appears more completely beyond the reach of the human intellect, than the cause of volcanoes and earthquakes; and yet some approach towards its discovery has recently been made.*

Sir Isaac Newton observed, that all bodies which refracted the rays of light were combustible, except one, the diamond, which he found to possess this quality, but which he was not able, by any powers he possessed, to burn. He did not conclude, however, from this, that the diamond was an exception to the uniformity of nature. He inferred, that, as the same Creator made the refracting bodies which he was able to consume and the diamond, and proceeded by uniform laws, the diamond would, in all probability, be found to be combustible, and that the reason of its resisting his power, was ignorance on his part of the proper way to produce its conflagration. A century afterwards, chemists made the diamond blaze with as much vivacity as Sir Isaac Newton had done a wax candle. Let us proceed then, on an analogous principle. If the intention of our Creator was, that we should enjoy existence while in this world, then He knew what was necessary to enable us to do so; and He will not be found to have failed in conferring on us powers fitted to accomplish his design, provided we do our duty in developing and applying them. The great motive to exertion is the conviction, that increased knowledge will furnish us with increased means of doing good,—with new proofs of benevolence and wisdom in the Great Architect of the Universe.

The human race may be regarded as only in the beginning of its existence. The art of printing is an invention comparatively but of yesterday, and no imagination can yet conceive the effects which it is destined to produce. Phrenology was wanting to give it full efficacy, especially in *moral science*, in which, little progress has been made for centuries. Now that this desideratum is supplied, may we not hope that the march of improvement will proceed in a rapidly accelerating ratio? We require only to attend to the scenes daily presenting themselves in society, to obtain irresistible demonstration of the consequences resulting from the want of a true theory of human nature, and its relations. Every preceptor in schools, every professor in colleges, every author, editor, and pamphleteer, every member of a legislative body, counsellor and judge, has a set of notions of his own, which in his mind hold the place of a system of the philosophy of man; and although he may not have methodized his ideas, or even acknowledged them to himself as a theory, yet they constitute a standard to him by which he practically judges of all questions in morals, politics, and religion; he advocates whatever views coincide with them, and condemns all that differ from them, with as unhesitating dogmatism as the most pertinacious theorist on earth. Each also despises the notions of his fellows, in so far as they differ from his own. In short, the human faculties too generally operate simply as instincts, exhibiting all the confliction and uncertainty of mere feeling, unenlightened by perception of their own nature and objects. Hence public measures in general, whether relating to education, religion, trade, manufactures, the poor, criminal law, or to any other of the dearest interests of society, instead of being treated as branches of one general system of economy, and adjusted each on scientific principles in harmony with all the rest, are supported or opposed on narrow and empirical grounds, and often call forth displays of ignorance, prejudice, selfishness, intolerance and bigotry that greatly obstruct the progress of improvement. Indeed, unanimity, even among sensible and virtuous men, will be impossible, so long as no standard of mental philosophy is admitted to guide individual feelings and perceptions. But the state of things now described could not exist if education embraced a true system of human nature and its relations.

* Vide Edinburgh New Philosophical Journal.

ESCAPE FROM A RATTLESNAKE.

[From Ross Cox's Adventures on Columbia River.]

A curious incident occurred, at this spot, to one of our men, named La Course, which was near proving fatal. This man had stretched himself on

the ground, after the fatigue of the day, with his head resting on a small package of goods, and quietly fell asleep. While in this situation, I passed him, and was almost petrified at seeing a large rattle snake moving from his side to his left breast. My first impulse was to alarm La Course. But an old Canadian, whom I had beckoned to the spot, requested me to make no noise, alleging it would merely cross the body and go away. He was mistaken; for, on reaching the man's left shoulder, the serpent deliberately coiled itself, but did not appear to meditate an attack. Having made signs to several others, who joined us, it was determined that two men should advance a little in front, to divert the attention of the snake, while one should approach La Course behind, and, with a long stick, endeavour to remove it from his body. The snake, on observing the men advance in front, instantly raised its head, darted out its forked tongue, and shook its rattles—all indications of anger. Every one was now in a state of feverish agitation as to the fate of poor La Course, who still lay slumbering, unconscious of his danger, when the man behind, who had procured a stick seven feet in length, suddenly placed one end of it under the coiled reptile, and succeeded in pitching it upwards of ten feet from the man's body. A shout of joy was the first intimation La Course received of his wonderful escape, while, in the mean time, the man with the stick pursued the snake, which he killed. It was three feet six inches long, and eleven years old, which, I need not inform my readers, we easily ascertained by the number of rattles. A general search was then commenced about the encampment; and under several rocks, we found upwards of fifty of them, all of which we destroyed. There is no danger attending their destruction, provided a person has a long pliant stick, and does not approach them nearer than their length, for they cannot spring beyond it, and they seldom act on the offensive unless closely pursued. They have a strong repugnance to the smell of tobacco, in consequence of which we opened a bale of it, and strewed a quantity of loose leaves about the tents, by which means we avoided their visits, during the night.

TORPID PLANTS.

[From the 'South West.']

There is a willow which grows on the banks of the Mississippi, whose roots become as dry as tinder, after the periodical swell has subsided, but which vegetates afresh as soon as it is watered by the next inundation. This property of dying and returning again to vegetative existence, is not peculiar to this willow; other plants possess the same singular property, though this exceeds all others in magnitude. The plants of that description known to botanists, are all water-mosses except two species of duckmeat—the '*lemna minor*' and the '*lemna gibba*.' These are but minute vegetables floating on the surface of stagnant water, without taking root in the pond. They may be dried in the hot sun and then kept in a deal box for two or three years, after which they will revive, if placed in spring, river, or rain water. There is at the north a kind of natural paper, resembling the coats or strata of a wasp's nest in colour and consistency, which is formed of the sediment of ponds, that become dry in hot weather. If a piece of this paper-like substance be put in a glass of fresh water, and exposed to light, it loses its dirty white colour in a few minutes and assumes a lively green. This sudden change is occasioned by a number of aquatic mosses, constituting a part of the materials of the paper or sediment in question, and belonging to the genus '*Conferra*;' for these minute vegetables may be said to be in the state of suspended animation, while they remain dry; but the presence of water restores them to their natural functions by its animating virtue. So long retaining the principle of life, these curious plants, as well as the two species above mentioned, may be transported to any distant country in a torpid condition, where they might again be animated. The same remark will apply to the Mississippi willow which suggested these observations.

Dancing Horses.—At equestrian exhibitions, horses are often made to dance. They keep perfect time to the music, and flourish their four legs with as much grace and facility as Celeste ever did her single pair; which, of course, shows double skill on the part of the quadruped. But it is said to be frequently the case, that horses drop down dead in the performance of the dance. One equestrian company has successively lost several valuable animals, in this way. As the physical exertion, during the dance, does not seem to be great, the fact must be accounted for by the tension of intellect, with which the poor horse adapts his motions to the music. Frenchmen live by dancing, but horses die by it:—as the frogs said, what is sport to us, is death to them.

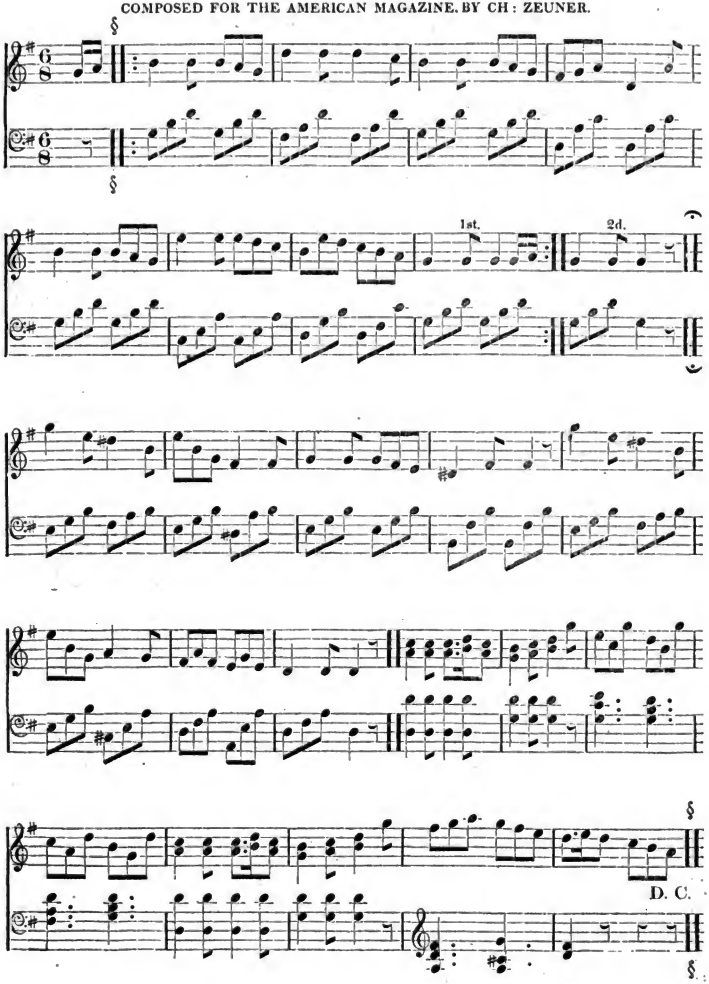
Flint in Hay.—Few persons, while tumbling about in a hay-mow, would suppose it to be partly composed of the same substance as a bed of flint. Yet such is the fact. A hay-stack being consumed by lightning, a portion of vitreous matter, of similar composition to flint-glass, was found among the ashes. This had been formed from the silex, or flint, in the stalks of hay.

☞NOTE ON THE TEA PARTY.

In drawing up our sketch of the Boston Tea Party, we have derived great assistance from a manuscript volume of letters and other documents, now in the possession of Mr. Abel Bowen. The collection appears to have been made with a view to publication. It contains letters to the East India Company, relative to the condition and prospects of the Tea-trade in America, and proposing methods of carrying it on:—other letters from American merchants in London, soliciting the agency in the disposal of the tea, for themselves or their friends;—and letters, also, from the agents in Boston and other ports, detailing the people's proceedings and their own. There are also copies of most of the public documents relative to the affair. The whole forms a mass of valuable information, a great part of which could not easily be found elsewhere, if at all. The manuscript came into Mr. Bowen's hands from a person who obtained it in Halifax; whither many New England papers, both public and domestic, were conveyed when the British evacuated Boston.

THE CASTILIAN QUADRILLE.

COMPOSED FOR THE AMERICAN MAGAZINE. BY CH: ZEUNER.



Statue of Hamilton, New York.

ALEXANDER HAMILTON.

To none of the eminent men of the Revolution are we more indebted than to Hamilton, both for his services in the course of that memorable contest, and for the sagacity with which, at its close, he discerned the political necessities of the country, and assisted in laying the foundations of our present prosperity. He saw, perhaps, more clearly than most other statesmen of that period, how greatly the future welfare of the people depended upon the developement of those resources which could only be drawn forth by the pervading influence of an energetic government. Nor be it imputed to him as a crime, if his opinions on this subject went to an extent, which, by the light of subsequent experience, we are now wise enough to shun. Even the errour of those opinions probably contributed to our welfare; and his fame is destined to 'grow with the growth, and strengthen with the strength' of that Union, which it was his warmest wish to render indissoluble.

Alexander Hamilton was born in the island of Nevis, in January, 1757. On the maternal side, he was of French extraction; his father was a descendant of the noble Scottish family of Hamilton. His childhood afforded many indications of talent, and at the age of thirteen, his ambition seems to have been as intense as at any subsequent period of his life. He was then in the counting-house of an opulent merchant of Santa Cruz; and, in a letter to a school-fellow, he 'confesses that his ambition is prevalent, so that he contemns the grovelling condition of a clerk, or the like, to which his fortune condemns him, and would willingly risk his life, though not his character, to exalt his station. He wishes there was a war.' Yet he was exceedingly assiduous in the duties of his situation, and evinced such a capacity for business, that before he attained his fourteenth year, Mr. Cruger, his employer, confided to him the conduct of his extensive establishment, during his absence on a visit to the American continent. He afterwards frequently adverted to this occupation as the most useful part of his education; he acquired in its details a method and facility peculiarly advantageous to the future Financier. Its teachings were practical, and therefore well suited to the practical character of his mind.

Shortly after this time, some of the West Indian islands were desolated by a hurricane, of which Hamilton wrote, and published in a newspaper, a description which attracted much notice, and induced his friends to yield to his wishes for a more liberal education than his native island could afford. Accordingly, at the age of fifteen, he took passage for New York, and soon after became a student of King's College, then under the Presidency of the Rev. Dr. Cooper. His acquaintance with miscellaneous literature was at this time extensive; he had made some progress in the study of mathematics, and of chemistry, which he afterwards recommended as a science, 'well adapted to excite curiosity, and create new combinations of thoughts.' Some of his early compositions in verse have been preserved, displaying much poetical talent. His favourite authors were Pope and Plutarch; but he also perused, with great interest, works of controversial divinity. 'While a student at King's College,' says his friend, Col. Troup, 'he was attentive to public worship, and in the habit of praying on his knees night and morning. I lived in the same room with him for some time, and have often been powerfully affected by the fervour and eloquence of his prayers. He had read many of the polemical writers on religious subjects, and was a zealous believer in the fundamental doctrines of Christianity. I confess, that the arguments with which he was accustomed to justify his belief have tended in no small degree to confirm my own faith in revealed religion.'

But the whole intensity of Hamilton's character was soon to be elicited by that Revolution, whose perils placed him in his appropriate sphere of action, and in which no other man, so young as himself, was so enviably distinguished. His earliest impressions were favourable to the rights of the crown; but these were speedily effaced, and feelings more befitting his future career awakened, by a visit to Boston, soon after the destruction of the tea. Massachusetts was, from the beginning, in Hamilton's own words, 'the pivot on which the Revolution turned,' and the excitement of the public mind was never greater than at that time. Hamilton returned to New York, strong in zeal and in argument, and on the sixth of July, 1774, at the age of seventeen, made his first essay as an Orator, and publicly pledged his devotion to the cause of liberty. It was at a large assemblage of the citizens, long remembered as 'the great meeting in the fields.' He had previously been in the habit of 'walking several hours each day under the shade of some large trees in Batteau, now Dey street, talking to himself in an under tone of voice, apparently engaged in deep thought; a practice which he continued through life. This circumstance attracted the attention of his neighbours, to whom he was known as the Young West Indian, and led them to engage in conversation with him. One of them, remarking the vigour and maturity of his thoughts, urged him to address this meeting to which all the patriots were looking with the greatest interest. From this seeming intrusion he at first recoiled; but, after listening attentively to the respective speakers, and finding several points untouched, he presented himself to the assembled multitude. The novelty of the attempt, his youthful countenance, his slender and diminutive form, awakened curiosity and attracted attention. Overawed by the scene, before him, he at first hesitated and faltered; but, as he proceeded almost unconsciously to utter his accustomed reflections, his mind warmed with the theme, his energies were recovered, and after a discussion, clear, cogent and novel, of the great principles involved in the controversy, he depicted in glowing colours the long continued and long endured oppressions of the mother country, he insisted on the duty of resistance, pointed to the means and certainty of success, and described the waves of rebellion sparkling with fire, and washing back on the shores of England the wrecks of her power, her wealth, and her glory. The breathless silence ceased as he closed, and the whispered murmur, 'it is a

Collegian! it is a Collegian!' was lost in loud expressions of wonder and applause, at the extraordinary eloquence of the young stranger.'* From this time, the studies of Hamilton were chiefly directed to politics and the art of war. He acquainted himself, as much as possible, with the details of military discipline, and with statesmanlike ability, inquired into the resources of the country; and the disposition of her inhabitants for vigorous and united efforts. He repeatedly took a part in the public discussions, and engaged in a controversy with the Rev. Dr. Cooper; the Episcopal clergymen of New York and Connecticut, having zealously espoused the ministerial side in the contest. He also wrote several political pamphlets which were attributed to Gov. Livingston and to Mr. Jay, and which were esteemed to confer additional celebrity upon these eminent men; but when, on the inquiry to which of them the honour belonged, the author was ascertained to be a youth of eighteen, but recently admitted to college, and new to the country, admiration of the works was lost in surprise at the discovery. 'I remember,' says Col. Troup, 'that in a conversation I once had with Dr. Cooper, about these pamphlets, he insisted that Mr. Jay must be the author, it being impossible to suppose that so young a man as Hamilton could have written them.' On the part of the British government, liberal offers were made him, which, it is scarcely necessary to say, he declined without hesitation.

The adherents of the crown were, from various causes, numerous in New York. There was little unity of feeling among the inhabitants, who were dissimilar in origin and in creed, and among whom property was more unequally distributed than in some of the other colonies. Landed estates were held by a peculiar tenure; education was not generally diffused; the patronage and expenditure of the government was also large; and all these circumstances combined to render the popular party less prompt to resist, and far more cautious in deliberation and resolution than might have been expected. Still, revolutionary sentiments and feelings were strong, and strengthening, among the people; and in the discussion of the momentous questions of the day, Hamilton continued to participate with his pen and with his voice, till the course of events summoned him to render services of a different nature. In March, 1776, he was appointed by the Convention of New York, 'Captain of the Provincial Company of Artillery,' one of the first companies raised by that province. He 'recruited his men, and, with the remnant of his second and last remittance from Santa Cruz, equipped them: He attended to their drill and his other duties with a zeal and diligence which soon made his company conspicuous for their appearance, and the regularity of their movements.'

Immediately after the Declaration of Independence, he was ordered upon active service. He was very soon fortunate enough 'to attract the observant eye of Washington, who, on the inspection of some works which Hamilton was engaged in throwing up, entered into conversation with him, invited him to his marquee, and formed a high estimate of his capacity.'

He distinguished himself at the battle of White Plains, and through the whole of that arduous campaign, one of the most disheartening of the whole war. 'Well do I remember the day,' said a friend, 'when Hamilton's company marched into Princeton. It was a model of discipline; at its head was a boy, and I wondered at his youth; but what was my surprise, when struck with his diminutive figure, he was pointed out to me as that Hamilton of whom we had already heard so much.' At the close of the season, his company, from exposure in battle and from the severity of the weather, was reduced to twenty-five men. On the first of March, 1777, he was appointed Aid-de-camp to General Washington, with the rank of Lieutenant Colonel. He was then twenty years of age.

Adverting to the selection of the members of his staff, Gen. Washington says, in a letter to Col. Harrison, of January 9th, 1777:—'As to military knowledge, I do not expect to find gentlemen much skilled in it; if they can write a good letter, write quick, are methodical and diligent, it is all I expect to find in my aids.' And, in a subsequent letter to Congress, requesting additional assistance, he remarks; 'the business which has given constant exercise to the pen of my secretary, and not only frequently, but always, to those of my aids, has rendered it impracticable for the former to register the copies of my letters, instructions, &c. in books, and thus valuable documents which may be of equal public utility and private satisfaction, remain in loose sheets and in the rough manner in which they were drawn.' Washington's principal Secretary was Col. Robert H. Harrison, of Maryland, and upon him the labour of the correspondence chiefly devolved; but such of the more elaborate and important communications, as were not written by the Commander in Chief himself, were the productions of Hamilton's pen. 'This larger and more appropriate sphere of action, gave to his mind not only a wider, but a loftier range. He was called, not merely to execute subordinate parts, but to assist in planning campaigns, in devising means to support them, in corresponding with the different members of this extensive empire, and in introducing order and harmony into the general system.'

From this period till the close of the war, his conduct displayed the utmost zeal, assiduity and valour; he acquired the most brilliant distinction at the siege of Yorktown, as well as on several previous occasions. He early perceived the incompetency of a 'merely federative and advisary' system of government, like the old Confederacy, to a vigorous prosecution of the war; and saw, in the financial embarrassments of the country, greater cause of alarm, than in the temporary successes of the British arms. 'He looked, with intense anxiety, to the adoption of some effectual means by which the distresses of the country might be reached at their source;' and endeavoured, in various ways, to urge upon the people, the necessity of confiding to Congress an authority adequate to the emergencies of the times.

At the close of the Revolution, Hamilton, then

* Life of Hamilton, by his Son.

scarcely twenty-five years of age, had already gained a high and secure place in American history. Our limits will allow us merely to glance at the career of his manhood, which, in point of ability and distinction, fulfilled the promise of his youth. When his military services were no longer required, he had commenced the study of the law, and speedily became eminent in the profession. In political life, he was one of the strongest champions of the party which had Washington at its head. He assisted in framing the Constitution of the United States, and greatly contributed to prepare the popular mind for its reception, by the admirable series of articles, entitled the Federalist. Of this work, as profound as any, and more generally intelligible than most, that have been written on the science of government, the larger portion proceeded from the pen of Hamilton. In recommending the present Constitution, he considered it not the most perfect that might have been framed, but better than the old Confederation, and the best that the people of America would consent to impose upon themselves. Hamilton had not sufficient faith in the capacity of the people for self-government; and while it was yet a matter of theory, we cannot wonder that his severe and practical mind should have distrusted the result. Had there been the same hesitation in America, at that period, between a monarchy and a republic, that there was in France, at her late Revolution, Hamilton, with pure but mistaken patriotism, would probably have given his voice for the former; or, at least, his nominal republic would have been very like a monarchy in its institutions. Fortunately, the bare proposal would have been met by an outcry of abhorrence; and Hamilton lent his great powers to the formation of a government, republican both in name and spirit, but endowed with all the energy that was needful to its own support.

Washington, on his installation as our first President, named Hamilton Secretary of the Treasury, the duties of which office he discharged with his usual ability. During the insurrection in Pennsylvania, when the people of the western counties took arms against the general government, Hamilton was placed at the head of the force destined to act against them. The disturbances being quelled without bloodshed, he resigned his post. His last appearance in a military character was again by the side of Washington, in 1798, as second in command of the army, which was to be called into service in case of hostilities with France. When the cloud of war had blown over, General Hamilton resumed the practice of the law, in the city of New York. He never again held any public office, but was considered the leader of the Federal party, which was then, and ever afterwards, in the minority, on all points of national dispute. The life of this eminent man was now drawing to a bloody close. In 1804, Aaron Burr, then Vice-President of the United States, peremptorily demanded an explanation from General Hamilton, in regard to some aspersions which the latter was supposed to have cast on his integrity. This demand was rejected. The consequence was a meeting at Hoboken, where Hamilton fell at the first fire, pouring out his life-blood on the same sod, which had before been wet by that of his son. He may thus far be absolved from the guilt of duelling, that he had no wish to take the life of Colonel Burr, and had resolved not to return his fire.

The vignette of the present number of our Magazine is from the Statue of Hamilton, which, by the liberality of the merchants of New York, was placed in the Exchange of that city. The material was the purest Italian marble, and was sculptured by Mr. Hughes, at an expense of several thousand dollars. This noble Statue had occupied its pedestal but a few months, when it was involved in the wide destruction, caused by the Great Fire of last December.

FAREWELL.—By Bishop Heber.

When eyes are beaming
  What never tongue might tell;
When tears are streaming
  From their crystal cell,
When hands are linked that dread to part,
And heart is met by throbbing heart,
Oh! bitter, bitter is the smart
  Of them that bid farewell!

When hope is chidden
  That fain of bliss would tell,
And love forbidden
  In the breast to dwell:
When, fettered by a viewless chain,
We turn, and gaze, and turn again,
Oh! death were mercy to the pain
  Of them that bid farewell!

Indian Hieroglyphics.—Schoolcraft observes, that the Chippewas have made greater progress than any other Indian people, in the art of hieroglyphic writing. No part of their country can be traversed, without perceiving evidences of this fact. Every pathway through the forest is marked by blazed and figured trees, conveying directions and intelligence to whomsoever is able to interpret the characters. They teach the art to their children, as carefully as we do the alphabet to our own; with this difference, however, that only the males are permitted to receive instruction. The characters are sometimes traced on sheets of birch-bark, which are suspended to poles, and also on war-clubs, paddles, and gun-stocks. Skins are likewise inscribed with them, particularly those which form the back-dresses of warriours. Information is also communicated by means of poles, with knots of grass attached to them, by rings of paint, and often by antlers, or the heads of animals, suspended over rivers.

General Picton's Helmet.—The battle of Busacos, in Spain, was fought in the night. Sir Thomas Picton, the British general, being suddenly aroused from bed, forgot to lay aside the coloured cotton night-cap, in which he had been taking a comfortable snooze. Wherever the battle raged hottest, there was seen the gallant general, in this queer sort of helmet.

Lawsuits in Pegu.—It is the custom in Pegu, a province of the Birman empire, when one man brings a suit against another, and the matter cannot be otherwise decided, to plunge both parties over head and ears in the water. The first who comes to the surface, loses his cause.

A BEE HUNT.

[From Irving's Tour on the Prairies.]

The beautiful forest in which we were encamped abounded in Bee trees; that is to say, trees in the decayed trunks of which wild Bees had established their hives. It is surprising in what countless swarms the Bees have overspread the far West, within but a moderate number of years. The Indians consider them the harbinger of the White Man, as the Buffalo is of the Red Man; and say, that in proportion as the Bee advances, the Indian and Buffalo retire. We are always accustomed to associate the hum of the Bee-hive with the farm-house and flower-garden; and to consider those industrious little animals as connected with the busy haunts of man, and I am told that the wild Bee is seldom to be met with at any great distance from the frontier. They have been the heralds of civilisation, steadfastly preceding it as it advanced from the Atlantic borders, and some of the ancient settlers of the West pretend to give the very year when the honey Bee first crossed the Mississippi. The Indians with surprise found the mouldering trees of their forests suddenly teeming with ambrosial sweets, and nothing, I am told, can exceed the greedy relish with which they banquet for the first time upon this unbought luxury of the wilderness.

At present the honey Bee swarmed in myriads, in the noble groves and forests that skirt and intersect the prairies, and extend along the alluvial bottoms of the rivers. It seems to me as if these beautiful regions answer literally to the description of the land of promise, 'a land flowing with milk and honey;' for the rich pasturage of the prairies is calculated to sustain herds of cattle as countless as the sands upon the sea shore, while the flowers with which they are enamelled render them a very paradise for the nectar seeking Bee.

We had not been long in the camp when a party set out in quest of the Bee-tree; and, being curious to witness the sport, I gladly accepted an invitation to accompany them. The party was headed by a veteran Bee-hunter, a tall lank fellow in homespun garb that hung loosely about his limbs, and a straw hat shaped not unlike a Bee-hive; a comrade, equally uncouth in garb, and without a hat, straddled along at his heels, with a long rifle on his shoulder. To these succeeded half a dozen others, some with axes and some with rifles, for no one stirs far from the camp without his fire-arms, so as to be ready either for wild deer or wild Indian.

After proceeding some distance we came to an open glade on the skirts of the forest. Here our leader halted, and then advanced quietly to a low bush, on the top of which I perceived a piece of honey-comb. This I found was the bait or lure for the wild Bees. Several were humming about it, and diving into its cells. When they had laden themselves with honey they would rise into the air, and dart off in a straight line, almost with the velocity of a bullet. The hunters watched attentively the course they took, and then set off in the same direction, stumbling along over twisted roots and fallen trees, with their eyes turned up to the sky. In this way they traced the honey-laden Bees to their hive, in the hollow trunk of a blasted oak, where, after buzzing about for a moment, they entered a hole about sixty feet from the ground.

Two of the Bee hunters now plied their axes vigorously at the foot of the tree to level it with the ground. The mere spectators and amateurs, in the mean time, drew off to a cautious distance, to be out of the way of the falling of the tree and the vengeance of its inmates. The jarring blows of the axe seemed to have no effect in alarming or disturbing this most industrious community. They continued to ply at their usual occupations, some arriving full freighted into port, others sallying forth on new expeditions, like so many merchantmen in a money-making metropolis, little suspicious of impending bankruptcy and downfall. Even a loud crack which announced the disrupture of the trunk, failed to divert their attention from the intense pursuit of gain; at length down came the tree with a tremendous crash, bursting open from end to end, and displaying all the hoarded treasures of the commonwealth.

One of the hunters immediately ran up with a wisp of lighted hay as a defence against the bees. The latter, however, made no attack and sought no revenge: They seemed stupified by the catastrophe and unsuspicious of its cause, and remained crawling and buzzing about the ruins without offering us any molestation. Every one of the party now fell to, with spoon and hunting knife, to scoop out the flakes of honey-comb with which the hollow trunk was stored. Some of them were of old date and a deep brown colour, others were beautifully white, and the honey in their cells was almost limpid. Such of the combs as were entire were placed in camp kettles to be conveyed to the encampment; those which had been shivered in the fall were devoured upon the spot. Every stark Bee hunter was to be seen with a rich morsel in his hand, dripping about his fingers, and disappearing as rapidly as a cream tart before the holyday appetite of a school-boy.

Nor was it the Bee-hunters alone that profited by the downfall of this industrious community; as if the Bees would carry through the similitude of their habits with those of laborious and gainful man, I beheld numbers from rival hives, arriving on eager wing, to enrich themselves with the ruins of their neighbours. These busied themselves as eagerly and cheerfully as so many wreckers on an Indiaman that has been driven on shore; plunging into the cells of the broken honey-combs, banqueting greedily on the spoils, and then winging their way full freighted to their homes. As to the poor proprietors of the ruin, they seemed to have no heart to do any thing, not even to taste the nectar that flowed around them; but crawled backwards and forwards, in vacant desolation, as I have seen a poor fellow with his hands in his breeches pocket, whistling vacantly and despondingly about the ruins of his house that had been burnt.

It is difficult to describe the bewilderment and confusion of the Bees of the bankrupt hive who had been absent at the time of the catastrophe, and who arrived from time to time, with full cargoes from abroad. At first they wheeled about in the air, in

the place where the fallen tree had once reared its head, astonished at finding it all a vacuum. At length, as if comprehending their disaster, they settled down in clusters on a dry branch of a neighbouring tree, from whence they seemed to contemplate the prostrate ruin, and to buzz forth doleful lamentations over the downfall of their republic. It was a scene on which the 'melancholy Jaques' might have moralized by the hour.

We now abandoned the place, leaving much honey in the hollow of the tree. 'It will all be cleared off by varmint,' said one of the rangers. 'What vermin?' asked I. 'Oh, bears, and skunks, and raccoons, and 'possums. The bears is the knowingest varmint for finding out a Bee-tree in the world. They'll gnaw for days together at the trunk till they make a hole big enough to get in their paws, and then they'll haul out honey, bees and all.'

GOLD WASHING.

In the mining districts of Brazil, the gold is imbedded in metalliferous ridges of rock, which spread to an immense extent over the country, rugged and barren, without trees, grass, or verdure of any sort. Towards the city of San Jose, the ridge presents a precipitous wall, five or six hundred feet high, and twelve or fourteen miles in length. The indications of gold are as follows:—waters impregnated with saline sulphates, particularly if they have a mineral taste; marcasites, or pieces of metal found in cavities of the rock, or in streams that flow from the ridge; a sterile soil, with scanty vegetation, if any, and of a sickly hue, caused by metallic vapours from the earth; a strong reflection of the sunbeams from the face of the rock; and a loud reverberation of sound, during a thunder storm. Standing upon the top of the ridges, and gazing over the country, the traveller sees nothing but a red desert, as far as the eye can reach; although, originally, this tract included the most fruitful soil in Brazil. Its ruin has been caused by washing away the vegetable mould in search of gold, with which, in the course of ages, the whole surface of the country had become impregnated, by means of the waters that ooze from the metalliferous ridges. The heavy rains penetrate into the recesses of the rocks, pass through the veins of gold, and issue from the sides of the ridge, bearing with them the lighter particles of metal, which they deposit in the soil for many miles around. The Brazilians, by repeated processes, wash away all the vegetable earth, and extract the particles of gold, but leave only a sort of red clay or dirt, which is as incapable of nourishing vegetation, as so much brickdust would be. There is no possibility of restoring, in any degree, the fruitfulness of those parts of the country, the surface of which has been thus washed away. So far as can be conjectured the curse of everlasting barrenness is entailed upon them. Had the inhabitants sought only the vegetable riches of these spots, they might have enjoyed them till the end of time; but they chose to devastate the land for the sake of its metallic wealth, which is already exhausted.

But though the soil itself now contains but little gold, the metalliferous ridges are supposed to be full of incalculable wealth. What has hitherto been gathered—though sufficient to gild, as it were, the whole surrounding country with glistering particles—was but the overflow and superfluity of the vast treasures which Nature has hidden beneath those barren rocks. Within a few years, associations have been formed in England for working the mines of Brazil. The Brazilians themselves possess no skill in mining; their only art is that of washing away the soil. Gold-finding, however, is the great aim and occupation of the inhabitants of all classes and ages; even the children, instead of engaging in sports, may be seen grubbing in the earth or pounding pebbles to pieces, with premature greediness for the glittering dross. Stripped as the land now is of all its vegetable qualities, it may still be questioned whether it would not be for the interest of the people, could the gold mountains be sunk to the centre of the earth. They would doubtless find some other mode of industry, which could not ultimately be so miserable as that which engrosses them at present.

A cubic foot of ore, weighing about one hundred and ten pounds, produces from three to eight and a half ounces of gold. The gold collected by washing is usually of a dirty white colour; some of the gold is black, owing to its being alloyed with an oxide of silver. It is a curious fact that a gold earring, as artificially manufactured as any in a jeweller's shop, has been found among the native metal under the soil. Gold-washing is now carried on in sixty-six districts of Brazil, all of which, in the course of time, must be ruined by it.

Viscount Exmouth.—This was the British admiral who fought the battle of Algiers. His family name was Pellew. From his boyhood, he was remarkable for courage, and early gave proof of the ability which afterwards made him a distinguished ornament of the British navy. When General Burgoyne was ascending the side of the ship which brought him to America, the yards were manned to receive him; and happening to look upward, the General saw a midshipman standing on his head, at the very extremity of the yard-arm. This was one of young Pellew's ordinary feats. After his arrival in America, he served with the army, and by his skill, a bridge was constructed across the Mohawk, over which Burgoyne marched to Saratoga. He was afterwards engaged in the battle of Bemis's Heights, and came near capturing General Arnold, whose stock and buckle remained in Pellew's hands as a trophy of the encounter. Had Arnold then been made prisoner, some of the most striking and melancholy incidents of our Revolutionary war might never have occurred, and that wretched traitor might still have borne the name of patriot.

To raise potatoes in Ireland, English seed is planted; in England, Irish seed.

French Wines.—Immense quantities of the light wines of France are annually thrown away. They will not bear transportation, and cannot find a market at home.

JOHN C. CALHOUN.

On the father's side, Mr. Calhoun is of Irish descent. His grandfather came to America in 1733, and settled first in Pennsylvania, whence he afterwards removed to the backwoods of Virginia, and finally to South Carolina. In this latter migration, he seems to have been accompanied, like an ancient patriarch, by his married children and their offspring. The family planted itself on the borders of the Cherokee country, and soon underwent a bloody attack from the Indians, in which the eldest son, with half the males of 'Calhoun's settlement,' were slain. The mother of the family, and several other women, besides a number of children, were massacred. During the hostilities that ensued, Mr. Calhoun's father, Patrick Calhoun, was appointed captain of a body of rangers, in which office he displayed great courage and ability. These events occurred long prior to the birth of JOHN CALDWELL CALHOUN, which took place on the eighteenth of March, 1782.

His early education was irregular and imperfect. When thirteen years old, he was placed at an academy, where he had free access to a circulating library, with liberty of choice between the light and fanciful, and the more solid literature, which it contained. He at once rejected the trash, and devoted himself to the perusal of history and metaphysics, with such an intensity of application that, in a few months, he had nearly ruined his health. In consequence, he was withdrawn from the academy, and became engrossed with rural sports and occupations, till the age of eighteen. He appears to have looked forward to a life spent in similar pursuits; nor was he easily persuaded by his brother, who saw his great natural abilities, to resume the studies which had been so long broken off. It is not probable that Mr. Calhoun, whatever might have been his pursuit or profession, would have lived without distinction of one sort or other, or have died without leaving some mark of his existence. Yet, however high may be a young man's talent, a classical education and a learned profession are desirable, not so much because they add to his natural gifts, as because they put him in the most direct road to his proper sphere of action. A farmer may have the intellect of a statesman; but it depends upon contingencies whether it will ever be brought into play; whereas a lawyer reaches, as a matter of course, that rank in public life to which his talents may entitle him. Certainly, if Mr. Calhoun had not yielded to his brother's advice, his distinction would have come later, and the country would have lacked the many services which he rendered her, while yet in his early manhood.

In two years from the time of his return to the academy, he was admitted to the Junior Class of Yale College, and was graduated, in two years more, with the highest honours of that institution. He received, also, a part of his legal education in New England, at the Litchfield law-school. Here, in the discussions of a debating society, he showed those powers of argument and eloquence, which were very soon to place him in the highest rank of public men. Although, in after life, he has stood forth the champion of a party, which appeared ready to withdraw the hand of union from New England, there must be many kindly feelings in his heart, towards that portion of his native country. Returning to the South, he was admitted to the bar in 1807, and at once assumed his place among the ablest members of the profession. His first step in public life was the delivery of an address, during the excitement arising from the attack on the frigate Chesapeake. After serving two sessions in the legislature of South Carolina, he was sent, in 1811, at the age of twenty-nine, to Congress; whither his fame had preceded him, and immediately obtained him a most important part in the conduct of national affairs. He was appointed to the committee on foreign relations, and in the course of the same session, on the withdrawal of General Porter, became chairman of that committee. Thus, in seven years from the period of his leaving college, had Mr. Calhoun reached a station, which made him a leader of the administration party, a chief advocate of hostile measures against Great Britain, and one of the strongest supporters of the war, when it commenced.

The life of a leading statesman is so mixed up with the annals of his country, that, in regard to him, there is scarcely any distinction between biography and history. Great national events compose the incidents of such a life. The narrative should not flow on in the narrow line, which suffices to represent the course of private men, but, if it aim to give any tolerable idea of its subject, must be allowed a latitude as wide as the land itself. Other characters, also—those of the statesman's friends or opponents—should be developed, in order to throw light upon his own. And as, in one sense, the most important part of the life of such a man, consists in his principles and opinions, these should be deduced from his actions, or gathered, where it is possible, from the records of his pen or the words

of his own mouth. The speeches, by which he influenced with his breath the destinies of his country, are not mere words, but mighty deeds, and should be preserved as such in his biography, not only as incidents of his life, but as interpreters of other incidents. His nominal rank—the public stations which he may have filled—are comparatively of no moment. External greatness is not a guarantee for greatness of soul and intellect; nor, where the latter exists, does the former effect any thing towards a portraiture of it. Yet, in a brief sketch like this, all that we can do is to trace Mr. Calhoun from one station or office to another, and leave almost the whole of his real biography untold.

At the close of the war, as chairman of the committee on currency, Mr. Calhoun was the chief instrument in establishing the bank of the United States. Whatever may be the ultimate tendency of such an institution, it had undoubtedly the immediate effect of regulating the currency of the country, which was then in a state of unprecedented disorder. On the accession of Mr. Monroe to the Presidency, Mr. Calhoun became Secretary of War, which office he continued to hold for the next eight years. Under his charge, the department was relieved from nearly all its immense burden of debt, and the expenses of the army were reduced more than one third. In the mean time, at an earlier age than usual, his name had been brought forward, among the most prominent candidates for the Presidency of the United States. As there was not, however, a probability of his being elected by the people, he withdrew his pretensions to the higher dignity, and became, by the suffrages of a large majority, Vice-President. We need hardly remind the reader, that there was no election of President by the people, and that Mr. Adams, without a plurality of the people's votes, was the choice of the House of Representatives. As Mr. Calhoun objected, on principle, to this mode of election, and held the opinion, that, when the choice did devolve upon the Representatives, they should be guided by the popular will, he now ranked with the opposition. On the accession of General Jackson to the Presidency, Mr. Calhoun began his second term of office, as a supporter of the Chief Magistrate.

The strong character of the new President, his tenacious grasp of his own opinions, and energetic action upon them, made it difficult for a man, himself of so decided principles as Mr. Calhoun, to remain in perfect harmony with him. Differences soon arose between the two highest officers of the nation, so important in their nature as wholly to alienate them from each other, both in their political and private relations. This hostility was embittered, when Mr. Calhoun took his stand as the champion of Nullification, and the President gave the whole strength of his arm to the support of the Union. But our narrative has now brought us to forbidden ground, where the embers of faction are still smouldering, and may scorch our feet, if we venture farther. In reference to Mr. Calhoun's public life, we will merely add, that he left the office of Vice-President for a seat in the Senate, where he fought the battles of South Carolina with the great statesman of the North. But we must not conclude without a tribute to his political integrity, which—whether his judgment may have been right or wrong—is as unquestionable as his private honour.

Combustion of a Professor.—The American Journal of the Medical Sciences gives an account of the spontaneous combustion of the Professor of Mathematics in the University of Nashville. He felt a sharp pain in the ankle, and began to strike the spot smartly with the palm of his hand; the pain, however, grew more acute, and compelled him to utter loud cries. On examining the spot, he discovered that his leg had actually caught fire, of its own accord, and that there was a flame of the bigness of a ten-cent piece, and of the colour of quicksilver. He extinguished the conflagration by pressing his hand forcibly upon the part; but an ulcer ensued, which was several months in healing. This occurred in January, 1835. Heretofore, no instances of spontaneous combustion have been known, except of persons addicted to the use of alcohol; but the Professor is a gentleman of the strictest temperance, and in no respect of a fiery disposition. He is subject to derangement of the digestive powers, and has somewhat enfeebled his constitution by a too devoted pursuit of science. Should this strange accident often occur, it will be the part of prudent men to take out policies of insurance against the Loss or Damage of their own persons by Fire.

Juvenile Outcasts.—It has been computed that there are four thousand children of both sexes, in London, who rise in the morning from dens of vice and misery, without knowing how they shall procure food during the day, or where they shall lie down at night. They get their living, such as it is, by theft, and pride themselves on their dexterity. As regards religious impressions, these poor children are on a level with the brutes; in moral sentiment, they are beneath them. In the above estimate, only those between the ages of seven and fourteen are included.

The English Bijou Almanac contains an annual calendar, six portraits of distinguished personages, and poetical illustrations of them: the length of this ponderous volume is one inch, and its breadth not quite so much. It would make a singular figure by the side of one of the vast folios, that were in fashion one or two centuries ago, each of which, if its solid contents were subdivided, would supply paper enough for at least five thousand such volumes as the Bijou. One of these books would adorn the library of Lilliput; the other, that of Brobdinag.

Singular Substance.—On the surface of the hot springs of Baden in Germany, and in several other places in Europe and Asia, there is collected a singular substance resembling human flesh, and which, when analyzed, appears to be composed of the same ingredients as animal matter. The question is suggested, whether this fact does not account for the stories of showers of human flesh, which are related among the prodigies of antiquity.

THE VALLEY OF THE SWEET WATERS.

[Commodore Porter's 'Constantinople.']

An old gentleman who lives at a village on the other side of the Bosphorus, asked me to come over to take breakfast with him, and promised me a distant view from the top of the hill, of an assemblage of the females of the Turkish families of Constantinople and the neighbouring towns, as they gather together in the Valley of the Sweet Waters, every Friday, and there pass the day, amusing themselves variously. He said we could not approach them, but that the sight at a distance was worth seeing. I accordingly went to his house, where I was introduced to his wife, his eight or ten married daughters, and their from six to eight children apiece, and, after enjoying the magnificent view from the hill at the back of his garden, proceeded to my kaick, and embarked for the Valley of the Sweet Waters, about a mile above us.

A kaick is a long narrow light boat like an Indian canoe, but turning up at each end; highly ornamented by carved work and gilding, and rowed (that is the diplomatic ones,) by three sturdy Mussulmen dressed in white coarse shirts and trousers, their muscular arms bare to the shoulders, a small red skullcap with a blue tassel on their heads, and each rowing two pair of oars. The larger kind carry from four to five passengers, seated on carpets in the bottom of the after part of the boat, and they skim along with a velocity which is almost incredible. They are beautiful things and perfect in their kind. At Buyuederé, a man's rank is as well known by the number of his oars, as by the number of strokes on the bell.

On our way to the Valley, we were joined by numberless kaicks filled with women, and in addition to the usual compliment, as many children as they could stow away among them, and they appeared to take very good care that no room should be lost: Women are generally economical, and are so in Turkey, at least when boat hire is in question, so far as I could judge by appearances. We entered with them a narrow fresh water river, up which we proceeded for about a mile, when we came to a light and airy wooden bridge thrown across the stream, near which was a landing-place, and at it a multitude of kaicks, from the rank of three banks of oars down to one.

A string of carriages, filled with women and children, was at the moment crossing the bridge to the place near where we had landed, which was the entrance to an extensive grove of trees of the largest kind; some in clusters of three, four and five, others spreading their branches to an immense distance, affording ample space and shelter from the sun for thousands. Here and there were seats, and a marble fountain, of clear and cold water, supplied the means of refreshment.

The Turkish carriage is a curious vehicle. It is something in shape like our Jersey wagons, without springs or seats, and is drawn by two fat and beautiful light gray oxen, most gorgeously decorated on their flanks, backs, and shoulders with gold, and a rich fringe-work made of silk. On the face, from the horns to the nose, is a piece somewhat in the form of a shield, composed of innumerable small looking-glasses, set in gold and silk work. The carriage is called an *araba*, probably from the rich arabesques, with which the exterior and interior are covered, highly ornamented with gold, and rich paint work. It has a bow top covered with a woollen or silk cloth, generally red, with white silk or linen curtains neatly fringed. The entrance is at the back by a small ladder, and the persons within are seated in the Turkish manner, on rich and soft cushions. Each of these vehicles contained six or eight Turkish ladies dressed with oriental splendour; the curtains of most of them were open; many of the ladies had their faces exposed, at least long enough to give me a full view of them. They were of various ages; principally from fifteen to three or four and twenty, and the major part of them extremely beautiful. Charmed with this unexpected, and singularly beautiful and picturesque spectacle, I followed the carriages up the Valley, where I saw seated in groups on rich Turkey carpets, spread on the grass in the shade of the wide-spreading trees, many hundreds of young and beautiful Turkish women, amusing themselves variously. Their carriages were drawn up in lines near them; the oxen, under the charge of the keeper, were grazing on the smooth green lawn in the centre of the grove; the children, splendidly clad and beautiful as angels, chasing the butterflies and grasshoppers, while wandering minstrels, generally Greeks, enchanted with their music and love songs, groups of 'lights of the harem;' here and there a wandering Bohemian, or Hungarian, recounting some love adventure, or an Egyptian fortuneteller, examining the palms, and exciting the hopes of some believing fair one. Among other exhibitions for the amusement of the domestics and the children, was a large grisly bear which had been taught to dance, to wrestle, &c. led by a northern savage, more wild and grisly than his companion. Not a Turk was visible, except a small guard of soldiers at the landing-place to keep order among the boatmen. The women were as free as the air they breathed, and as unrestrained; I went among them, made signs to them, for I could not speak; my companions, (I had two) talked to them; there was scarcely a face among them worth seeing, that I had not a full view of, and never in my life did I so much regret the want of a tongue to express myself. The scene of the Valley of the Sweet Waters was most lovely, and the situation in which I was placed, singular. I have no recollection of any traveller mentioning this place, or noticing the extreme license given to Turkish women on their Sunday. They scarcely seemed to be aware of the impropriety of a departure from their usual concealment in our presence; they gazed at us, and we gazed at them with equal curiosity. What struck me most, was their brilliant black eyes, their beautiful arched eyebrows, and their long and glossy black hair almost reaching the ground. The delicate fairness of their skins is owing doubtless to their confinement to their homes; of their figures I could not judge. Some of them have thrown off their clumsy yellow boots, and substituted the silk open-work stockings and slippers; handsomer ancles, and smaller and prettier feet, I have never seen. When a man buys a wife, if rich, he undoubtedly

chooses a handsome one. The Turks are a noble race of men, and the women being generally of Circassian origin, it is natural that the daughters of the Turks should be beautiful.

About one o'clock, a boat laden with hampers of meat, and bales of wine of every description, arrived at the landing, and soon after, the wife and daughters of my friend, who is of Venetian parentage, and whose ancestors came to this country some centuries ago. He and all his family speak Greek, French, and Turkish; the ladies are intelligent, accomplished, handsome, and fashionable. We spread our carpet, over which we laid our table-cloth, with knives, forks, plates, spoons, &c. in the European style, and under the shade of a noble tree began our repast. This was a subject of wonder; groups collected around us, and every thing appeared to astonish them; eating with the spoon, instead of the fingers! cutting the meat, instead of tearing it! drinking wine, and to one another! and above all, the gentlemen waiting on, and helping the ladies, instead of making the ladies wait on them!! It was wonderful; many among them exclaimed, 'Mash Allah,' God is great! Dancing bear, Greeks, Bohemians, Hungarians, and Gipsies were all deserted to go and see *Christians eat!*

About four o'clock, the company began to move off, those of the Asiatic side in their Arabas, those of the European in their Kaicks. The oxen were geared up, and the company seated, and in motion with scarcely a word spoken. We followed their example, and embarking in our kaicks, descended the Bosphorus about half a mile to a Kiosk of the Sultan's, near which is a splendid Persian fountain of white marble, very highly ornamented. Here also is an extensive grove, and a large verdant meadow where the Sultan turns out his horses to graze and play. Here we found the same company, in augmented numbers, in groups under the trees, taking coffee, sherbets, and ice-creams, which were sold by persons hawking them about. There were many, also, who sold sweetmeats; and pedlars, with fancy things, ribbons, laces, &c.

I remained till sunset; how long the others remained I know not, but was told that it was not unusual to remain till midnight; and that sometimes the Sultan visits the place with the officers of his court, and his band of music (an excellent one and taught in the European manner.) In such cases they do not break up till nearly daylight. Not long since he paid a visit to this village at about eleven o'clock at night, with a long string of barges, filled with his gentlemen and guards, and preceded by his band, slowly moving along in front of the long stone quay, and playing in the best style. From thence he went back to the Kiosk, near the fountain and plain, where he remained with the company until two o'clock in the morning, when he returned to Constantinople.

The day to me was a day of *uninterrupted* enjoyment; nothing whatever occurred to mar in the slightest degree the pleasures of it; every thing was unexpected and surprising. I had got into an entirely new world. I had seen the Turkish character in a new point of view; the film had dropped from my eyes, and I saw things with my own optics, not as described by others. The few hours I passed here were worth volumes of the creations of the imagination of book-making travellers. The Turkish women are as free as any women in the world; they receive no attention from the men, it is true, and perhaps do not wish for the restraint of their presence. They have their customs, we have ours; and where is the christian husband, so confiding in the prudence of his wife and daughters, as to permit their absence whole days and nights, without inquiring where they had been, and what they had been about? but this is permitted by Turkish husbands and fathers; for every Friday and Friday night, in fine weather, the same scenes I have described take place at the Valley of the Sweet Waters, on the Asiatic side of the Bosphorus.

Fashions at Hamburg.—The unmarried women of Hamburg wear their hair braided in two tails, hanging down their backs nearly to the ground. On the day of marriage, one of these tails is cut off; and if the lady survive her first husband, and be fortunate enough to obtain a second, she loses the remaining tail. In the same city there is a Hospital, which, besides accommodating thirteen hundred sick, affords an asylum to aged persons, where, on payment of a small sum of money, they may be sure of a comfortable home for life. The police of Hamburg, had formerly a singular method of punishing and reforming the idle. They were suspended in a basket over the dinner-table in the House of Correction, and doomed to subsist merely on the smell of the victuals, till they chose to labour for more solid sustenance.

Swedish Currency.—A traveller in Sweden mentions that his pockets were filled with no less than one hundred bank-notes. The value in specie of this great bundle of paper-money was precisely six dollars and sixty cents. The Swedish bank-notes are not generally of higher denominations than from five to twenty cents.

Native Silver.—In the royal museum of Copenhagen, there is an enormous mass of native silver, measuring five feet, and weighing five hundred pounds.

Tonquinese Soldiers.—A woman, being condemned to death at Tonquin, underwent her punishment with so much fortitude that the soldiers, who were present, devoured her body, hoping that this food would inspire them with similar courage.

The Heights of Mountains may be ascertained with considerable accuracy by inserting a thermometer into boiling water. The heat of water at the boiling point is less, in proportion to the distance above the earth.

Arrow-Root is sometimes adulterated with starch, or the fecula of potatoes. Pure arrow-root is not so white as either of these mixtures; its grain is finer; and it contains small lumps that crumble between the fingers. The jelly which is made of it, and the water that is turned off, are inodorous; while those of the adulterations have a distinguishable smell

AN ANNUAL FAIR, IN INDIA.

[From Miss Roberts's Work on Hindostan.]

The town of Hurdwar does not afford accommodation for a tenth part of the numbers who crowd to its fairs; but Asiatics are independent of lodging-rooms; the rich carry their canvass dwellings along with them, and the poor are contented with the shelter of a tree. The country round about is formed into one vast camp, in which Arabs, Cingalese, Persians, Tartars, mingle with Seiks, people from Cutch, Guzerat, Nepaul, and all other provinces of India; while, a little removed from the din and clamour of this Babel-like assemblage, are to be seen the tents of European visitants, ladies, who venture fearlessly into the hubbub, sitting as much at their ease, as the dust, the myriads of flies, and the intolerable clamour, will admit.

To give some idea of the valuable nature of the articles brought to Hurdwar for sale, it may be interesting to state, that a necklace consisting of a row of alternate diamonds and emeralds was valued at five thousand pounds; for another composed of splendid pearls, a fifth part of that sum was demanded; and those of wrought gold were from thirty to fifty pounds each. All sorts of brazen vessels are exposed for sale, and a great variety of idols of the same metal, which, previous to being consecrated, may be purchased by the pound. After the Brahmins have shed the odour of sanctity upon them they increase prodigiously in price; persons, therefore, who only buy out of curiosity, should content themselves with the least valuable articles. Inferiour trinkets, in the shape of beads, necklaces, bangles, armlets, and anklets of silver or of baser metal abound, together with real and mock coral, tinsel, and glass. There are mouth-pieces for pipes, of lapis-lazuli, agate, cornelian, and different kinds of marble; and toys in ivory, stone, and mother of pearl. Rosaries and Brahminical cords in great abundance, with preserved skins of wild animals, and stuffed birds. Truffles are brought from the countries north of the Sutledge. The sherbets are the finest in the world, but the manufacture and the consumption of sweetmeats almost exceed belief. Every fourth shop at Hurdwar is a confectioner's, and the process of baking goes on at all hours of the day and night. The articles intended for sale are arranged with more regard to convenience than taste; either strewed promiscuously upon the ground, or hidden in the tents; the various wild animals, which form a part of the merchant's speculations, are openly exposed to public view, and, though gazed at with wonder and amazement by strangers from distant lands, are not rendered more profitable by being exhibited for money. The cattle department, at the Fair of Hurdwar, is the most attractive, both to Europeans and natives, being considered the best in India: Horses are brought from Hattiawar, Cutch, the countries north of the Sutledge river, Persia, and the shores of the Red Sea, perfect in blood and bone, proud in their bearing, swift as the wind, and suited to warriours and cavaliers; these fine animals are contrasted with a race less showy, but equally useful, the small, compact, and sturdy breeds of Cashmere and Cabul, and the mountain ghoouts, of which Jacquemont has lately made such honourable mention. Elephants also rear their gigantic forms in the encamping-grounds of the dealers. Like the horse, they are distinguished by their good points; the tusks should be perfect, and they are greatly esteemed when the tail is of the orthodox dimensions, and furnished with a flat tuft of hair at its extremity.

The difference of appearance betwixt an elephant destined for the pad, or as the caparisoned bearer of princes and nobles, is very great, but will bear no comparison with that displayed in the Camel. At Hurdwar, every description of this animal may be seen, from the uncomfortable looking, dejected beast of burden, to the thorough-bred *hircarrah*, which can maintain its speed for a hundred miles without pause or rest; a winged messenger, which none but the best-trained and boldest riders can venture to mount. The camel and the dromedary were long supposed to be distinct animals, but modern naturalists have decided that there is really no difference between them, the single and double-humped being merely a variety, and the fleetness and intelligence of both depending upon early education. Buffaloes, cows, and sheep, are likewise for sale, the list of domestic animals closing with dogs and cats, the beautiful races of Persia, so much sought for in India, appearing by the side of some huge elephant. Monkeys, occupying a sort of debateable ground between the wild beasts of the field and the quadrupeds which man has enlisted into his service, are brought in great numbers to Hurdwar: bears, leopards, and cheetas are also numerous, and deer of every kind, from the stately nylghau, to that diminutive species which can be so rarely preserved in captivity, even in India; the Yak is also sometimes found, though but seldom, since it is unable to bear the heat of the plains. The most valuable articles of commerce at this fair, are the gems and precious stones of all kinds which lapidaries bring from every part of Asia: the shawls and cloths from Cashmere and Thibet, rank next; the same dealer may also have a stock of English woollens; and perfumery and *bijouterie* of every kind from London and Paris, find their way to this remote market.

In speaking of the commodities to be met with, it may not be out of place to mention those which would be most likely to find purchasers at fair prices. In cutlery, there should be scissors, penknives, and razors; next, common padlocks and all kinds of cheap locks. Red and blue broadcloths, and serge, with woollen caps, such as sailors wear, sell well. In cotton and silk, care should be taken to select articles which would make up readily into turbans and *sarees*; the former should be white, scarlet, or crimson, plain or flowered, twenty yards long by twelve inches; cloths for the *duputtee*, six yards long and one and a half wide, plain, or white, or those with coloured borders, which are much in request; also chintzes of gaudy patterns, which, as the fashions in India are unchangeable, would secure a constant sale. Stationary is also in considerable demand, but it should consist of very cheap paper, both foolscap and post, French and Italian, it is said, answering best, being manufactured at a low price; quills, red wafers, and black lead pencils,

complete the list in this department. The catalogue of English books is rather amusing; in addition to school dictionaries (that of Mylius, and that by Fulton and Knight, being recommended,) Murray's Grammar, Spelling Book, an English Reader; the list contains an abridgment of the Spectator, Arabian Nights, Chesterfield's Letters, whole or abridged; English Dialogues, the Young Man's Best Companion, and the Universal Letter Writer. These are eagerly sought after, but as yet, for the generality of Indian students, the remaining portion of English Literature has been written in vain.

Watches of silver or yellow metal, costing from thirty shillings to five pounds, are greatly in demand; also good spectacles, in cheap mountings of silver or metal, plated ware not selling readily in India; small mirrors in plain frames, and lanterns of a common sort, filled up with lamps for oil. Patterns of hard-ware manufactory, should be procured from India; for the natives will not eat or drink out of new-fangled utensils, however convenient they may be; plates, dishes, basins, and bowls, of iron, copper, and tin, should be fashioned after a peculiar manner, as also the *lota*, or jug, from which if an unpractised European were to attempt to drink, he would inevitably spill every drop of the liquor. In medicine, there is an incessant demand for the following articles: bark-powder and quinine, jalap and cream of tartar, essence of peppermint, brandy disguised as a medicine, eau de Cologne, lavender-water, and strong sweet water, such as eau de mille fleurs. This list appears very scanty; but the gentleman who furnished it assures us that it will not be expedient to add any thing to it for the purpose of supplying the wants of the interiour; he caused it to be examined and corrected by several opulent and respectable natives, well acquainted with the actual state of the country, and with what would sell most readily among the great mass of the people; many of the most respectable classes being poor, and content with the commonest conveniences of life.

The English visitors at Hurdwar are made to smile at the base uses to which the refinements of European luxury are degraded; nothing appears to be employed for the precise purpose for which it was originally intended; table covers of woollen with printed borders, black and crimson, or yellow and blue, figure upon the shoulders of the poorer classes, who have purchased them from next to nothing, tables being at present unknown in the houses of the natives; while prints are offered for sale upside down, and hung up in the same manner when purchased. A taste for the fine arts is still a desideratum in India, and it is difficult to explain the most obvious pictorial subject to an uneducated native.

THE COMBUSTIBILITY OF THE DIAMOND.

[From the Edinburgh Philosophical Journal.]

The first grand experiment to prove the combustibility of the diamond took place in the presence of Cosmo the Third, Grand Duke of Tuscany, wherein the diamond being exposed in the focus of the great lens (still in the Grand Duke's laboratory at Florence), it was entirely volatilized. Guyton de Morveau, and others, consumed the diamond, and it was readily dissipated in the focus of the great mirror of Tchirnhausen, as we believe it subsequently was in that of Parker's burning lens. In the year 1771, Macquer observed the diamond to inflame. Guyton de Morveau had proved that the diamond was destroyed when projected into red-hot nitre; and it was also burnt by means of melted nitre in a gold tube, by Mr. Tennant. When fragments of diamond were introduced into the brilliant arch of flame, evolved between points of charcoal in the galvanic batteries of the Royal Institution, consisting of 2000 double plates, and exposing a surface of 128,000 square inches, they rapidly disappeared, being completely volatilized. The diamond may be easily consumed by being placed in a cavity of charcoal, and urging on it the flame of a spirit-lamp, by means of a stream of oxygen.

So far the combustibility of the diamond was completely ascertained, but its nature remained still undetermined. Lavoisier had proved and pointed out that carbonic acid gas was evolved as a product both in the combustion of the diamond and that of charcoal, and thus their identity was inferred. The researches of Clouet, Messrs. Allen and Pepys, and others, have confirmed this conclusion. Sir George Mackenzie converted iron into steel by means of powdered diamonds. Mr. Children's immense battery consisted of twenty triads, each six feet long, by two feet eight inches broad, exposing a total surface of thirty-two feet; when iron, with diamond powder interposed, was exposed to its influence, the iron was converted into steel, and the diamond disappeared; and Mr. Smithson Tennant, having placed a diamond in a gold tube, supported in a state of incandescence, a stream of oxygen, by means of gentle pressure, was made to traverse it, and the result proved that the oxygen was transformed into an equal volume of carbonic acid gas, which was found in an opposite receiver resting over mercury. Sir Humphrey Davy, when at Florence, made some experiments with the Grand Duke's burning lens, on the combustion of the diamond. He found that when the gem was introduced into a glass globe, supplied with oxygen, and kindled by the lens, it continued to burn after it was removed from the focus—the oxygen was supplanted by an equal volume of carbonic acid gas, while there was no deposit of aqueous vapour. On the other hand, when plumbago and charcoal were consumed under similar circumstances, there was a sensible diminution of volume, and also a formation of watery vapour, clearly proving that the latter contained hydrogen. Experiment has thus unequivocally demonstrated that the diamond is pure crystallized carbon.

Czar Peter's Statue.—The colossal statue of the Czar Peter was erected by Catherine the Great, empress of Russia, in 1782. It is of bronze, and represents the Czar on horseback, with a composed and graceful mein, holding the reins in his right hand, and stretching forth the left, as if to bestow a benediction on his subjects. The pedestal of this statue is a solid rock, weighing 1600 tons, which was brought fifteen miles, by land and water, to St. Petersburg.

COINAGE.

Coins have been made of pewter, brass, copper, silver, gold, and platinum. Money has recently been coined of the latter metal in Russia. Pewter coins were issued by King James II, during his wars in Ireland, after abdicating the English throne. Leathern coins, if such they may be called, have been in use in some countries. The Spartans, we believe, used iron money. The most ancient pieces of coin were impressed by placing the blank metal under the die, and giving it a blow with a hammer. They appear to have been very carelessly manufactured; for the blank piece of metal was often imperfectly rounded, and sometimes was not placed directly underneath the die; so that only a portion of the inscription or device was stamped upon the coin. Occasionally, coins were cast; and ancient moulds have been found with metal remaining in them. The form has generally been circular in all ages; but we have seen specimens of coin from the East Indies in the shape of little copper cubes. The size of pieces of money varies extremely in different ages and countries. Some Russian copper coins are almost big and heavy enough to crush a man, should they fall upon his head. The gold doubloon is a ponderous coin. On the other hand, there used formerly to be a coinage of silver pennies and half-pence, in England, which were so small that it was difficult to find one of them in the pocket. In fact, they could not have been much bigger than silver spangles, and must have looked as if they came from the royal mint of Lilliput. Medals, struck in honour of distinguished personages, or to commemorate remarkable events, are often several inches in diameter—the size of an ordinary saucer.

Gold bullion for the English coinage is imported by the Bank of England, and transmitted to the mint in the shape of ingots. It is there melted in black lead crucibles, each of which will contain about a hundred pounds of metal. When in a state of fusion, the gold is stirred with a stick of black-lead, in order to mingle the pure metal with the alloy, the proportion of which is two carats to twenty-two. It is then poured into moulds, which give it the shape of bars, ten inches long, seven wide, and one thick. Silver bullion is imported in ingots, of from fifty to sixty pounds troy-weight. At the mint, it is melted in very strong cast-iron pots, shaped like the letter U, each containing from four hundred to four hundred and fifty pounds of the metal. After being mixed with alloy, at the rate of eighteen penny weights to every eleven ounces and two penny weights, it is cast into iron ingot moulds. The bars of silver must then be annealed, by heating them red-hot. Gold does not undergo this process.

Having been thus prepared, the bars of silver and gold are passed between rollers, in order to reduce them to sheets of the necessary thickness for coinage. These sheets are cut into slips, each of the bigness of two coins; and pieces of a circular form are struck out, which must be sized, or brought to the standard weight, by filing the heavier ones, and throwing the light ones aside to be re-melted. This process of sizing is rendered much less troublesome than formerly, by the great perfection of the machinery which is now used for flattening the bars, and cutting out the circular pieces. After being sized, the pieces, or blanks, as they are called, are heated red-hot, and are then pickled, by boiling them in sulphuric acid, which renders them clean and brilliant. The next operation, is milling; the use of which is, to preserve the coins from being filed or clipped round the edges. Lastly, they are stamped on both sides at once, by means of a screw-press. Such is the accuracy with which coin is now manufactured in England, that, of 1000 sovereigns, 500 were found to be perfectly correct, 200 varied only half a grain from the standard, 100 varied three-fourths of a grain, and the remaining 100, in the aggregate, one grain. Medals are produced by a succession of operations, similar to the above. When they are very large, and the figures are to be much elevated above the surface, it is sometimes necessary to give them fifteen or twenty strokes of the die. Some have been cast in plaster moulds. They have also been cast in sand, and finished by striking with the die.

In this country, the earliest coinage was that of shillings, in Massachusetts, in 1652. By manufacturing and issuing these coins, the government of the colony infringed a royal prerogative, and made themselves liable, for aught we see, to the pains and penalties of forgery. King Charles the Second took umbrage at the fact, but was pacified by being shown one of the coins, whereon was represented a tree, which his Majesty mistook for the Royal Oak that had concealed him from his enemies;—the truth being, that the New England coiner had done his best to give the image of a pine-tree. There is a well-known story, that the mint-master grew very rich by his contract with government; and at the marriage of his daughter, a stout, plump lass, he put her into one side of a pair of scales, and heaped Massachusetts shillings into the other, till they weighed her down. This was the girl's portion. If young ladies of modern times were to be thus portioned according to their weight in silver, a slender waist would stand but a poor chance in the matrimonial market.

Snoring.—'Snoring,' says a writer in the American Journal of Science, 'is caused by the inactivity of the muscles of the extremities, in consequence of which the blood returns more sluggishly to the heart. Some of the muscles of respiration are thus impeded, and the remainder labour more violently, to overcome the deficiency; for the lungs require a certain quantity of air, in order to the performance of their functions. What they fail to receive in the regular inspirations they make up by more frequent inhalations; and what they want in frequency, they endeavour to compensate by the quantity admitted at once. In snoring, the mouth is besides but slightly extended, the palate is depressed, and a large volume of air is admitted into the nose. Hence the peculiar nasal resonance.'

Bullets.—In the early days of this country, when there was scarcely any coin, musket-bullets passed current instead of farthings.

TOWER OF BABEL.

On the banks of the Euphrates is the site of a ruined city, which is supposed to have been Babylon, that mighty capital of ancient Chaldea. Among the ruins, and about four miles from the river, there is an immense mound, to which the Arabs have given the name of El Mujellibah, or 'The Overthrown.' Scholars, deeply versed in ancient history and geography, are of opinion that this mound was the foundation of the Tower of Babel. In shape, it is a vast oblong square, and is composed of sun-dried and kiln-burnt bricks, which are laid in regular courses, with layers of unbroken reeds between each course. The material of most of the bricks appears to have been mud, which was beaten up with chopped straw, and baked in the burning sun of that Eastern clime. This was the sort of brick which the Israelites were compelled to make without straw—a very difficult task; for the straw was necessary to keep the mud or clay from crumbling to pieces. Instead of mortar, asphaltus or bitumen was used; this is the slime which is referred to in the following passage from Scripture—'And they had brick for stone, and slime had they for mortar.' Such of the bricks as remain entire are thirteen inches square and three inches thick, and are generally marked with ancient characters.

The mound is a solid mass, the sides of which face the four cardinal points. The northern side is 274 yards in length; the southern 256; the eastern 226; and the western 240. In its most elevated part, the ruin is 139 feet high. The summit is an uneven surface, strewn with whole and broken bricks, some of which are vitrified or petrified, and with pottery, bitumen, shells, and glass. The base of the mound is greatly injured by time and the elements. Towards the southeast, it is cloven asunder by a deep furrow, extending from top to bottom. In the sides of the structure deep cavities are visible, which have been partly worn by the weather, but chiefly hollowed out by the Arabs, in search of bricks and other antiquities. Within these caves, there is an offensive smell, and they are strewn with the bones of sheep and goats, which have been dragged thither and devoured by jackals. Numberless bats and owls inhabit their dismal recesses. Lions have been said to make their lair among the ruins; but it is believed that there are no lions in that part of the East. The natives can hardly be prevailed on to follow strangers into the cavities of the wall, or to remain in the vicinity of the mound after sunset, for fear of the demons with whom their superstitious fancies have peopled this place of mystery and decay. Besides its name of El Mujellibah, the mound is also called Haroot and Maroot, from a tradition that two rebel angels, who bore those appellations, are confined thereabouts in a certain invisible well, within which they have been hanging by their heels for ages, and will continue so to hang till the day of judgment. It is natural that legends of this character should be connected with the ruins, and throw a shadowy dread around them; but the only real danger, incurred by a visit to El Mujellibah, is that of being stung by the venomous reptiles which infest the spot. The situation of this, and other parts of the once magnificent and populous city of Babylon, corresponds well with the prophecy of Jeremiah.—'And Babylon shall become heaps, a dwelling-place for dragons, an astonishment and a hissing, without an inhabitant.' The traveller in the East finds, at every step, proofs equally strong of the prophetic truth of the Bible. It is not too much to say, that all the countries, where the old prophets dwelt, are now strewn with accomplished prophecies.

This is not the place for an erudite discussion, whether the ruinous mound of El Mujellibah—The Overthrown—be really the remains of the Tower of Babel, where mankind, till then constituting one race and people, were first divided into nations of various tongues. But there is nothing, either in the structure itself, or its local situation, to controvert that opinion; and if any person, by adopting it, will gain a livelier faith in Scripture history, there are fair and reasonable grounds for him to do so.

Russian Police.—Foreigners, who arrive in Petersburg, are not permitted to leave the city, till their names have been three times published in the Gazette. As this newspaper appears only twice a week, all travellers are compelled to remain at least ten days. After the regulation has been complied with, they are at liberty to depart at any time, within twelve days; but if they exceed that period, the whole ceremony of publication must be repeated. The supposed object of this singular ordinance is, to prevent strangers from going off in debt, without due notice to their creditors.

The Knout.—There is a large open space in the suburbs of St. Petersburg, where the punishment of the Knout is inflicted, generally on Sabbath mornings, and on females as well as men. Such is the severity of its stroke, that the executioner, if he be so ordered, can inflict death with it in the course of twenty lashes. The instrument is composed of the dried skins of fishes. Peter the Great, it is said used to lay it over the backs of the noblemen and ladies of his court, with his own hand.

Stage-Coaches.—Lord Clarendon, speaking of the change in the mode of travelling, says—'Whereas we were wont, in any great road, to meet a hundred horsemen in a day, we now see not ten; the Lawyer and his Clerk, the Citizen and his Apprentice, and the Lady and her Maid, being all crowded together into one Coach.' This was written more than a hundred and fifty years ago. Stage-Coaches are now, in their turn, beginning to go out of fashion.

Covered Heads.—It used formerly to be the custom to sit with the hat on at table. Lord Clarendon, in one of his tracts, introduces a person as saying that he never sat covered in his father's presence, till he was thirty-three or four years old, married, and had children; and then only at *meal-times*. Pepys, also, in his Diary, alludes to the custom.

Saint Ursula.—Such was the purity of St. Ursula, that, if any unclean carcass were buried near her grave, the earth, it is said, would throw it up again.

GREENOUGH, THE SCULPTOR.

[In a Letter from H. Greenough, Esq.]

[Dunlap's History of the Arts of Design.]

He was born in Green Street, Boston, on the 6th of September, 1805. At an early age he was placed at school, to be instructed in the course of his studies in the branches necessary to fit him for a collegiate education. His instructors were changed from time to time as he advanced, or as more eligible situations presented themselves. Most of these were masters of country academies, at some distance from Boston. I myself recollect twelve different persons, under most of whom we studied together. He was distinguished for his proficiency in the classics, and especially for his excellent memory; having once obtained a prize for having committed in a given time, more lines of English poetry, than any of his competitors, by a thousand and odd. To mathematics he had always a repugnance, and made little show; though the taste, I suspect, rather than the talent, was wanting.

Being generally robust, and of an active and sanguine temperament, he usually entered with great ardour into all the games and amusements at school. In the athletic exercises, as running, jumping, and swimming, he excelled most of his age. But many of his amusements were of a nature to show a decided propensity for the profession which he finally chose.

Although seeing an elder brother constantly engaged in drawing and painting might have induced him to do the same, from mere imitation; yet, in the manufacture of his playthings, a love of the beauty of form early manifested itself. His schoolfellows often begged of him to carve them wood cimeters and daggers, as every one he made surpassed the last in beauty. I recollect in particular, a small pocket pistol of his manufacture, which was cast of lead, and mounted on a very gracefully formed stock, inlaid with flowers and ornamental work, of thin strips of lead, which had, when new, the appearance of silver. On several occasions, when detected in manufacturing playthings in school hours, his performances procured him praise for their ingenuity and beauty, instead of the intended reprimand.

I might mention numerous instances of this kind, but will merely speak of one more favourite amusement. This was the manufacture of little carriages, horses, and drivers, of beeswax of different colours, which, being very small, (the wheels of the circumference of a cent) were the admiration of all our visitors, from their beauty and delicacy. The carriages were formed on exceedingly graceful models, trimmed and lined with bits of silk and gold cord, and with the horses, which were very well modelled, had quite the air of the equipages of some Lilliputian noble.

A small room was, by the consent of our parents, appropriated for the manufacture and preservation of these articles, and invention soon suggested the idea of laying out, on long pine tables, estates for the supposed proprietors of these equipages. The houses and tables were laid out, as it were, on a ground plan merely, the apartments being divided, like pews in a church, by partitions made of drawing paper, and furnished with miniature articles of similar manufacture; and, in this room, and with these puppets, adventures were dramatically gone through, with great enthusiasm, in play hours, for nearly two years, when the system, having arrived at what seemed the 'ne plus ultra,' was abandoned for some new project.

I have often heard him attribute his first wish to attempt something like sculpture to having constantly before his eyes a marble statue of Phocion, a copy from the antique, which my father caused to be placed, with its pedestal, as an ornament to a mound in the garden. His first attempts were made in chalk, on account of its whiteness and softness. He soon attempted alabaster, or rather rock plaster of paris, (unburnt,) with equal success; and within a few weeks of his first attempt, he had been so assiduous as to transform his chamber to a regular museum, where rows of miniature busts, carved from engravings, were ranged on little pine shelves. I recollect, in particular, a little chalk statue of William Penn, which he copied from an engraving in the 'Portfolio,' from the bronze statue in Philadelphia. A gentleman who saw him copying, in chalk, the bust of John Adams, by Binon, was so pleased with his success, that he carried him to the Athenæum and presented him to Mr. Shaw, I believe the first founder of the Institution, and at that time the sole director. My brother was then about twelve years old, and of course was much edified by Mr. Shaw's conversation, who assured him, as he held the chalk in his hand, that there were the germs of a great and noble art. He then showed him the casts there, and promising him he should always find a bit of carpet, to cut his chalk upon, whenever he wished to copy any thing, gave him a carte blanche to the *fine arts* room, with its valuable collection of engravings, &c. He may be considered from this time as studying with something like a definite purpose, and with some system. The friendship of Mr. Solomon Willard, of Boston, soon initiated him into the mysteries of modelling in clay, which he had unsuccessfully endeavoured to acquire from directions in the Edinburgh Cyclopedia; and Mr. Alpheus Cary, a stone-cutter, of Boston, gave him a similar insight into the manner of carving marble, so as soon to enable him to realize his wishes in the shape of the bust of Bacchus. He profited much also by the friendship of Mr. Binon, a French artist then in Boston, going daily to his rooms, and modelling in his company.

His progress was so rapid, that his father no longer opposed his devoting most of his time to these pursuits; insisting only on his graduating at Harvard University, Cambridge, on the ground that if he continued in his determination, a college education would only the better fit him for an artist's life. He accordingly entered college at the age of sixteen, A. D. 1821. His time was now almost exclusively devoted to reading works of art, and to drawing and modelling, and the study of anatomy.—Professor Cogswell, the Librarian of the University, assisted him in the former by the loan of a valuable collection of original drawings, as well as by his counsel and criticisms: and to Dr. George Parkman, of Boston, he was indebted for most of his anatomi-

cal knowledge, learned from *his* books, skeletons, and preparations. These are, however, not the only gentlemen to whom he was indebted for such real services, and of whom he always speaks with affection and gratitude; but as the object of the present communication is merely to trace the order of his studies and works as *an artist*, I have avoided mentioning names, excepting as tending to show how any main object of study had been effected.

Notwithstanding the benefit he must be sensible of having derived from his studies at Cambridge, I have heard him say he estimated them little in comparison to what he obtained from the friendship of Mr. Washington Allston, whose acquaintance he made at the house of Mr. Edmund Dana, the brother of Mr. R. Dana, the Poet. With Mr. Allston much of his time, during his junior and senior years, was spent. By him his ideas of art were elevated, and his endeavours directed to a proper path.

MOORISH PECULIARITIES,

TAKEN AT RANDOM.

Tangier is a good specimen of a Moorish city; at a distance, its mosques, lofty towers, and the battlements and turrets of the Alcassaba, or castle, give it an imposing appearance; but within the walls, the stranger sees a miserable collection of houses, looking the shabbier by contrast with two or three splendid mansions belonging to foreign consuls. The shops are mere stalls. The streets are so narrow, that a passenger in the middle can easily touch the walls on each side; and the houses so low, that he can reach the roofs without standing on tiptoe. The inhabitants are very subject to Elephantiasis. In ancient times, this disease used to cause the joints to separate, and the limbs to drop off; so that only the trunk and head remained. The countenance assumed the savage and frightful aspect of a wild beast. At present, the legs only are affected; they swell to the size of an elephant's; and the similarity gives the disease its name. From the knee downward, the leg is discoloured and ulcerated, and the skin thick and rough, crackling like parchment. The general state of health does not appear affected, and the disorder is so common that it occasions little anxiety. Its causes are supposed to be poorness of living, dampness, and the bad quality of water.

In Tangier, and throughout Morocco, the Sultan alone has the privilege of carrying an umbrella. Should any inferior person venture abroad with one, it would be high treason, and his head would be the forfeit. The habitation of Moorish saints are distinguished by a small white flag, or rag, stuck on a pole; and Christians must keep their distance from the sacred precincts. A military patrol walks all night through the streets of Tangier, shouting the watchword every five minutes. Before daylight, the Mueddin bellows, with a sepulchral cry, from the summit of a mosque, enjoining the true believers to awake and pray; this vociferation is three times repeated. The Moorish Judges often hear causes in the open street; little deliberation is used; and the sentence, whatever it be, is immediately carried into execution. The bastinado is the ordinary punishment for slight offences; and decapitation for more serious crimes. When a person is to be decapitated, he is stretched on his back, his arms and legs are held down, and the executioner, with the dexterity of frequent practice, passes a long and sharp knife through his neck. So many undergo this death, that it has lost its terrours. There is, or was formerly, a mode of punishment by tossing the criminal into the air. Three or four stout negroes were the executioners, and performed their office with such skill, that he was sure to come down on his head, shoulder, or in any other position that had been prescribed by the sentence.

In some of the cities of Morocco, the streets are roofed over, and thus form a succession of long, dark, narrow passages. The shop-keepers sit cross-legged among their goods, so that they can lay their hands upon any article, without the trouble of getting up. The Jews suffer great persecutions in the Moorish cities. They are distinguished by small black scullcaps on their shaven heads. A Moorish child may often be seen to kick an old gray-bearded Jew, or smite him on the cheek; while the Jew addresses the little fellow as his lord or master, and entreats permission to pass on. Were he to return a blow for those which he receives, his hand would be cut off. Many of the Jews are good mechanics, but almost all are miserably poor. Renegadoes, or deserters from Christianity, are in even a worse condition, and are despised equally by Moors, Christians, and Jews. On the death of one of these wretches, neither Christians nor Moors would own him; and his body lay long in the street unburied.

In one of the Moorish cities, there are seventeen Jewish synagogues. The Jews keep a yearly festival, in commemoration of the sojourn of their fathers in the wilderness. During eight days, it is unlawful for them to sleep under a roof. The Jewish women are very beautiful; they dwell in greater seclusion than the Moorish females; and many of them, till the age of eighteen or twenty, are never seen in the street, and perhaps do not once cross the threshold of their homes. Yet they seem cheerful and happy—probably because they are never idle. The Moorish ladies, when they go abroad, are enveloped in a white *hayk*, somewhat resembling a shroud; it completely conceals their face and form, but discloses their bare legs—contrary to the fashion of Europe, where ladies conceal their legs, but show their faces. Beauty among the Moors consists in corpulency, and a wife is valued according to her weight, and the circumference of her waist. A lady who weighs a ton, and whose girth is equal to that of a hogshead, may aspire to be Sultana.

There are no wheel-carriages in Morocco, nor any roads suitable to them; and all the travel is performed with camels, horses, or mules. The camel goes only half as fast as the horse or mule, and his motion is not easy to the rider. In travelling, it is necessary to take a tent, or perhaps two, with bed and bedding, provisions, and a load of articles for presents, and to be attended by a military escort. In the villages, the houses are composed of low walls of stone or plastered reeds, with

loosely thatched roofs. Large troops of ferocious dogs are kept in every village, not from any liking which the Moors entertain towards these brutes, whom, on the contrary, they abhor as unclean animals; but they are necessary as a defence against the Arabs and Breber robbers. Wandering tribes of Bedouins are frequently met with, dwelling in tents; they possess flocks of sheep and goats. Such is the scarcity of water, that the situation of a well is as universally known, as that of a city in other parts of the world. In the Moorish country, there is a singular method of preserving grain. A cellar is dug to the depth of seven or eight feet; the floor is covered with mats and straw; the sides are lined with reeds; a layer of straw is placed on top, then a slab of stone, and lastly the earth is heaped in a mound over the whole. In these granaries, which are called Matamores, wheat or barley may be kept perfectly good for five years, and other sorts of grain even longer. There is but a very imperfect knowledge of agriculture, and no more food is raised, than barely suffices for the scanty population. Famines have occurred, during which the half-starved wretches were compelled to eat dogs, cats, rats, roots, bones, and the most disgusting offals.

In the streets of the cities may be seen auctioneers—jugglers playing various tricks—story tellers, surrounded by an audience—and Moors seated at chess. At funerals, the body is borne on a bier, in a coffin resembling a large chest of varnished wood; and the mourners follow, chanting a sepulchral verse. If the dead person be of the poorer class, he is enveloped in a white cloth, and buried without a coffin. In cases of illness, a conjurer is sometimes called in. He writes his prescription on a white plate; the ink is suffered to dry, and is then washed off with water, which must be drank as a medicine. It may be said in favour of this custom, that it is one of the safest possible ways in which a doctor's prescriptions can be swallowed.

The Brebers, who infest Morocco, and are hated by the Moors, are supposed to have come originally from Syria, and to be descendants of those Philistines who were driven from their country by David, when he slew Goliath of Gath.

TURTLE.

At the island of Ascension, turtle are so numerous that 2500 have been taken in a year, several of which weighed from six to eight hundred pounds a piece. They are kept in two large ponds, without food, and are preserved in good condition by an occasional change of water. They are served out to the crews of the vessels which touch at the island, instead of fresh meat, and are cooked in the same manner as beef or mutton. Prepared in this simple style, turtle is a more delicious food than the most elaborate art of cookery can render it in Europe, where the animals arrive in a sickly and dying condition, having lost much of their original richness of flavour. On the island of Arptola, in the Persian Gulf, they are taken by the Arabs in such numbers, that the smell of their decaying bodies pollutes the air to a considerable distance. The Arabs do not use them as food, but capture them only for their shells, which are carried to China. Lieutenant Kempthorne, who has recently surveyed the southern shore of the Persian Gulf, gives a curious description of the turtle fishery on the above-mentioned island. The turtle come thither by night, to deposit their eggs in the sand of the beach. When attacked by an enemy, their mode of defence is to throw up a cloud of sand with their flippers, under cover of which, they make their retreat. They can be secured only by turning them on their backs—a feat which requires the united strength of three or four men. One of Lieutenant Kempthorne's men, while at a distance from his companions, attempted singly to turn a large turtle. The turtle, however, resisted, and contrived to get the man's hand between his shell and neck; then drawing in his head, he held the poor fellow fast, and began to move towards the sea, dragging his prisoner along with him. The other sailors were alarmed by their shipmate's cries, just in time to rescue the captive, and capture the conquerour. Six large turtle were taken, on this occasion, and converted into soup, cutlets, and steaks; and the eggs were eaten with boiled rice, instead of butter—which they considerably resembled. These eggs are round, two or three inches in diameter, and covered by a thin membrane, like parchment. Twice or thrice a year, the female turtle deposits about a hundred of them in a hole, a foot wide and two feet deep, in the sand, where they are hatched by the warmth of the sun. The young ones break the shell at the end of a month, and crawl to the sea in ten or twelve days more.

The Camel's Thorn.—This lowly shrub abounds in the deserts of Arabia, India, Africa, Tartary, and Persia, where it constitutes the chief or only food of the camels. It has small oval leaves, and bears beautiful crimson flowers. Its tough roots penetrate deep into the desert sands, and collect all the scanty moisture which they can supply. The Arabs take a singular advantage of this property, possessed by the Camel's Thorn, of secreting moisture within its stalk from the sun-parched soil. In the Spring, they divide the stem close to the root, put a single water-melon seed within the fissure, and replace the earth about it. The seed sprouts, and becomes a vine, which is abundantly supplied with nourishment by its foster-parent, the Camel's Thorn, and produces water-melons, as full of delicious juice as if they grew in a happier clime. This is the only process by which such fruit could be raised in the desert; for the roots of the water-melon are fitted to imbibe nourishment only where moisture is abundant; nor is it probable that the seed, if planted in the usual way, would even sprout above the sand.

Public Loans.—The system of public loans, by which war is carried on, is founded on the principle, that future generations ought to sustain a part of the burden, which is supposed to be incurred for their benefit. No country can make war with merely its habitual revenue.

In the city of Vienna, there is a private Penitentiary, to which parents, in a respectable rank of life, send their children, when their own authority is inadequate to controul them.

View of Pennsylvania Hospital.

PENNSYLVANIA HOSPITAL.

This Institution had its origin in the charity of private individuals, and was the first of the kind in the Anglo-American dominions; although, at an earlier date, there were probably hospitals under the direction of the Catholic priesthood, in the French colonies. The corner-stone of the eastern wing was laid in the year 1755. As since enlarged and completed, it consists of a central part and of two wings, which are united to the main structure by two buildings, each eighty-one feet in length. The central part is sixty-three feet long, and sixty-one in depth; the wings extend each about thirty feet in front, by one hundred and eleven feet deep; and the length of the whole edifice is two hundred and eighty-five feet, fronting southward, on Pine street. There are other buildings belonging to the Hospital; and the space of ground, covered by its edifices, its groves, and gardens, is nearly fifteen acres, and occupies the entire square between Spruce and Pine, and Eighth and Ninth streets. Venerable trees throw their shadow round about the structure, and a statue of the illustrious Quaker, William Penn, presented by his grandson, stands on a pedestal in front. In all respects, the exterior of the Hospital is on a scale of magnificence and beauty, that fills the beholder's mind with the pleasantest impressions, in spite of the associations of human misery, connected with a remembrance of the objects to which this stately structure is devoted.

The internal arrangements are equally admirable. The central edifice contains a library of six thousand volumes; an apothecary's establishment; an amphitheatre for surgical operations and lectures; a lying-in ward; a female sick ward; chambers for the resident physicians; and apartments for the steward's family. The western part of the Hospital is occupied exclusively by insane patients, one hundred of whom can there be accommodated. On the east of the central edifice are the medical and surgical wards, calculated for the reception of one hundred and sixty patients. From the foundation of the Hospital, down to the year 1828, the number of individuals, admitted within its walls, had been hardly less than twenty-five thousand.

The foundation of Hospitals was an early result of Christianity, until the appearance of which, there was no such thing as systematic benevolence on earth. In the first years of the Church, the bishops provided for the poor, both in health and when diseased; and after the priesthood had acquired a stated revenue, one fourth of the whole was appropriated for similar purposes. The Catholic religious institutions, although greatly perverted from the pristine purity of their origin, accomplished a vast deal of good, during the dark and bloody centuries in which they flourished. The only friends of the sick and miserable were then to be sought under the hood of the monk and the veil of the nun. In course of time, many persons, when conscious of the approach of death, devoted their wealth to the foundation of Hospitals, thus hoping to perpetuate their names and memory, which would otherwise have been lost for want of children—or perhaps to make amends for an evil life, by applying to this sacred purpose their unjust gains, which they could no longer hoard in their coffers, nor spend upon themselves. Other Hospitals were endowed by governments; others, as in the present instance, by the contribution of charitable individuals. At the present day, there are few or no civilized countries, where the homeless sick may not find the shelter of a roof, the skill of a physician, the care of a nurse, and a pallet to stretch their wasted forms upon;—every thing, in short, save the sedulous affection which, at a sick bed, is worth them all.

The most powerful description of a Hospital that ever was, or can be given, is contained in Milton's Paradise Lost. The Archangel Michael leads Adam, after his fall, to the summit of a high hill, and brings before him a series of pictures, portraying the future destinies of the world;—and among the rest, the following,—the dark and fearful painting of which is worthy of the pencil that had successfully depicted the torments of the fallen angels:—

> 'Immediately a place
> Before his eyes appeared, sad, noisome, dark,
> A Lazar-House it seemed, wherein were laid
> Numbers of all diseased, all maladies
> Of ghastly spasms, or racking torture, qualms
> Of heart-sick agony, all feverous kinds,
> Convulsions, epilepsies, fierce catarrhs,
> Intestine stone and ulcer, colic pangs,
> Demoniac frenzy, moping melancholy,
> And moon-struck madness, pining atrophy,
> Marasmus, and wide-wasting pestilence,
> Dropsies, and asthmas, and joint-racking rheums.
> Dire was the tossing, deep the groans: Despair
> Tended the sick, busied from couch to couch;
> And over them triumphant Death his dart
> Shook, but delayed to strike, though oft invoked
> With vows, as their chief good, and final hope.
> Sight so deform what heart of rock could long
> Dry-eyed behold? Adam could not, but wept,
> Though not of woman born; compassion quelled
> His best of man, and gave him up to tears.'

No marvel that Adam wept!—no marvel, if he failed to discern, in this dreadful misery of his descendants, the hand of a beneficent Creator! But Michael tells him, in substance, that these many varieties of loathsome sickness were the punishment of intemperance and ungoverned appetite. Adam inquires, if there be no easier mode of death than those which he beholds in the Lazar-House; and receives the following answer.—

> 'There is, said Michael, if thou well observe
> The rule of not too much, by temperance taught,
> In what thou eat'st and drink'st, seeking from thence
> Due nourishment, not gluttonous delight,
> Till many years over thy head return:
> So may'st thou live, till like ripe fruit thou drop
> Into thy mother's lap, or be with ease
> Gathered, not harshly plucked, for death mature.'

The above lines contain the whole doctrine of Temperance, and are worthy of the Archangel's lips. And were mankind wise enough to seek, in their food and drink, 'due nourishment, not gluttonous delight,' there would be many a vacant bed in the wards of the Pennsylvania Hospital.

POLYGAMY.—The Mahometans attempt to justify their custom of marrying a plurality of wives, by the fact, that the Eastern women grow old much faster than the men. A girl is marriageable at thirteen, in her prime at fifteen, and old at twenty-five: while the males retain their vigour as long as in other countries.

SCENES OF WAR.

Captain George Cooke, who has published his Adventures in the Peninsular War, gives an account of many ghastly wounds, and other horrible sights, which he witnessed in the course of his military service. We take the following from various parts of the volume:—

Among the soldiers who were blown up at the storming of Cindad Rodrigo, there was one whose face, hands, and body, were as black as a coal, and incrusted with a black substance like a shell; his hair was singed off, and his features were entirely indistinguishable—and yet the poor fellow was alive. The top of the head of one of the soldiers was split in twain, from the forehead backward, leaving the cavity of the skull completely emptied of brains. Another sat with his head bent forward, his chin resting on his breast, his eyes open, and an agreeable smile upon his lips; in this peaceful guise, his spirit had passed from the scene of strife. A dragoon was observed, with his jaw separated from the upper part of his face, and hanging down on his breast; in which terrible condition, he was attempting to drink. A French officer stood on the top of a precipice, nearly one hundred feet high, with both eyes hanging on his cheeks; they had been forced from their sockets by a musket ball; and, in his blinded condition, he dared not move, lest he should tumble down the precipice. A naked man was lying on his back, with no appearance of a wound; and a Spaniard, curious to know what had killed him, laid hold of the dead man's hair, and was surprised at the extreme lightness of the head; it proved, on examination, that the whole back part of his head had been shot away by a cannon ball, leaving only the scalp and face. About four months after a battle, the dead bodies of many French soldiers were discovered in a valley, unburied, and in as perfect a state of preservation as on the day when they were killed; their skins were blanched white, like parchment, by the sun and rain, and were so hard that they sounded like a drum. After the battle of Salamanca the bodies of the slain were blistered by the scorching sun, and swelled to a horrible size, appearing like gigantic monsters. It was remarked, throughout the whole war, that those dead bodies, which were exposed to the sun, immediately became a mass of corruption; but those which lay in the shade, and were moistened with the rain and dew, remained undecayed during a great length of time. Their skins became hard and tough, like leather. The vultures who took possession of every field of battle as soon as the victors and vanquished had deserted it, would not feed upon human bodies, but gorged themselves upon the dead horses, and grew so fat that they could hardly rise from the ground. In riding over a field of battle, the motion of a horse is the gentlest and easiest that can be conceived; he pricks his ears, snorts, looks downward, plants his feet before him, and proceeds with a light and springy step, as if fearful of trampling on the dead.

DIRT-EATING.

This singular disease is prevalent in the West-India islands, in Guiana, and Surinam. Those affected with it are listless and stupid, almost to idiocy, in reference to things in general, yet evince a very remarkable cunning, in satisfying their depraved appetites. All ages and classes are liable to it, but chiefly negroes, who were formerly supposed to eat dirt wilfully, as a mode of committing suicide. But physicians now say, that the devouring of charcoal, chalk, dried mortar, mud, clay, sand, shells, rotten wood, shreds of cloth, and all such indigestible substances is merely a symptom of disease, and is just as involuntary as the shivering-fit of a fever. Negroes eat their tobacco pipes, their garments, their own hair or wool, and swallow young rats or mice alive. The city of Paramaribo stands on a bed of marine shells, heaps of which are often dug up, for the purpose of mending the streets; this is a dainty precisely suited to the taste of the dirt-eaters, who may be seen feasting greedily on the heaps. The disease, when once seated, is incurable: The bodies of the patients become ulcerated; and death ensues. The only possible method of restraining a dirt-eater from his pernicious habit, is to confine his mouth in a metallic mask, secured by a lock.

AMERICAN GIPSIES.

Gipsies are known in almost all countries of Europe—an idle, vagabond race, without settled homes, living by theft, beggary, fortune-telling, and the mending of pots and kettles. They are of uncertain origin, but show the same characteristic marks, wherever they are found. No attempts have hitherto succeeded in reducing the Gipsies of Europe to the habits of civilized life. It has been supposed that there are none of this singular race in America, where, in our woods and wildernesses, their wandering propensities might have had boundless space for exercise. Yet, in fact, there is a colony of Gipsies, who were brought to America by the French, in early times, and whose posterity now live and flourish on the shores of Biloxi bay, in Louisiana. A philosopher, contemplating the points of similarity between the European Gipsy and the American Indian—both untameable—one the wild man of civilized countries and the other of the forest—might have imagined that the two races would at once have mingled, and the Gipsy have found a home in the Indian wigwam. On the contrary, ever since their settlement on this side of the Atlantic, the Gipsies appear to have thrown off their hereditary characteristics. No difference can be perceived between them and other descendants of French colonists, except in personal appearance; their complexion is much darker, and their hair is coarse and straight. They still call themselves Gipsies, or Egyptians, but are industrious, orderly in their habits, and retain nothing of their ancestry, except the name.

The Looking-Glass.—In her youth, a woman goes to the glass to see how pretty she is; in her age, she consults it, to assure herself that she is not so hideous as she might be. She gets into a passion with it, but dies before she can make up her mind to break it.

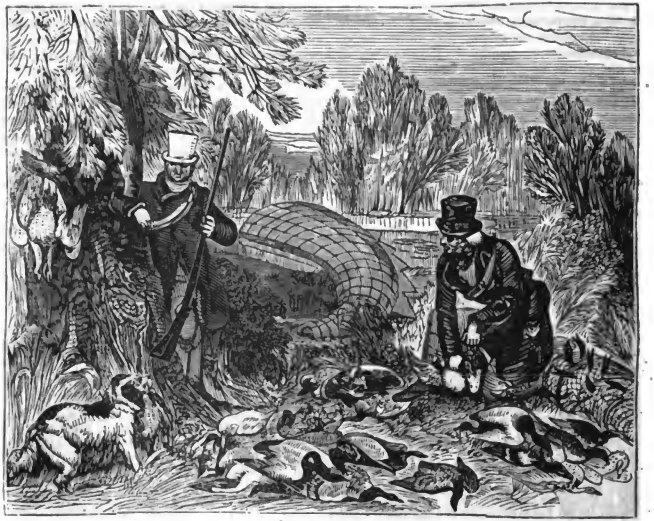
The Spanish milled dollar is probably current in more regions of the globe than any other coin.

WILD DUCKS.

The two engravings, annexed to this article, represent the method of taking wild ducks in the fens of Lincolnshire, England. In the most solitary part of the shores of the lakes, or ponds, whither the ducks resort, a ditch is dug, about four yards wide at the entrance, and gradually growing narrower towards the farther end, which is not more than two feet in width. Along each side of the ditch, poles are driven into the ground, the tops of which are bent over, and tied together, so as to form an arch. This arch is about ten feet high at the entrance, and decreases to the height of about eighteen inches, at the farther end. The arched poles are placed at the distance of six feet from each other, and are connected by poles laid lengthwise and fastened together, thus forming a frame work, over which is thrown a net. At the farther end of the ditch is placed a 'tunnel-net,' connected with the termination of the arch, and distended by a number of small hoops. The nature of the whole contrivance may be better understood by examining the first cut, where a person is seen driving the ducks into the net. The upright fences, which might be mistaken for folding doors at the entrance of the arch, are composed of woven reeds, and are intended to conceal the fowler from the ducks on the outside of the net, while he is driving those within.

To entice the ducks, that are swimming on the lake, to enter the arch, hemp-seed is sometimes thrown upon the water. The assistance of a dog, trained for the purpose, is indispensable. Tame ducks may also be used, who will come at the keeper's whistle, eat the hemp-seed which they find floating on the water, and lead the way under the arch, followed by the flock of wild fowl. When a sufficient number have been decoyed within the arch, the keeper shows himself and waves his hat, thus frightening the ducks, who fly forward, and creep into the tunnel-net. The tame ducks, being accustomed to the sight of the keeper, do not follow their wild companions, but return back safe into the pond. When the wild ducks are all enclosed in the tunnel-net, the man gives it a twist, in order to prevent their escape; then removes the net from the end of the arch, and wrings the necks of his prisoners. Five or six dozen of wild fowl are sometimes taken, in this manner, at one haul. By an act of Parliament, the method is prohibited from being used, except from the latter part of October till February. (See cut at top of the next page.)

In different countries, there are various other modes of capturing this timid and cautious fowl. In our own country, wooden figures of ducks are set afloat, or anchored in a favourable spot, and attract passing flocks, which alight near them, and are slaughtered by the shot of the concealed sportsmen. On the Delaware, when scattered masses of ice are floating on the river, the gunner lies down in the bottom of a skiff painted white, and thus approaches a covey of ducks, often committing great havock among them. They are sometimes surprised asleep, with their heads under their wings. Another method is to sink a large hogshead in the marsh or mud, near



the haunts of the wild ducks, and to cover the top with grass, reeds, or sedge. The fowler hides himself within, and watches his opportunity to pour a destructive discharge into the centre of the flock. In the East Indies and China a man covers his head with an empty calabash, and wades into the water among the ducks, who have no suspicion of the mischief that is at hand, under the guise of a floating calabash. Arriving in the midst of the flock, the fowler draws them under water by the legs, fastens them to his girdle, and returns ashore with as many as he can carry, leaving the rest entirely unsuspicious of their danger or escape. Where the object is profit, any or all of these methods may be good; but, for the pleasure of the thing, it is far preferable to take no treacherous advantage of the poor ducks, but to dodge them along the shore, and pepper away at them when they give you a chance.

GRATITUDE OF ANIMALS.

[From Jesse's Gleanings.]

It is impossible to view the cheerfulness and happiness of animals and birds without pleasure. The latter especially, appear to enjoy themselves during the fine weather in Spring and Summer with a degree of hilarity which might be almost envied. It is astonishing how much man might do to lessen the misery of those creatures which are either given to him for food or use, or for adding to his pleasure if he was so disposed. Instead of which, he often exercises a degree of wanton tyranny and cruelty over them which cannot be too much deprecated, and for which, no doubt, he will one day be held accountable. Animals are so capable of showing gratitude and affection to those who have been kind to them, that I never see them subjected to ill treatment without feeling the utmost abhorrence for those who are inflicting it. I know many persons, who, like myself, take a pleasure in seeing all the animals about them happy and contented. Cows will show their pleasure at seeing those who have been kind to them, by moving their ears gently, and putting out their wet noses. My old horse rests his head on the gate with great complacency when he sees me coming, expecting to receive an apple or a piece of bread. I should even be sorry to see my poultry and pigs get out of my way with any symptoms of fear.

The following little anecdote will show the gratitude of an animal and its recollection of the kindness shown to it. A young lady in this neighbourhood (who, if she should ever read this anecdote, will not, I hope, object to this record of her humane disposition) brought up a calf whose mother had died soon after it was born. She made a *pet* of it; but, when it became a heifer, for some reason it was parted with, and she lost sight of it for about two years. At the end of that time, as she was walking with a friend in a lane, she met some cows, when one of them left the herd and came up to her, showing evident symptoms of pleasure at seeing her.

She immediately knew and patted her old acquaintance, who, after being satisfied by these marks of her favour that the recognition was mutual, quietly turned away and joined her companions.

THE DOCTRINE OF COLOURS.

[Brewster's Life of Newton.]

If the objects of the material world had been illuminated with white light, all the particles of which possessed the same degree of refrangibility, and were equally acted on by the bodies on which they fall, all nature would have shone with a leaden hue, and all the combinations of external objects, and all the features of the human countenance, would have exhibited no other variety but that which they possess in a pencil sketch or a China-ink drawing. The rainbow itself would have dwindled into a narrow arch of white light,—the stars would have shone through a gray sky,—and the mantle of a wintry twilight would have replaced the golden vesture of the rising and the setting sun. But he who has exhibited such matchless skill in the organization of material bodies, and such exquisite taste in the forms upon which they are modelled, has superadded that ethereal beauty which enhances their more permanent qualities, and presents them to us in the ever-varying colours of the spectrum. Without this, the foliage of vegetable life might have filled the eye and fostered the fruit which it veils,—but the youthful green of its Spring would have been blended with the dying yellow of its Autumn. Without this, the diamond might have displayed to science the beauty of its forms, and yielded to the arts its adamantine virtues; but it would have failed to shine in the chaplet of beauty, and to sparkle in the diadem of princes. Without this, the human countenance might have expressed all the sympathies of the heart, but the 'purple light of love' would not have risen on the cheek, nor the hectic flush been the herald of its decay.

The gay colouring with which the Almighty has decked the pale marble of nature, is not the result of any quality inherent in the coloured body, or in the particles by which it may be tinged, but is merely a property of the light in which they happen to be placed. Newton was the first person who placed this great truth in the clearest evidence. He found that all bodies, whatever were their peculiar colours, exhibited those colours only in white light. When illuminated by homogeneous *red* light they appeared *red*, by homogeneous *yellow* light, *yellow*, and so on, 'their colours being most brisk and vivid under the influence of their own day-light colours.' The leaf of a plant, for example, appeared *green* in the white light of day, because it had the property of reflecting that light in greater abundance than any other. When it was placed in homogeneous *red* light, it could no longer appear *green*, because there was no green light to reflect; but it reflected a portion of red light, because there was some red in the compound green which it had the property of reflecting. Had the leaf originally reflected a pure homogeneous green, unmixed with red, and reflected no white light from its outer surface, it would have appeared quite black in pure homogeneous red light, as this light does not contain a single ray which the leaf was capable of reflecting. Hence the colours of material bodies are owing to the property which they possess of stopping certain rays of white light, while they reflect or transmit to the eye, the rest of the rays of which white light is composed.

DUELS.

[Library of Entertaining Knowledge.]

Individual Bees of adjacent hives often engage in fatal duels. Sometimes a bee, while sitting peaceably on the outside of a hive, or walking about, is rudely jostled by another, when the combat immediately commences with such bitter violence, that they permitted Réaumer to examine them quite closely with a magnifying glass. They wrestle, turn, pirouette, and throttle each other; and after rolling about in the dust, the victor, watching the time when the enemy uncovers his body by elongating it in the attempt to sting, thrusts its weapon between the scales, and the next instant its antagonist stretches out its quivering wings, and expires; for the stroke of the sting, when it once penetrates the muscle is mortal. In these engagements the conqueror is not always able to extricate his sting, and then both perish. The duration of such duels is uncertain; they sometimes last an hour, and are at others very soon determined; and occasionally it happens that both parties, tired with their fruitless struggles, give up the contest and fly off.

THE GARDENS OF ETAWAH, IN INDIA.

[Miss Roberts's 'Scenes and Characteristics of Hindostan.']

The gardens afford an agreeable method of passing the short period of day-light which the climate will permit to be spent in the open air. They are large and well planted; but the gardeners are extremely ignorant of the European methods of cultivation, not having the same opportunity of acquiring knowledge as at larger stations. The Pomegranate is of little value except for its rich red flowers;—for the fruit—in consequence, no doubt, of either being badly grafted or not grafted at all—when ripe, is crude and bitter; it is greatly esteemed, however, by the natives, who cover the green fruit with clay to prevent the depredations of birds. The Pomegranates brought from Persia never appeared to me to merit their celebrity: whether any attempt has been made to improve them, by a graft from the Orange, I know not; but I always entertained a wish to make the experiment. Sweet Lemons, Limes, Oranges, and Citrons offer in addition to their superb blossoms and delicious perfume, fruit of the finest quality; and Grapes, which are trained in luxuriant arcades, not only give beauty to a somewhat formal plantation, but afford a grateful banquet at a period of the year, (the hot winds,) in which they are most acceptable.

Amongst the indigenous fruits of these jungles is a wild Plum, which has found an entrance into the gardens, and which, if properly cultivated, would produce excellent fruit; in its present state it is too resinous to be relished by unaccustomed palates. The Melons, which grow to a large size, and are abundant in the season, are chiefly procured from native gardens, and are left as well as Custard-Apples, Plantains, and Guavas, to the cultivation

of the natives, the ground in the neighbourhood of a bungalow being chiefly appropriated to foreign productions.

The seeds of European vegetables are sown after the rainy season, and come to perfection during the cold weather; Green Peas, Cauliflowers, and Cos Lettuce appear at Christmas, sustaining, without injury, night frosts which would kill them in their native climes. Either the cultivation is better understood, or the soil is more congenial to these delicate strangers, since they succeed better than the more hardy plants, Celery, Beets, and Carrots, which never attain to their proper size, and are frequently deficient in flavour. To watch the progress of the winter crop of familiar vegetables and to inspect those less accurately known, cannot fail to be interesting, although the climate will not permit a more active part in the management of a garden.

The Oleanders, common all over India, are the pride of the jungles, spreading into large shrubs, and giving out their delicate perfume from clusters of pink and white flowers. The Bamboo also boasts scent of the most exquisite nature which it breathes from bells of gold; the delicacy of its aroma renders it highly prized by Europeans, who are overpowered by the strong perfume of the Jessamine, and other flowers much in request by the natives. The Sensitive plant grows in great abundance in the gardens of Etawah, spreading itself over whole borders, and showing on a great scale the peculiar quality whence it derives its name; the touch of a single leaf will occasion those of a whole parterre to close and shrink away; nor will it recover its vigour until several hours after this trial of its sensibility. Equally curious, and less known, is the property of another beautiful inhabitant of these regions; the flowers of a tree of no mean growth arrive to nearly the size of a peony; these flowers blow in the morning, and appear of the purest white, gradually changing to every shade of red, until, as the evening advances, they become of a deep crimson, and falling off at night, are renewed in their bridal attire the following day. When gathered and placed in a vase, they exhibit the same metamorphosis, and it is the amusement of many hours to watch the progress of the first faint tinge, as it deepens into darker and darker hues. Around every shrub, butterflies of various tints sport and flutter, each species choosing some particular blossoms, appearing as if the flowers themselves had taken flight, and were hovering over the parent bough; one plant will be surmounted by a galaxy of blue winged visitants, while the next is radiant with amber or scarlet. Immense winged grasshoppers, whose whole bodies are studded with emeralds which no jeweller can match; shining beetles, bedecked with amethysts and topazes, and others, which look like spots of crimson velvet, join the gay carnival. These lovely creatures disappear with the last sunbeams, and are succeeded by a less desirable race. Huge vampire bats, measuring four feet from tip to tip of their leathern wings, wheel round in murky circles; owls venture abroad, and the odious musk-rat issues from its hole.

In no other part of India, with the exception of the hill-districts, are more brilliant and interesting specimens of birds and insects to be seen; extremely small brown doves, with pink breasts, appear amid every variety of the common colour, green-pigeons, blue-jays, crested wood-peckers, together with an infinite number of richly plumed birds, glowing in purple, scarlet, and yellow, less familiar to unscientific persons, flock around. A naturalist would luxuriate in so ample a field for the pursuit of his studies, and need scarcely go farther than the gardens to find those feathered wonders, which are still imperfectly described in works upon ornithology. Here the lovely little tailor-bird sews two leaves together, and swings in his odorous nest from the pendulous bough of some low shrub.

The fly-catcher, a very small and slender bird of a bright green, is also an inhabitant of the gardens, which are visited by miniature birds resembling those of paradise, white, and pale brown, with tails composed of two long feathers. Nothing can be more beautiful than the effect produced by the brilliant colours of those birds, which congregate in large flocks; the ring-necked paroquets, in their evening flight as the sun declines, show rich masses of green; and the *byahs*, or crested sparrows, whose breasts are of the brightest yellow, look like clouds of gold as they float along.

Numbers of aquatic birds feed upon the shores of the neighbouring Jumna, and the tremendous rush of their wings, as their mighty armies traverse the heavens, joined to other strange and savage sounds, give a painful assurance to those long accustomed to the quietude of sylvan life in temperate climates, that they are intruders on the haunts of wild animals. There is one sound, which, though not peculiar to the jungles, is more wearying there than in more thickly inhabited places, on account of the extreme loudness of the note, and its never ceasing for a single instant during the day—the murmuring of doves; the trees are full of them, and my ear, at least, never became reconciled to their continual moaning. At sunset this sound is hushed; but the brief interval of repose is soon broken by the innumerable night cries of the untamed forest.

Duration of Human Life.—Naturalists have settled it as a general rule, that animals live eight times the length of the period from their birth to their maturity. Now as man does not arrive at physical perfection till about the age of twenty-five, his life ought to have a duration of two hundred years. There is little doubt, that simple and temperate habits, if universally diffused, might extend the ordinary term of human life to at least one century. In order to effect this, the simplicity of the savage state must be combined with the refinements of civilisation.

Gardens on House-tops.—In Sweden, it is not uncommon to observe houses, in the country, and in small villages, the roofs of which are covered with grass, and afford pasture to a goat. In Norway, trees are planted on the turf that covers the roof, so that the village, at a distance, resembles a small wood. Kitchen gardens on the house-tops are very common.

A Whale can suspend its respiration twenty minutes, and sink to the depth of a mile in the ocean.

RED JACKET.

'I have received,' says Mr. Dunlap in his History of the Arts of Design, 'a communication from Dr. J. W. Francis, on the subject of Red Jacket's interview with the painter Weir. I have room only for the following paragraph. 'It becomes not me,' says Dr. Francis, 'to speak of the peculiar merits of the painting of Red Jacket (Saguoaha, or Keeper awake,) by Weir. It is admitted, by the competent, to eclipse all other delineations of our Indian chiefs, and demands, as a work of art, no less regard than the subject himself, as one of preeminent consideration among our aborigines. The circumstances, however, which gave the artist the opportunity of portraying the distinguished warrior and great orator of the Seneca nation, deserve at least a short notice. An acquaintance of some years with Red Jacket, which was rendered, perhaps, more impressive in his recollection by occasional supplies of tobacco, led him to make an appointment with me to sit for his picture upon his arrival in the city. When he came to New York, in 1828, with his interpreter, Jamieson, he very promptly repaired to the painting-room of Mr. Weir. For this purpose he dressed himself in the costume which he deemed most appropriate to his character, decorated with his brilliant over-covering and belt, his tomahawk and Washington medal. For the whole period of nearly two hours, on four or five successive days, he was as punctual to the arrangements of the artist as any individual could be. He chose a large arm-chair for his convenience, while his interpreter, as well as himself, was occupied, for the most part, in surveying the various objects which decorated the artist's room. His several confederates, adopting the horizontal posture, in different parts of the room, regaled themselves with the fumes of tobacco to their utmost gratification. Red Jacket occasionally united in this relaxation; but was so deeply absorbed in attention to the work of the painter, as to think perhaps of no other subject. At times he manifested extreme pleasure, as the outlines of the picture were filled up. The drawing of his costume, which he seemed to prize as peculiarly appropriate, and the distant view of the Falls of Niagara, (scenery nigh his residence at the Reservation,) forced him to an indistinct utterance of satisfaction. When his medal appeared complete, he addressed his interpreter, accompanied by striking gestures; and when his noble front was finished, he sprang from his seat with great alacrity, and, seizing the artist by the hand, exclaimed, with great energy, 'Good! Good!' The painting being finished, he parted with Mr. Weir with a satisfaction apparently equal to that which he doubtless, on some occasions had felt, in effecting an Indian treaty. Red Jacket must have been beyond his seventieth year when the painting was made; he exhibited in his countenance somewhat of the traces of time and trial upon his constitution; he was, nevertheless, of a tall and erect form, and walked with a firm gait. His characteristics are preserved by the artist to admiration; and his majestic front exhibits an altitude surpassing every other that I have seen of the human skull. As a specimen for the cranioligist, Red Jacket need not yield his pretensions to those of the most astute philosopher. He affirmed of himself, that he was *born an orator*. He will long live by the painting of Weir, in the poetry of Halleck, and by the fame of his own deeds.'

Influence of the Seasons.—A French writer states, that the number of deaths in Winter is greater than in Summer, in the proportion of three to two. It is the same with the births; there being three in January or February, where there are two in July. The influence of the seasons on the human constitution varies according to the period of life. In infancy, the liability to death in Winter is threefold what it is in Summer; but this liability decreases, till, at the age of ten or twelve, it is almost nothing. From that period till manhood, the vital heat being much increased, the influence of Summer is more to be dreaded than that of Winter. After the age of forty, the effects of Winter again become perceptible; and persons beyond sixty suffer almost as much as young infants, from its influence. Of Octogenarians, and upwards, three or four die in Winter, for one in Summer.

The growth of the body in Summer is considerably greater than in Winter. There is a stronger tendency to mental alienation in warm weather than cold. The influence of Summer in exciting the passions of men may be estimated from the fact, that crimes against the person—that is to say, deeds of personal violence—are then twice as frequent as in Winter.

I REMEMBER,—I REMEMBER.—BY T. HOOD.

I remember, I remember
The house where I was born;
The little window where the sun
Came peeping in at morn;
He never came a wink too soon;
Nor brought too long a day;
But now, I often wish that night
Had borne my breath away!

I remember, I remember,
The roses, red and white,
The violets, and the lily-cups;
Those flowers made of light!—
The lilacs where the robin built,
And where my brother set
The laburnums on his birth-day,—
The trees are living yet!

I remember, I remember,
Where I was used to swing,
And thought the air must rush as fresh
To swallows on the wing;
My spirit flew in feathers then,
That is so heavy now,
And summer pool could hardly cool
The fever on my brow!

I remember, I remember,
The fir-trees, dark and high;
I used to think their slender tops
Were close against the sky;
It was my childish ignorance,—
But now 't is little joy
To know I'm farther off from heaven
Than when I was a boy.

Yew-trees.—A section of a yew-tree has been exhibited in England, which bore the marks of being upwards of five hundred years old. There is a stump of a yew, near Bangor (Eng.) which is computed to be of an earlier date than the christian era.

DRESS OF MIDSHIPMEN.

['Public and Private Economy.'—By Theodore Sedgwick.]

I shall, for the present, mention one instance only of the expenditure of the *public* money for fashion's sake, and that is in the dress of a midshipman in the American navy. When he enters, as midshipman, he must be fourteen years of age, and is, perhaps, the son of a poor mechanic, farmer, or clergyman. His annual pay, (including rations,) amounted to three hundred and eighteen dollars, previous to the last Winter, (1835,) when it was increased by act of Congress.

In the year 1830, the then Secretary of the navy issued an order, regulating the costume of several of the officers; accompanying these orders were patterns of the dresses required, of the swords, &c. The midshipman's coat, (full dress,) is particularly prescribed; it must be an *embroidered* coat. It is proper that those who pay the expense should know what is meant by an embroidered coat. It is made by working a profusion of silk braid upon the sleeves and other parts of it. This coat cost, at the shop of a fashionable tailor, in New York, in the year 1832, fifty dollars; the embroidery on it, as a part of that fifty, fifteen. It was said, at that time, that the entire full dress cost one hundred dollars.

Here is a boy, then, that cannot be known as the servant of his country, without an embroidered coat, which is not worn by the President, nor any member of Congress, nor any private gentleman in the country. Neither is it worn by any member of the House of Commons, or of the House of Lords, upon ordinary occasions. These are declared to be the most simply dressed gentlemen in England. The first lesson taught to this boy is a lesson of profusion, to spend what he never earned, and more than he ever spent before, and for no better reason, than that this is the warlike fashion; and still the sensible gentlemen of the navy despise this finery, and object to it for the same reason that a farmer or mechanic should. The money that a country pays its public officers should be mainly for good works and noble deeds; these are always entitled to good wages. Little do the people know of the immense amount of their money paid by government in follies of this kind.

LAKE SUPERIOUR.

The Indian name of this lake was Gitchigomi, which was contracted to Chigomi, and thence to Igomi. It covers about 30,000 square miles of surface, and is situated six hundred and forty feet above the level of the sea. Its waters are remarkable for their depth and purity, and abound with white-fish, sturgeon, salmon-trout, and other varieties of the finny tribe. Grand Island, and Royal, and Magdalen, are the largest of its numerous islands. The shores of the lake are, in some places, of yellow or iron sand; elsewhere they are pebbly, and bestrewn with boulders, or large insulated stones; and in other parts, they are precipitous walls of rock. To the southward there are mountains of considerable height. Masses of native copper have been found on the shores of Lake Superiour. Mr. Schoolcraft, from whose description we have abstracted these particulars, estimated the Indian population, three or four years ago, at 1006, inhabiting the immediate vicinity of the lake. Reckoning the Indians who dwell along the streams that empty into Lake Superiour, the number will be about 5,000. A mission for the benefit of the red men has recently been established on Magdalen island. In passing from one extremity of the lake to the other, boats and canoes do not venture into the open sea, as we may well term it, but coast along the shores, employing about twenty-six days in the passage. The distance is 580 miles. Furs and peltries constitute the chief commerce of Lake Superiour.

MEMORY.—BY WORDSWORTH.

A pen—to register; a key
  That winds through secret wards,
Are well assign'd to Memory
  By allegoric bards.

And not inaptly might be given
  A pencil to her hand,—
That, softening objects sometimes even
  Outstrips the heart's demand;

That smooths foregone distress—the lines
  Of lingering care subdues,
Long-vanished happiness refines,
  And clothes in brighter hues;

Yet, like a tool of fancy, works,
  Those spectres to dilate
That startle conscience as she lurks
  Within her lonely seat.

O, that our lives, which flee so fast,
  In purity were such
That not an image of the past
  Should fear that pencil's touch!

Retirement then might hourly look
  Upon a soothing scene;
Age steal to his allotted nook
  Contented and serene.

With heart as calm as lakes that sleep
  In frosty moonlight glistening;
On mountain rivers, where they creep
Along a channel smooth and deep,
  To their own far-off murmurs listening.

SCORCHED LEAVES.—In the Summer, after some days of fine weather, during the heat of the day, if a storm occurs, accompanied with a few light showers of rain, and the sun appears immediately after with his usual splendour, it burns the foliage and the flowers on which the rain had fallen, and destroys the hopes of the orchard. The intense heat, which the ardour of the sun produces at that time on the leaves and flowers, is equal to that of burning iron. Naturalists have sought for the cause of this strange effect, but they have said nothing which satisfies a reasonable mind. This is, however the fact; in the serene days of Summer it is visible that there gathers on the foliage and the flowers, as, indeed, on every other part, a little dust, sometimes more and sometimes less, scattered by the wind. When the rain falls on this dust, the drops mix together, and take an oval or a round form, as we may frequently observe in our houses on the dusty floor, when servants scatter water before they sweep. These globes of water form convex lenses, which produce the same effect as burning mirrors. Should the rain be heavy and last long, the sun would not produce this burning heat, because the force and duration of the rain will have destroyed the dust that formed these drops of water; and the drops, losing their globular form, in which alone consisted their caustic power, will be dispersed.—*Huet.*

DR SAMUEL COOPER.

[Sullivan's Familiar Letters.]

Dr. Samuel Cooper died during the early years of Gov. Hancock's magistracy (Dec. 1783,) at the age of fifty-nine. Dr. Cooper was one of the great men in revolutionary days. He was learned and eloquent, and one of the most finished gentlemen of that age, and one of the ablest divines of any age. He was singularly neat in his dress. He wore a white bushy wig, a cocked hat, and gold-headed cane. He was tall, well formed, and had an uncommonly handsome, intelligent, and amiable face. One could not fail to remember him well who had ever seen him. He was as much of a politician as a divine, and a powerful writer on the patriot side; but there are no writings of his preserved, except sermons, and newspaper essays, which cannot now be distinguished as his. He is supposed to have sacrificed his life to the inordinate use of Scotch snuff. His brain was first seriously affected, and his mind was much impaired before his physical powers failed. He told a friend who visited him a short time before the close of his life, 'when you come again, bring with you a cord; fasten an end of it in each corner of the room; let the cords cross in my head to keep it steady.' There are representations of the personal appearance of Dr. Cooper, having inscribed on them this notice of his eloquence, *melle dulcior fluebat oratio.* The most distinguished men of that time were his parishioners, and, among others, Governours Bowdoin and Hancock.

CUSTOMS FIFTY YEARS SINCE.

[Sullivan's Familiar Letters.]

It may not be uninteresting to sketch the condition and usages of society about the time of the adoption of the Constitution, according to the impression now retained of them. There were families who were affluent and social. They interchanged dinners and suppers. The evening amusement was usually games at cards. Tables were loaded with provisions. Those of domestic origin were at less than half the cost of the present time. The busy part of society dined then, as now, at one, others at two o'clock; three o'clock was the latest hour for the most formal occasions. There were no theatrical entertainments; there was a positive legal prohibition. There were concerts. About the year 1760, Concert Hall was built by a gentleman named Deblois, for the purpose of giving concerts; and private gentlemen played and sang for the amusement of the company. There were subscription assemblies for dancing, at the same place, and it required a unanimous assent to gain admission. Dress was much attended to by both sexes. Coats of every variety of colour were worn, not excepting red; sometimes the cape and collar were of velvet, and of a different colour from the coat. Minuets were danced, and contrè dances. Cotillions were of later date. They were introduced by the French, who were refugees from the West India islands. A very important personage, in the fashionable world, was Mrs. Haley, sister of the celebrated John Wilkes. She came over in the year 1785, and purchased the house in which the late Gardiner Greene lived, at the head of Court street. She was then advanced in life, of singular personal appearance, but a lady of amiable deportment. She afterwards married a gentleman who was the uncle of a celebrated Scotch reviewer; but after some years returned to England. Her house was a place of fashionable resort. Marriages and funerals were occurrences of much more ceremony than at the present day. The bride was visited daily for four successive weeks. Public notice was given of funerals, and private invitations also. Attendance was expected; and there was a long train of followers, and all the carriages and chaises that could be had. The number of the former in town was not more than ten or twelve. There were no public carriages earlier than the beginning of 1789; and very few for some years afterwards. Young men, at their entertainments, sat long and drank deep, compared to the present custom. Their meetings were enlivened with anecdote and song.

Among the remarkable visiters of this country was Brissot de Warville, in 1788, afterwards chief of a faction in the French Revolution, called the Girondists. He was executed in Robespierre's time, at the age of thirty-eight. He came over to learn how to be a republican. He was a handsome, brisk little Frenchman, and was very well received here. He wrote a book on this country. He was much delighted with the Quakers, and is said to have respected their simplicity of dress, and to have introduced, in his own country, the fashion of wearing the hair without powder.

There are more books, more reading, more thinking, and more interchange of thoughts derived from books, and conversation, at present, than there were fifty years ago. It is to be hoped that society is wiser, and happier than it was, from being better instructed. The means of education have greatly improved. There were then two Latin Schools. One in School street, and one at the north part of the town. The only Academies recollected, were one at Exeter, (New Hampshire,) and one at Andover, at which boys were prepared for college. It was a common practice for clergymen to receive boys into their families to prepare them for college. The means of educating females were far inferiour to those of the present time. The best were '*boarding* schools,' and there were but two or three of these. The accomplishments acquired were inferiour to those which are common among hundreds of young females at the present time. The sum of acquirements now, in the process of education, greatly surpasses that of forty years ago in both sexes. The moral condition of society, among the well-informed, (so far as is seen on the surface,) is greatly improved. There is more occupation of various sorts. Society, collectively, is undoubtedly better. Whether its members, in all things then and now, innocent, are happier or not, one cannot judge from youthful impressions. In one respect there is a change of immeasurable value; that is, in the intercourse of parents and children. It is very possible that there are some who prefer the strict discipline of former days; and who believe that as much of substantial benefit has been lost as gained, in the changes which have occurred. If this be so, it arises from the quality of education, and not because there is more of it.

THE LUMBERERS OF MAINE.

[North American Review.]

We cannot permit ourselves to pass over the testimony which Mr. Audubon bears in favour of the Lumberers of Maine. As a lover of nature, he was delighted to witness their humanity to their cattle; and though it seems like an incredible Arcadian description, he avers that the drivers neither beat nor cursed them,—a kind of unusual self-denial, which says much in their praise. The explanation is not distant; for he tells us that in many of the villages of Maine, when he applied for brandy, rum, or whisky, he could not obtain one drop; insomuch that he, temperate as he is, could not help feeling as if the temperance amounted to excess.

He gives an interesting account of the habits of these hardy men. They go forth in parties to the spot, which they are soon to make desolate with their axes, and begin by providing a shelter for their cattle; then they construct their own log hut, making bedsteads of the rudest cabinet-work, in the corners, and a '*rung chimney*,' as it was called by our forefathers, on one side, meaning a chimney formed, by securing together four ladders, filled in with clay between the rounds. In the neighbourhood of the camp, they set their 'steel traps;' 'dead falls,' and 'spring guns,' to catch the bears which are apt to prowl round such establishments,—guests unbidden and unwelcome, save that their skins answer good purpose for raiment, and their flesh is no contemptible food. The appearance of one of these woodmen is sufficiently odd, with a rackoon's skin over his head and brow, and moose-skin 'leggins' reaching up to the girdle round his waist, stalking forth on snow-shoes, to cut down the noble pines, and destroy the growth of centuries in an hour. These trees are sawn into measured logs, and drawn by the cattle, to be left on the ice of the rivers; so that when the winter breaks up, they may be ready to float down the stream.

When the labour of the season is completed, they devote themselves to pleasures; not, however, of the unprofitable kind, as the deer, bears, sables and martens, will bear witness; the moose-hunt, also, is recommended to them by the dignified associations of hardship and danger; this large and powerful animal makes his way through snows several feet in depth, faster than the hunters can follow him on their snow-shoes. A veteran hunter knows the direction in which to pursue them, by the marks of their teeth on the branches, left in browsing; these are found more distinct and frequent, as he draws near them; but the moose have senses so acute, that before the hunter can reach them, they have taken the alarm and moved away. They have surprising strength and activity in overcoming obstacles in their flight; when hard pressed, they will turn and defend themselves with great fury. Mr. Audubon's party took a young one, which was so exhausted, that it made no opposition when it was led to the camp; but on the next day it was so powerful and violent, that it was found impossible to preserve it alive. The common deer, which but a few years ago, were found in Massachusetts, are now hardly seen in New England, except in Maine, and the northern parts of New Hampshire. The newspapers of the last Winter gave us an example of the danger to which these Lumberers are sometimes exposed, from the burning of their camps; and Mr. Audubon has given us an account, as he received it from the lips of a forester, of one of these conflagrations of the woods. They are sometimes thought to be kindled by the Indians; others ascribe them to the friction of dry trees upon each other; but where so many fires are made, and this element is treated as cavalierly as it generally is in new countries, it is not wonderful that these accidents should abound, since insects often destroy trees in vast numbers, and leave their dry remains in a fit state to receive the flame. This man, with his family, was awakened one night by the outcry of their cattle, and, starting from their beds, they saw the glare and heard the crackling of the fire; they arose and fled for life on their horses; but the flames pursued so fiercely that they could feel the withering heat; their only resource was to gain a lake, and secure themselves on the lee side of it; there they released their horses, which they never saw again, and threw themselves down among the rushes on the water's edge. The frightened wild beasts dashed into the water, swam across to the place where they were, and stood still at their side. Perhaps no condition in life can be imagined, more full of horrour and dismay than this, and yet it is not uncommon in the forest regions of our country.

Many of the logs sent down by the Lumberers do not reach their destination; they linger in large heaps, within the banks of the stream, where they are suffered to remain, till the miller has done his office upon those that have reached him. Mr. Audubon has given an animated account of the operation, by which these wayfarers are brought down. Vast numbers of them were lying in the gorge of a stream, which, though broad and powerful in the Spring, was then shrunk to the centre of its dusty bed, and had left the logs white in the sun. A dam was made at the outlet of another gorge above, which slowly filled itself with the diminished waters of the stream, and formed a broad sheet of water, a mile in length, with a depth of ten feet. When it was filled, the temporary dam was torn away, and the waters were suffered to pass into the gorge choked with logs below. They flowed out with conscious power; presently a slow, ponderous motion was seen, as if a monster beneath was struggling to throw off a weight; then, the logs rose in masses, lifting, crashing, and dashing each other aside, some springing into the air, others diving under the roaring tide, till at last the waters bore all away, cleaving some into splinters, and striking others against the banks, with a noise that resounded like thunder. He could compare it to nothing but the confusion of a battle, with the roar of cannon, the shouts of the victorious, and the groans of the dying. It gave him a profound and tremendous impression of the force of the waters.

Bones of Fish.—Teeth, supposed to be those of the Shark, from an inch to an inch and a half long, slender and very sharp, have been found in the midst of the prairies of Alabama. Portions of the vertebræ of fish have been met with in the same region.

The approach of Wolfe to the Heights of Abraham.

WOLFE, ON THE HEIGHTS OF ABRAHAM.

In 1759, the American forests had been for about four years the battle-ground of France and England. The war had lingered, and its events had done little credit to the British generals hitherto employed; less, perhaps, from any remarkable deficiency on their part, than from the great military talents of Montcalm, the French commander. But Sir Jeffrey Amherst had now succeeded General Abercrombie in the chief command, and had formed a a plan for the reduction of Canada, by means of three armies, which should enter the province by as many different routes, and simultaneously attack all the strong-holds of the French. Brigadier General Wolfe, a young but distinguished officer, was placed at the head of the division which was destined to besiege Quebec. It was near midsummer, when he ascended the St. Lawrence, under convoy of Admirals Saunders and Holmes, and disembarked his men on the island of Orleans, a few leagues below the Canadian capital.

Quebec, by its position, is a natural fortress, and much military science had even then been employed in strengthening it. The city occupies a table land, on the tongue of a peninsula, formed by the junction of the river St. Charles with the St. Lawrence. At that period, it contained ten thousand inhabitants, and covered a space about three miles in circumference, two-thirds of which were defended by the height of the precipices and the rapidity of the streams, and the remainder by a fortification across the peninsula. On the summit of Cape Diamond, three hundred and fifty feet above the level of the water, stood a citadel, the cannon of which commanded the whole town. This citadel, as well as the ramparts which it looked down upon, was strongly garrisoned. Armed vessels and floating batteries were moored in the river of St. Charles; and on its eastern shore, and extending to the Montmorenci, lay the French army, under the famous, and hitherto fortunate, Marquis de Montcalm. His troops were composed partly of regulars, and partly of provincials, either of whom had the strongest motives to fight valiantly; the latter for their native city, the former for the capital and key of the French dominion in America. On the whole, the defences of Quebec were proportioned to the importance of the city.

Wolfe saw the difficulties of his undertaking, and that none but the most daring measures offered even a chance of success. He had, in the first place, taken possession of Point Levi, on the opposite shore of the St. Lawrence, and thence battered the city with cannon-shot and bombs, which beat down many of the houses, but produced no impression on the ramparts. His next attempt was made against the army of Montcalm in its entrenchments, by landing on the eastern shore of the Montmorenci river, and attempting to storm the lines. Here he was repulsed, with the loss of five hundred slain. It was the policy of Montcalm to avoid a general engagement in the open field, and lengthen out the siege, till the invading army should be routed by the severe and early winter of that re-

gion. Autumn had already commenced, and nothing had been effected towards the reduction of the place. Wolfe began to despair of the result, and his anxiety wrought upon his frame, already debilitated by disease, and naturally too weak for the gallant soul that animated it. He was observed to be much depressed, and is said to have resolved not to survive the failure of the expedition. At this juncture, while Wolfe was confined to a sick-bed, his three brigadiers, Monckton, Townshend, and Murray, conceived a plan for landing the army on the shore of the St. Lawrence, above Quebec, and thence gaining the Heights of Abraham, by means of a narrow passage up the precipice. In that quarter, as the approach of an enemy was deemed next to impossible, the city was less strongly fortified than elsewhere. The project being submitted to the decision of Wolfe, he immediately acceded to it, and deferred the execution only till he should be able to superintend it in person. The time fixed upon was the night preceding the thirteenth of September.*

Montcalm had previously been induced, by the motions of the British, to detach fifteen hundred of his men to a distance, under the command of M. de Bougainville. On the appointed night, the fleet moved three leagues up the river, with Wolfe and the troops on board, and made demonstrations of landing detachments at various points. Meantime, the general and his army embarked in boats, and fell down the river with the tide, undiscovered by the French sentinels who were ranged along the shore. Owing to the darkness of the night, a part of the troops were landed somewhat below the point that had been selected. The Scottish Highlanders, however, accustomed to climb among the rugged passes of their native mountains, led the way up the darksome and dangerous path, followed by the remainder of the battalions, as fast as the boats touched the shore. General Wolfe was among the foremost. The ascent was scaled, by catching hold of the projections of the almost perpendicular precipice, clinging to the plants which had rooted themselves into the crevices of the rocks, and swinging from one precarious foothold to another, aided by the branches of the trees. At the summit, there was an entrenched party of the enemy, whom the van of the British put to flight. It appears not improbable, that, had a few resolute men taken their stand at one of the turns of this wild path, with sword and bayonet, they might have defended it against Wolfe's whole army, have thrust the assailants down the cliff, and thus have rescued the province from its fate. But no such gallant stand was made. The troops reached the verge of the precipice in safety, and with little opposition, and stood, at daybreak, on the Heights of Abraham, within a mile of the hostile city. Between them and the ramparts, the ground rose and fell in abrupt inequalities. So near was this adventurous army to Quebec, that they could hear the bells of the Cathedral pealing the hour. Their commander had led his troops where there was no retreat down the headlong precipice, nor any alternative for himself or them, save victory or utter ruin.*

When tidings came to Montcalm, that Wolfe and the British forces waited to give him battle on the Heights of Abraham, he could not at first believe the tale. It was if an army had flown thither through the air. But, as one messenger after another assured him that the foe was really under the ramparts of Quebec, he resolved that the fate of Canada should now be decided by one great battle. It would still, no doubt, have been the best policy of the gallant Frenchman to avoid a general engagement, and trust the defence of Quebec to its walls and citadel; which latter fortress, at least, was capable of sustaining a regular siege. The enterprise of the British commander, was, in fact, the ultimate resource of a desperate man; without a battle, he was almost certainly lost; but there appears to have been no need that his adversary, whose situation was so different, should play the desperate game which gave Wolfe his only chance. Such, however, were not the reflections of Montcalm. When convinced that the British had actually gained the Height, he lost no time in passing his army across the river St. Charles, which lay between him and the city. Wolfe, aware of the enemy's movements, immediately arranged his order of battle, placing himself on the right of the line. Montcalm, in person, commanded the left wing of the French. Thus, when the two armies met, their generals encountered each other amid the smoke, and dust, and fury of the conflict, where it raged the fiercest.

We shall describe the battle on the Heights of Abraham, no farther than as it was connected with the fate of Wolfe. Early in the action, a bullet struck his wrist; around which he wrapped his handkerchief, and waved the wounded arm to encourage his men onward. Not long afterwards, he received a second shot, in the groin, but continued to advance, without betraying that he was again wounded. While the fate of the day was still doubtful, a third ball passed through his body, and stretched him on the field. Even then, he would scarcely allow himself to be conveyed to the rear. Reclining against a rock, which, in after times, was venerated as a hero's death-pillow, he had sunk into a stupor, no longer mindful of the din of arms. But a shout came pealing across the battle-field—'They fly! They fly!'—and starting as from sleep, Wolfe looked earnestly round on his kneeling attendants. 'Who fly?' he inquired. 'The French!' replied the lieutenant who supported him. The martial

* Wolfe was heard to say, that he should be well contented to give an arm or a leg, to gain possession of Quebec. All things considered, he was probably even better pleased to win the city at the price of his life. Colonel Hamilton, author of Men and Manners in America, has questioned the military abilities of Wolfe. On this point we can pass no opinion; but, so far as we are qualified to judge, Wolfe showed a mixture of enthusiasm and good sense, which composed a very rare and lofty character, and indicated great talent of some kind or other. It was perfectly characteristic of Colonel Hamilton, that he should stand on the Heights of Abraham, and endeavour to depreciate the fame of Wolfe.

* It is stated that there were thirty boats, and sixteen hundred men; but this number is probably less than the truth. The morning was overcast and showery. The precipitous ascent, by which the army reached the summit of the cliff, is now used as a path down to the timber-rafts, which generally cover the surface of Wolfe's Cove.

enthusiasm of Wolfe gleamed forth upon his countenance, like the effulgence of the sun, and changed his expiring agony to transport. 'Then I die happy!' he exclaimed; and there lay his corpse upon the victorious field, while his spirit was borne away upon the very shout that announced his triumph.

Never—never—was there a death more glorious! If a man's heart do not throb higher at the tale, he has not the heart of a man within his breast. Rank and honours, all that his King could give, awaited Wolfe in England; but no such glorious moment could have come to him again; and it was better for him then and there to die, leaning against his stony pillow, listening to the peal of his own triumph—and consecrating, with his life-blood, the soil which he had added to the dominion of Britain.*

* Wolfe died at the age of thirty-three. It was said, that, at the period of his victory and death, he was suffering under a mortal disease, and could have survived but a few months. A monument (as we have stated elsewhere in this Magazine) has recently been erected to his memory by Lord Aylmer, the late Governor-General of Canada.

THE FRENCH LABOURING CLASSES.

[North American Review.]

Although our intercourse with France in the way of trade and commerce is so frequent, we know comparatively little of the actual condition of the great mass of her population. Her past history is in a measure familiar to all, but it is not so easy to determine or describe, with precise accuracy, the civil rights enjoyed by the people at the present day. The Revolution effected a great change in the feudal condition of society and property. In 1820, about one half of the whole population were landed proprietors. About two-thirds of them are now engaged in agricultural pursuits, and of these, about five millions are not proprietors. Of the manufacturing population, between four and five millions of labourers are destitute of property.

We have not room to enter into detail as to the condition of the manufacturing classes in France, but if we can credit the statements of travellers, it is more wretched than even that of the same classes in England. We may, however, remark here, that we have good authority for saying, that the highest wages of a cotton manufacturer in France are not more than five shillings and sixpence a week. Even these are higher than the wages of similar manufacturers in other countries on the continent of Europe. In Switzerland and Austria, they are four shillings; in the Tyrol, three shillings and ninepence; in Saxony, three shillings and sixpence, and in Prussia, two shillings and sixpence. The wages of cotton manufacturers on the Continent may be considered as varying from fifty cents to one dollar and twenty-five cents, weekly.

The population of France may be stated at thirty-two millions. Of these, seven and a half millions receive less than twenty dollars a year for their support, and nearly twenty-three millions are compelled to procure the necessaries of life with from five to eight sous (about the same number of cents) daily. To an American, this seems hardly credible. Such a pittance would be insufficient to supply the meat, bread, and tea, or coffee, with their usual accompaniments, which are daily found on the tables of all classes of our citizens. The French are, consequently, compelled to live with proportionate frugality, in order to live at all; and we are informed, that seven and a half millions of the people do not eat meat, or wheaten bread. They live upon barley, rye, buck-wheat, chestnuts, and a few potatoes, and their drink is water.

In 1820, more than one hundred thousand,—one seventh part of all the inhabitants of Paris,—received support from the public charity; and one-third of the inhabitants who died during the year, died in hospitals. We have no means of comparing the present state of that city with its condition at that period; but we are not aware of any material improvement in these respects.

The consequence of this general poverty of the labouring classes is, that they are compelled to work incessantly for the means of daily sustenance. During certain seasons of the year, the women are employed in field labours. The ordinary implements of French husbandry are ill adapted to aid the farmer in his toil, and cows, asses, oxen and horses, are often seen yoked together to the same plough. It is stated by Simond, a late accurate and intelligent traveller, that the common wages of a hired labourer upon a farm, were two hundred francs yearly for men, and one hundred for women. This would give to the man in our country thirty-seven dollars and fifty cents, and to the woman eighteen dollars and seventy-five cents, annually. But he adds, that in consequence of bad seasons, labourers were at that time very willing to work for their bread only. The poverty of these classes, however, does not protect them from taxation. We have seen that a large proportion of the whole people are proprietors of the soil, either as owners or lessees; and we can, therefore, form an idea of the extent of taxation in France, when we learn that the taxes upon the land, are equal to one fifth of its net produce. So that a man who should rent his farm for one hundred dollars a year, would be compelled to pay twenty dollars of that amount into the public treasury for taxes. This burden would, of course, fall upon the labouring classes,—the tillers of the soil.

The condition of the people of France, as respects education, varies in the different departments. In the northern and eastern portions of the kingdom, the people are better educated than in the central and western sections. In the northern provinces, fifty-two out of a hundred of the population can read and write; in the eastern, fifty-five out of a hundred; while in the western and central parts, from twenty-seven to thirty-five only in a hundred can read. This statement will serve to indicate the difference between the condition of the labouring classes in France, and that of the same classes in Massachusetts, for instance, where scarcely one native citizen in a thousand is destitute of the rudiments of a school education.

We cannot dismiss this portion of our subject, without briefly inquiring how far the people of France are permitted to take part in the affairs of government. The members of the Chamber of Deputies, the popular branch of the government,

are chosen by the people; but the qualifications of candidates for office, as well as of the electors, are so high, that the mass of the people are, in fact, far from having any important influence in the election of the deputies, and in making the laws. No man can be an elector, who does not pay a direct tax of two hundred francs, (thirty-seven dollars and fifty cents;) and when we remember the proportion of those whose whole income does not exceed that amount, we perceive, at once, how small a number are qualified to vote. That, of more than thirty-two millions of inhabitants, far more than twice the amount of the population of the United States, less than one hundred and seventy thousand are qualified to vote in the elections; so that we have more than half as many electors in Massachusetts as there are in France, although her population is more than fifty times as great as ours. But even this boon, confined as it is to the rich, and wholly denied to the labouring classes, is of comparatively little value. Every officer, from the minister of state to the petty constable of the village is appointed by the crown, which has at its disposal more than one hundred thousand offices. The consequence is, as might be expected, that the government controls the elections, and a great majority of the deputies of the people are, in fact, but the creatures of the crown.

In France, all religions are nominally tolerated, but the Catholic is the national faith. The clergy exceed forty thousand in number, and cost the country, exclusive of fees, gifts, and other allowances from parishes, communes, and departments, thirty-three millions and nine hundred and eighteen francs annually.

Moral Benefits of Commerce.—A man enters into business with a view of acquiring a fortune—a laudable motive. That property which arises from honest industry is an honour to its owner; the repose of his age, the reward of a life of attention; but, great as the advantage seems, yet, being of a private nature, it is one of the least in the mercantile walk. For the intercourse occasioned by traffic gives a man a view of the world, and of himself; removes the narrow limits that confine his judgment, expands his mind, opens his understanding, unfixes his prejudices, and polishes his manners. Civility and humanity are ever the companions of trade; the man of business is the man of liberal sentiment; if he be not the philosopher of nature he is the friend of his country. A barbarous and commercial people is a contradiction.—*Hutton's History of Birmingham.*

Cabbage, and Tailors.—The Roman name for a Cabbage, *Brassica* came, as is supposed, from 'præséco,' because it was cut off from the stalk: it was also called Caulis in Latin, on account of the goodness of its stalks, and from which the English name Cole, Colwort, or Colewort, is derived. The word Cabbage, by which all the varieties of this plant are now improperly called, means the firm head or ball that is formed by the leaves turning close over each other; from that circumstance we say the cole has cabbaged. From thence arose the cant word applied to tailors, who formerly worked at the private houses of their customers, where they were often accused of cabbaging: which means the rolling up pieces of cloth instead of the list and shreds, which they claim as their due.—*Phillip's History of Cultivated Vegetables.*

Leathern Rafts.—The Euphrates is navigated by what are called leathern rafts. These are composed of the timber of wild poplar-trees, supported on inflated bags of sheepskin, flayed in a peculiar manner. On arriving at Bagdad, the wooden portion of the raft is sold, and the sheepskins, exhausted of air, are packed on camels and carried back whence they came; in order to be again inflated, and support another load of poplar-wood and merchandise.

Defaced Coins.—To read an inscription on a silver coin; which, by much wear, has become wholly obliterated, put the poker in the fire; when red hot, place the coin upon it, and the inscription will plainly appear of a greenish hue, but will disappear as the coin cools. This method was practised at the British Mint to discover the genuine coin when the silver was last called in.

Spider's Den.—There is a species of Spider in New South Wales, which forms a den in the ground, having an aperture of about an inch in diameter: Over this aperture is a lid, composed of web and earth, so incorporated as to form a solid substance; it has also hinges of web, and when shut down, fits so accurately to the mouth of the den, as not to be discovered without the minutest inspection. A person was accustomed to feed one of these spiders, and became well acquainted with his habits. When visited by his friend, the spider would lift the trap-door of his den, come forth, and partake of the food that was brought him; and, when satisfied, would retreat into his dwelling, shutting the door after him. We are inclined to think that this spider is the only creature, except man, that has constructed a door, turning on hinges.

Indian Totem.—An Indian is very reluctant to tell the name which belongs to him as an individual; but his Totem—which corresponds to our family names, and by which lineage is traced—he is proud to tell.

First Philadelphian.—The first native of Philadelphia, of European descent, was born in a cave, hollowed out in the high banks of the Delaware river.

Great Gun.—At Moscow, there is so large a cannon, that Captain Cochrane, an English traveller, sat upright in its muzzle.

'If a man is not rising upwards to be an angel, depend upon it he is sinking downwards to be a devil. He cannot stop at the beast. The most savage of men are not beasts; they are worse, a great deal worse.'—*Coleridge.*

Torture.—Confessions used formerly to be extorted in Russia, by pouring boiling water, in single drops, on the bare skulls of suspected persons.

NATURE OF SLEEP.

Scientific men have been infinitely puzzled to explain the phenomena of sleep; the reason being, perhaps, that they cannot examine into its nature, at the same time that they are undergoing its influence. If a person, while asleep, were capable of noticing and recording his own sensations, a correct theory of the matter would probably soon be attained. Most of the present theories are dreams, it is true; but they have the great disadvantage of being merely the dreams of waking men.

Dr. Philip, an English physician, has paid much attention to the subject, and appears to have thrown considerable light upon it. His observations on the nature of sleep are so connected with his researches on other points of animal physiology, that the former cannot be fully understood without an acquaintance with the latter. An abstract, however, may be attempted, and perhaps be made sufficiently intelligible to interest the reader.

He observes, that, in the more perfect animals, there are two systems, in a great degree distinct from each other; one is the sensitive system, by means of which we perceive, and act, and hold intercourse with the external world; the other is the vital system, by which existence is maintained. The sensitive system, alone, is subject to sleep. When the reasoning powers are fatigued by attention, the feelings by the indulgence of passion, the eye by objects of sight, the ear by sounds, and the muscles of voluntary motion by powerful and repeated exercise, they cease to be excited by ordinary stimulants; and, unless stronger stimulants are applied, they fall into a state of rest. This is sleep; and during its continuance, the excitability, which had previously been exhausted, is restored, and the nerves can be again acted upon by the usual stimulants. It is a law of the sensitive system, that it is subject to be thus alternately excited and exhausted; and unless the exhaustion is excessive, it does not interfere with health, but is entirely in the natural course of things. But that sleep alone is healthy, which is easily broken. If from fatigue, or any other cause, it be unusually profound, such sleep partakes of disease; because then the vital system, though it does not sleep, is affected by the torpor of the sensitive system. Thus, in very profound sleep, the movements of the respiratory organs are sluggish, and the blood, in consequence, is less frequently renovated at the lungs, and therefore acts with diminished power in keeping up the motion of the heart.

As we have stated, it is the nature of the sensitive system to be alternately excited and exhausted. Now, there is this great difference between it and the vital system, that the latter is continually excited, but never, in its natural and healthy state, undergoes exhaustion, or needs repose in order to fit it for the performance of its duties. It is continually at work, from the first moment of our lives till the last, and is never tired; or if it be so, its weariness is the symptom of disease; it does not resemble the healthy exhaustion of the sensitive system, but manifests itself in debility, whence the sufferer very slowly recovers, if at all. The heart belongs to the vital system; it is continually in a state of excitement and action, and is never weary of throbbing; it works for a whole lifetime together, and never sleeps till it has done its task. Its sleep—the sleep of the vital system—is death; for when it has once fairly sunk under exhaustion, there is no possibility of arousing it. The sensitive system, on the contrary, is aroused from its sleep by means of the vital system; from which, during its repose, it has been collecting and accumulating fresh excitability, to supply the place of what was wasted in the hours of wakefulness. The vital powers reinvigorate the exhausted sensitive powers; and therefore the latter may safely fall asleep; but Nature has provided no method of reinvigorating the exhausted vital powers, because she did not contemplate that they should ever need repose. Had we been created without this faculty of continual wakefulness, in our hearts and the rest of our vital systems—had these organs been liable to fall asleep, like the sensitive ones—the first nap, which we might happen to take, would last till the day of Judgment—for the simple reason, that there would be no possibility of awaking us. Hence we may infer, that no living creature has ever been more than half asleep, and that only the dead sleep sound; their bodies, we mean; for their spirits are then more wide-awake than ever.

How strange and mysterious is our love of sleep! Fond as we are of life, we are yet content to spend a third of its little space in what, so far as relates to our own consciousness, is a daily or nightly, annihilation. We congratulate ourselves when we have slept soundly; as if it were a matter of rejoicing that thus much of time has been snatched from the sum total of our existence—that we are several steps nearer to our graves, without perceiving how we arrived thither, or gaining either knowledge or enjoyment on the way. Well!—Eternity will make up the loss; on no other consideration can a wise man reconcile himself to the necessity of sleep.

Despots.—It is a mistaken rule to judge of despots by the momentary successes which they may have obtained, at the utmost stretch of their absolute power. It is the state in which they leave the country at their death or fall, it is that which remains of their reign after they themselves are gone, it is its enduring consequences, that reveal what monarchs have been.—*Madame de Staël.*

Extravagance is merely comparative. A Canadian, when encamped in the woods, will perhaps heap several large pine trees upon his watch-fire They cost him nothing, and are of no value to any body. But a native of Potosi would consider this the utmost degree of extravagance, because, in his country, each tree would be worth a thousand dollars.

Royal Munificence.—In every country except England and our own, splendid public edifices are tokens either that the people are not free, or have not always been so. The same may be said of all the establishments and institutions, for which credit is given to royal munificence. It is easy for those kings to be munificent, who can take money out of the people's pockets at their own pleasure.

EFFECT OF COLOUR ON HEAT.

Many of our readers will recollect Dr. Franklin's experiment, by placing pieces of cloth, of different colours, on the snow, in order to test which of them would absorb the greatest quantity of heat from the sun. It was found, after some hours' exposure, that the black cloth had sunk deepest in the snow, and that the other pieces had sunk to depths which corresponded to the darkness of their colours; while the snow beneath the white cloth had not been melted at all. From this result, Dr. Franklin drew the inference that dark-coloured garments were unfit to be worn in hot countries; and that the dress of the inhabitants, and of sailors, and the uniform of soldiers, between the tropics, should be of some light hue. Their hats, especially, in his opinion, should be white, that the intense heat of the sun might not be absorbed through a dark surface into their brains.

Nevertheless, the observations of other distinguished philosophers led them to a very different conclusion. Among these were Count Rumford and Sir Everard Home. The Count affirmed, that, if he were to become a resident in the torrid zone, he would either blacken his skin, or wear a black shirt. Sir Everard, by actual experiments on his own person and that of a negro, discovered that the black skin was far less affected by the sun's rays than the white; although the absorption of heat by the black was very considerably greater. In other words, the negro's skin remained cooler, while yet it undeniably imbibed the largest quantity of heat. No satisfactory explanation of this phenomenon was offered; and even Sir Humphrey Davy, though the fact was undisputed, failed to assign a reasonable cause. In a recent volume of the London Philosophical Transactions, there is an able and interesting paper, which brings forward what appears to be a correct solution of the mystery. The author states, that, although a greater quantity of heat is absorbed by dark-coloured surfaces than by light ones, yet a proportionably greater quantity is given out. Thus, in the case of the negro, there is a brisk circulation of heat, which, passing into and out of the skin, promotes insensible perspiration, and keeps the body cool. Hence, too, the peculiar odour of the coloured race; it being disengaged from their persons together with the heat which is given out.

We may readily conclude, that Nature would not have given the African his sable skin, unless it had been his best protection against the burning clime of his nativity. The ingenious writer, whose essay forms the basis of this article, supposes that the shades of colour in the human race correspond to the differences of climate; and that thus the mean temperature of the body is kept about the same in Greenland, for instance, as in Calcutta. On this theory, however, he would find it difficult to account for the unvarying hue of our Indians; whose skins, we believe, are of as deep a copper colour at the sources of the Mississippi as in Florida. Setting aside the red men, we should suppose that, with all other varieties of mankind, his system might hold good. In regard to the lower orders of animal life, there are even stronger evidences, that their colour is regulated by the degree of heat or cold which they are to endure. Many of the quadrupeds of northern climates change their Summer garments, of various hues, to a Winter dress of white; in the arctic regions, there are white foxes, white hares, and white ermine. In England, similar changes occasionally take place; and in our own country, the rabbit, at least, turns white in Winter. The feathered tribes, in climates where there is a great difference of temperature between Winter and Summer, undergo still more striking variations of hue. Their Winter dress is so unlike that which they assume in Summer, and both, in some cases, are so little similar to what they wear in Spring or Autumn, that Ornithologists, describing the same birds at different seasons, have supposed them to belong to various species. The ptarmigan may be taken as an instance; the dark richness of its Summer plumage gradually gives place to a grayish white, in Autumn; its black spots are changed to zig-zag lines and specks; and it continues to fade, till, in the depth of Winter, it is seen of a pure immaculate white. There is a vast difference of hue between tropical birds and those of an arctic climate; it would exhaust the richest colours of a painter's palette to depict the former; while black and white would suffice for the Summer and Winter dresses of the latter. Humming birds, by the metallic reflection and polished surfaces of their plumage, are admirably fitted to flit through the Summer sunshine. Insects, whose existence begins and ends with Summer, are painted with a gorgeous depth of hue. In like manner, it is supposed that the temperature of flowers is regulated by the colours of their petals; so that there is an important use, in what we have been accustomed to consider merely ornamental. The flowers of mid-summer glow deeply bright; those of the early Spring are pale.

Had black been the colour best fitted to retain heat, there is no doubt, strange as the idea may seem, that the earth would have been defended against the inclemency of Winter by a garment of black snow. But, in the present constitution of things, the soil, and the roots of the herbage and plants, are protected by precisely the proper covering; which, though its spotless whiteness absorbs little or no heat from the sun, gives off as little from the earth. Would it not be wise, then, if we were to reverse the rules that have hitherto guided us, and follow Nature in her fashions—putting on garments white as her snow, for Winter-wear, and decking ourselves, in Summer, with the deepest hues of her verdure and her flowers?

A Question.—It is said by naturalists, that the population of a sea-coast is physically a more powerful race than those who inhabit the interiour of the same country. But how is this opinion to be reconciled with the physical prowess of our half-horse and half-alligator giants of Kentucky, thousands of whom never smell a sea-breeze in the whole course of their lives?

Nothing is so intolerable as a little wit and a great desire of showing it.

BELLS

Cowper, in the person of Alexander Selkirk, finds no stronger mode of expressing the dreary desolation of the island of Juan Fernandez, than the following:—

> 'The sound of the church-going bell
> These valleys and rocks never heard,
> Never sighed at the sound of a knell,
> Nor smiled when the Sabbath appeared.'

The idea, contained in these lines, is true and powerful; we immediately feel all the loneliness of the desert isle, 'far mid the melancholy main,' where man dwells not now, nor ever did dwell, nor has hallowed the hills and groves by his earthly sorrows, nor his hopes of immortality. All ears delight in the music of a bell. Milton, for instance, numbers it among his pensive pleasures:—

> 'Oft on a plat of rising ground,
> I hear the far-off Curfew sound,
> Over some wide-watered shore,
> Swinging slow with sullen roar.'

The accents of its iron tongue have a strange influence over human sympathies; or rather, they chime in with every tone of sentiment, and make religion more venerable, grief more tender, and joy more gladsome. Such an effect has been recognised from the earliest times. The Egyptians ushered in the festal days of their deities by the ringing of bells; and bells were rung, too, in some of the religious solemnities of the ancient Greeks.

It is supposed that bells were first introduced into Christian churches about the year 400; although they were not brought into general use, till three or four centuries afterwards. They were given by princes and great men to religious communities; and, in the early ages of the Catholic faith, it was usual to baptize the bells, with great ceremony; the crossing, benediction, and other rites, being performed by a bishop. Many marvellous virtues were attributed to them; and among the rest, that of dispelling thunder storms, in order to effect which, they were generally rung amid the roar of the tempest. The church bells were also sounded, at the moment when the soul of a dying person was passing from his body; a custom for which there were two reasons—one, that all Christians might be reminded to pray for their departing brother; and the other, because the knell was believed to chase away the evil spirits, who watched around the sinner's death-bed.

Bells have the same general shape in all countries; and it is conjectured that their form was imitated from that of a pot or kettle. They have recently been made without any curvature of the sides, but straight up and down, like a tub. The largest bells in the world, are in Nankin, and in Moscow. In the former city, there were four bells, of such size, that, though they were never swung in the belfry, but merely struck with a wooden mallet, they caused the tower to fall, and are said to be still lying amid the ruins. In Moscow, there is a bell which was presented to the cathedral of that city by the Empress Anne, the height of which is twenty-one feet, its circumference near the bottom more than sixty-seven, and its weight at least four hundred and thirty-two thousand pounds. It remains in a deep pit, where it was cast, and has a fissure in its side through which two persons may pass abreast, without stooping. This enormous bell is worth above three hundred thousand dollars, considering it merely as a mass of old bell-metal, and without reckoning the gold and silver, a large amount of which is supposed to be mingled with its materials; for tradition affirms that, while the metal was in a state of fusion, many of the Russian nobility and people threw in their plate and coin. The tone of a bell is thought to be greatly improved by a mixture of silver. Bell-metal is composed of copper and tin, generally in the proportion of twenty-three pounds of the latter to one hundred of the former; and it is a singular fact, that not only is the compound more sonorous than either of the metals separately, but is also heavier than their aggregate weight.

Bells of moderate size are moulded in the manner of large pots. In the manufacture of larger ones, pits are dug in the earth, and they are cast in a sort of plaster moulds. A cracked bell is generally considered as irremediably ruined; but attempts have recently been made, and sometimes with success, to restore the proper tone by cutting out the fractured part. While the Great Tom of Lincoln was undergoing this operation, a piece was broken off the rim, eight feet in length, and weighing six hundred pounds.

It would have been by no means wonderful, if our pious ancestors, when they emigrated to New England, had rejected the use of bells, and refused to be thus summoned to public worship, because the same mode was practised in the churches and high cathedrals of the ancient faith. They do, in fact, in some of the country towns, and probably in Boston, during the first years of its settlement, appear to have substituted the beat of a drum, instead of the ringing of a bell, on Sabbaths and Lecture-days. This, however, was attributable to the necessity of the case; and bells were imported from England, almost as soon as the pilgrims had exchanged the canopy of forest-boughs for a temple built with hands. The earliest use of bells, in North America, was probably in the French and Catholic city of Quebec. Every little chapel in the wilderness, where the French Jesuits preached to the red-men, had its bell. We recollect to have seen, in the museum of Bowdoin College, one, which we believe, had belonged to the chapel of the martyred Father Ralle. After the priest was slain, and his altar desecrated, by the bloody hands of the New England rangers, this bell, if we mistake not, lay hidden many years beneath the forest-leaves; until being accidentally brought to light, it was suspended in the belfry of the College-chapel. The adventures of this bell would form a pretty and fanciful story, which we should be glad to write, if it were in our nature to be guilty of such nonsensical scribblings.

THE PRECIOUS METALS,

AS APPLIED TO ARTICLES OF USE AND ORNAMENT.

The consumption of the precious metals, in other modes than by converting them into coin, has greatly increased in recent times. Some articles of plate, such as silver tea-urns and tureens, have been

introduced in modern days. Silver table-forks, also, were unknown, even among the higher classes, until the commencement of the reign of George the Third; although, at present, one half the silver used in England, is consumed in the manufacture of forks and spoons. It probably is not two centuries, since table spoons of silver were substituted for pewter, as the latter material had formerly been for horn or wood. Tea-spoons were of course introduced subsequently to the use of tea; the date of which was in Queen Anne's reign. They are now manufactured by millions. Silver plates, dishes, and vessels, the use of which was formerly confined to people of rank, are now common throughout a much wider class. Watches, which are worn by almost every body above the lowest rank, employ a vast amount of gold and silver, far the greater part of which has been applied to this use within half a century. Only a small quantity of the precious metals is now used in lace and embroidery, which were formerly worn in great profusion on the garments of the nobility and gentry; but what is saved, in this respect, is expended, and a great deal besides, in the number and variety of gold ornaments that are now fashionable. For instance, there are gold chains and seals, broaches, breast-pins, and waist-coat buttons; large golden combs, and other ornaments for the head; ear-rings and necklaces; eye-glasses set in gold, and spectacles with gold bows; buttons, clasps, and hooks and eyes of gold, for ladies' gowns. No small portion of gold goes to the manufacture of finger-rings; of which, we presume, almost every man, not absolutely in a state of poverty, has occasion to present at least one to some object of his tender regards, and probably to receive one in exchange.

Much gold is consumed in the various branches of gilding. In London alone, there are eighty gold-beaters, some of whom use up no less than twenty ounces per week; the average quantity, among the whole trade, is about three ounces. The gold-leaf, after being beaten out to the requisite thinness, is placed between the leaves of books, each of which is three and three-eighths of an inch square, and contains twenty-five leaves. These books are sold by the thousand, at different prices, according to the thickness of the leaves. Only eight penny-worths of gold is used in manufacturing a thousand of the cheapest kind. Silver leaf is sometimes made in the same manner; but the thinnest is at least two and a half times as thick as the thinnest gold; and a thousand books cannot be made with less than an ounce of silver. In what is called water-gilding, gold dust is mingled with quicksilver, and applied like paste to the buttons or toys, which are to be gilded. An enormous quantity of these articles are scattered from the workshops of England over all the markets in the world. A great deal of gold is also used in the porcelain potteries, for gilding tea-sets, table-services, and ornamental china. Plating with gold is performed by applying a thin plate of gold to a thicker one of inferiour metal; the two metals are made to adhere, by means of a strong pressure; and seals and other articles are manufactured in this way, at a comparatively trifling expense. For ten or twelve years, or more, they look as well as solid gold. Silver is likewise rolled in contact with other metals; and ornaments for coaches and coach-harnesses are thus manufactured.

The frames of pictures and looking-glasses require still further portions of gold; and much, also, is expended on the epaulettes and lace of uniforms. A mighty mass of silver is manufactured into thimbles, which are turned out by the bushel and cart-load. Then there are silver pencil-cases, and a host of gew-gaws and knick-knacks, too numerous to mention.

The value of the silver, drawn from all sources, since the discovery of America, has been three times that of the gold; but the loss by wear, on gold, is only a fourth part what it is on silver. An ounce of gold is now worth about fifteen ounces of silver; but, in the days of ancient Rome, it was worth only from nine to eleven ounces. By far the larger part of the immense amount of the precious metals, consumed in the above manufactures, comes fresh from the mines, or is obtained by melting down light guineas, or doubloons, Portugal-pieces, and other foreign coin. About one-fortieth part of the whole is supplied by burning old gold and silver lace, and picture frames, melting unfashionable plate, and from the sweepings of goldsmith's shops, and all such sources. Vast as is the expenditure of the precious metals, they might, however, in case of urgent necessity, be, in a great measure, dispensed with; for the artists of Birmingham are so skilful in the manufacture of alloyed gold, that ornaments of this material may be afforded at from one half to one quarter the standard cost; yet look altogether as well, to an ordinary observer, as the pure metal. Jeweller's gold is not looked upon as the pure gold of Ophir, in any part of the world; and, for aught we know, Birmingham might meet its match on this side of the Atlantic. We recollect a story of an old and wealthy goldsmith, who, being asked by one of his younger brethren how he had managed to grow so rich by his handicraft, made the following oracular response:—'When I set up in business, my young friend, my stock of the precious metals consisted of a gold doubloon and old brass-kettle;—and the doubloon lasted longer than the brass-kettle!'

Origin of Words.—All our words of necessity are derived from the German; our words of luxury and those used at table, from the French. The sky, the earth, the elements, the names of animals, household goods, and articles of food, are the same in German as in English; the fashions of dress, and every thing belonging to the kitchen, luxury, and ornament, are taken from the French; and to such a degree of exactness, that the names of animals which serve for the ordinary food of men, such as *ox, calf, sheep,* when alive, are called the same in English as in German; but when they are served up for the table they change their names, and are called *beef, veal, mutton,* after the French.—*Duten.*

Diablotins.—Travellers, lodging at German inns, paste these fulminating crackers across the crack of the door, that they may explode and give the alarm, should any person attempt to enter.

HUMAN SACRIFICES IN MEXICO.

[From the French.]

It is known that the Spaniards, when they conquered Mexico, found in that country a most barbarous and sanguinary religion, notwithstanding that the people had made considerable advances in civilisation. Nothing could be more cruel than the human sacrifices, by which the Mexicans endeavoured to appease their divinities, who were supposed to be greedy of blood. The atrocity of these murders was rendered yet more monstrous, by the solemnity of the religious rites which accompanied them. Magnificent temples were consecrated to the worship of the Gods, of whom the chief was the god of war, bearing the name of *Huitzilopotchli*. The Mexicans had a particular veneration for this deity. A precise estimate cannot be made of the number of wretches who were annually immolated, in these sacrifices; but according to the most moderate calculations, they amounted to more than ten thousand, in all parts of the empire. In a Spanish history of the Conquest of Mexico, we find a circumstantial detail of the mode in which a human sacrifice was conducted.

Six priests assembled together in the temple of the Idol. The Chief Priest, or *Toplitzin*, was arrayed in a crimson garment, and wore a crown of green and yellow plumes. His five companions were clad in black and white. These sacrificing priests dragged their naked victim to the most elevated part of the temple, and laid him at full length upon the altar. Four of them held his feet and hands; the fifth forcibly confined his head, with an instrument of wood in the form of a serpent. The Chief Priest, armed with a sharp knife of stone, then approached, clove the victim's breast asunder, tore out his palpitating heart, and cast it at the Idol's feet. When the deity was of gigantic size, this bloody offering was introduced into his mouth, by means of a golden spoon. The lips of the god, and the entrance of his temple, were often wet with the blood of the victim. When the sacrifice was consummated, if he happened to have been a prisoner of war, his head was set aside, in order to preserve the skull; while the rest of his body was thrown into the inner part of the temple. The warriour, to whom the prisoner belonged, then reclaimed the bleeding corpse, and bore it away, as the chief dainty in a magnificent feast, which he prepared for his family and friends. Among some of the Mexican tribes, it was customary to divide the victim's body into morsels, and to sell them publicly in the Markets.

It is not to be wondered at, that the Mexicans had chosen the most frightful emblems and figures, to represent the cruel deities whom they worshipped. Gigantic monsters and pictures, in which were collected all the horrours that the credulous imagination of a barbarian could produce,—such were the objects of their veneration. Their temples were ornamented with serpents, tigers, and other ferocious animals. The spirit of a religion, which saw nothing in Heaven but cruelty and vengeance, was far from being favourable to humanity. Accordingly, we see that the Mexicans, although the most civilized people of the new world, were often also the most savage and ferocious.

Rich Skeletons.—In the old Peruvian mines, skeletons of Indians are said to have been found, covered and intertwined with fibres of silver, and the inward parts filled with lumps of the same metal. The original owners of these dry bones were supposed to have perished, hundreds of years before, and as their flesh decayed, silver had grown around them, till, when found, they looked like silver corpses. Some men, possibly, would desire nothing better than such a transformation; provided it might take place while they were alive. Undoubtedly, it would make valuable men of them.

Rainbows.—It has been observed by the ancients, that where a rainbow seems to hang over, or to touch, a sweet smell may be perceived. It will be found a somewhat difficult matter to reach the spot which a rainbow touches, in order to test this experiment. Like all other bright things, the gorgeous pageant will remove as we advance, and at last fade into the sky—where, if we follow it thither, we shall doubtless find it.

Theory of the Tides.—A Pythagorean philosopher affirmed that the ebbing and flowing of the sea was the respiration of the world, which he supposed to be a living monster, drawing in water instead of breath, and heaving it out again.

Brazilian Ignorance.—The descendants of the Portuguese settlers, in the interiour of Brazil, think that there are but two grand divisions of the earth—America and Portugal. One of these people, by no means more ignorant than his countrymen generally, inquired if Napoleon were not a general in the Portuguese service, who had rebelled against the king. Napoleon, we doubt not, would have been vexed, could he have conceived that his earth-pervading fame had so vaguely reached this portion of the globe. Another Brazilian, in giving a description of England, spoke of its noble river Mississippi, which was so wide that the eye could not see across it.

Ancient Bricks.—Amongst the ruins of the city of Gour, the ancient capital of Bengal, are found bricks having projecting ornaments in high relief: these appear to have been formed in a mould, and subsequently glazed with a coloured glaze. In Germany, also, brickwork has been executed with various ornaments. The cornice of the church of St. Stefano, at Berlin, is made of large blocks of brick moulded into the form required by the architect.—*Babbage.*

Female Protection.—At Cairo, under the government of the Mamelukes, if a criminal fleeing for his life, could reach the door which led to a Harem, he cried out—*fy ard el harym*—'I claim the protection of the women.' His life was then secure. Recently, in our own country, a body-guard of petticoats has been found a surer protection than the civil authority.

BAKER'S BREAD.

In most families which make their own bread, it depends considerably upon chance whether the batch shall be good or bad. There is apt to be a dislike of settled rules; although, if these were to receive due attention, good bread might be rendered a matter of absolute certainty. Professional bakers would be ruined, were they to incur a hundredth part of the failures that attend domestic bread making; yet the same systematic management, which ensures their success, would be equally effectual in the latter case. From an English scientific work, we have abstracted a description of the process used by the bakers in London; whence the American housewife may perhaps derive some profitable hints. It will, at least, show how strict a degree of accuracy is observed in their operations.

In the first place, they dissolve from four to six pounds of salt in thirty-six pounds of water, slightly warmed, and to this add three pints of yest. They then make a hole in the middle of a heap of flour, consisting of two hundred and eighty pounds, pour in the salt and yest, and knead a portion of the flour into paste. This is called one quarter sponge. The paste is then covered with more flour, and the kneading trough is closed with flannel. Three hours afterwards, they add three hundred and sixty pounds of boiling water, and knead up the mass with more flour. This is called half sponge. Five hours afterwards, they pour in one hundred and eight pounds of hot water, and work it with more flour, for an hour at least; it is then cut into small pieces, covered with flour, and laid in a corner of the trough. After another interval of four hours, it is again kneaded for half an hour, and then formed into loaves for the oven. The bakers judge of the heat of the oven, by throwing in a pinch of flour; if it instantly turn black, but without taking fire, the temperature is at the proper height. The loaves are placed so close together, that when they rise, they press against each other, and are formed into cubes. After remaining two hours and a half in the oven, they are taken out, and immediately covered up close, in order to prevent any loss of weight—a serious consideration, where the bread is to be sold by the pound. It is estimated, that the loaves lose a ninth part of their weight in the oven, although, when taken out, they are three times as large as when put in. A half pound of alum is sometimes used instead of salt; or equal portions of salt and alum will answer the purpose.

In order to know whether the bread is well made, a loaf may be cut in two. The cut surface should exhibit a quantity of air holes, increasing in diameter from the bottom to the top; and the middle of the loaf should be as dry as the part near the crust, and should not crumble too much, on being cut. The latter is a sign that the flour has not retained too large a quantity of water. Different sorts of flour imbibe and retain different quantities of water; those which require least water are preferable for household bread; but the bakers choose the sorts which possess the contrary quality—not that such flour makes better bread, nor so good, but because the additional weight of the water is a clear gain to them. Fifteen pounds of good wheaten flour ought not to require more than ten pounds of water to make it into paste; and from this quantity, after baking, there should be at least twenty pounds of bread.

An oven of stone is preferable to a brick one; it heats quicker, and retains the heat longer. In London, the bakers' ovens are kept hot throughout the day, by means of a small furnace in the side of the oven, with a circular flue passing under and around it. There is sometimes a coal grate beneath the bottom of the oven. In Russia, and occasionally in England, the ovens are made of iron plates, or of cast iron.

Most countries have their own peculiar fashions, both in the manufacture of bread, and in the ingredients. The method of making bread in Paris would require as long a description as we have bestowed on the process of the London bakers. In Germany, all the bread, or nearly all, is made of a mixture of wheat and rye. Rye-and-Indian bread seems to be purely an Americanism, and is as worthy to be a subject of national pride, as many other matters of which we boast more loudly. The French make an excellent kind of gingerbread, with honey and rye meal; the honey serves instead of water, butter, eggs, and sugar. There is a singular disproportion between the quantities of bread consumed in France and in England; in the former country, it is computed that each person eats, including what is taken with soup, two pounds and a quarter of bread per day; while in England, the average quantity is thirteen ounces.

MARRIAGE, AND LONG LIFE.

It has long been the opinion of those who have paid attention to the subject, that marriage, in both sexes, is conducive to length of life; and an European philosopher has lately made observations, which render the fact indubitable. His researches, together with what was previously known, give the following remarkable results. Among unmarried men, at the ages of from thirty to forty-five, the average number of deaths per annum is twenty-seven in a hundred; but of married men, at the same period of life, the deaths are only eighteen. For forty-one bachelors who attain the age of forty, there are seventy-eight married men who do the same. As age advances, the difference becomes more striking. At sixty, there are only twenty-two unmarried men alive, for ninety-eight who have enjoyed the benefits of matrimony;—at seventy, the proportion between the bachelors and married men is eleven of the former for twenty-seven of the latter;—and at eighty, there are nine married men for three single ones. The same rule holds good, in nearly the same proportions, with regard to the other sex. Married women, at the age of thirty, taking one with another, may expect to live thirty-six years longer; while, for the unmarried, the expectation of life is only thirty years and a half. Of those who attain the age of forty-five, there are seventy-two married women for fifty-two old maids. These estimates, it must be understood, are based on actual facts, by observing the difference of longevity between equal numbers of individuals, in single and in married life.

Should it be asked, how it is that marriage conduces to longevity, it may be difficult to give a satis-

factory reply. Its mode of operation is probably rather mental and moral, than physical. As regards the male sex, the quietude of domestic life—its peaceful cares, if we may use the expression—and the calm sense of virtuous affections, and satisfied desires—would be likely to keep the soul from wearing out the frame too soon. The course of a married man's life is generally regular; his wife's influence tempers his masculine character, and makes him less wild and adventurous; he feels that he is not exclusively his own property, and therefore is not ashamed to be careful of himself. His spirit is tamed down, and does not hurry him into vicissitudes, whether of good or evil fortune. He has bidden adieu to all feverish passions. On many accounts, his health is exposed to far less peril than before; and, in sickness, he has the tenderest of nurses. Finally, he totters a long way, down into the vale of years, because supported by a careful arm, when he otherwise might sink. Compare such a life with the ill-regulated and reckless course of too many unconjugated men, and here is at least one cause for the briefer span of the latter class. Our reasoning, however, is not equally applicable to old maids, who, nevertheless, are subject to the same law as their male counterparts.

THE FOSSIL ELEPHANT.

[Translated from the Magasin Universel.]

When we contemplate merely the surface of the globe which we inhabit, we see nothing that would lead us to suspect its history. A soil enriched with the treasures of vegetation and the miracles of human art; seasons, returning with admirable regularity, to bestow on the earth the benefit of their influence; an infinite number of animals and plants, of which the species are diversified according to the wants and pleasures of each country and each climate:—all these objects excite ideas of immutability, of harmony, and happiness. But, if we penetrate beneath the earth's surface, and examine the different layers which compose it, the position of those layers, their mutual relations, the nature of their substances, and the remains of organized beings which they inclose, we meet with disclosures so unexpected, that the mind will not at first credit them. By such proofs as these, man learns that the globe has long existed without his presence, and that, for a long time, it was a mere lifeless desert, wholly devoid of every species of animated nature. He sees that, even after the appearance of life, there were great and terrible changes in the condition of the earth, and that these revolutions destroyed multitudes of living beings. Finally, if we compare the remains of such beings with those which now exist, we shall perceive that, in many cases, they belong to species which are no longer found on earth.

Among these extinct species is the Fossil Elephant. This animal, without being much taller than the Elephant of the Indies, was of larger proportions than the individuals of that species; he was stronger limbed, and more solid; his tusks were long, of a spiral form, and turned outward; and the sockets, into which they were fastened, were much deeper than those of the Indian elephant—a characteristic which indicates a very considerable difference in the figure and organization of the trunk. It is not known precisely what was the colour of the skin; but it is ascertained that this elephant possessed two sorts of covering:—one, a reddish wool, coarse and thick; and the other consisted of stiff black hairs, which, on the tail and spine of the back, were long enough to form a kind of mane. From the warmth of its clothing, so unlike that of the elephants of the torrid zone, it may be conjectured that, if the Fossil Elephant did not exclusively inhabit cold countries, his organization was such that he preferred them to hot climates.

This species must have been spread over a large portion of the globe; for hardly any country has been examined by naturalists, where they have not found some of its enormous relics; but Siberia is the most remarkable in this respect. In every part of that country are found the fossil remains of this elephant. Its bones are generally separated and scattered about; but some complete skeletons have been discovered, enclosed, as it were, in a sepulchre of sand, and even entire carcasses, the soft parts of which had been perfectly preserved by the cold. Thus, Gabriel Sarytschen, in his journey to the northeast of Siberia, speaks of an elephant found on the shore of the Alaseia, a river which empties into the Arctic Ocean. This elephant, which had been disinterred by the river, stood in an erect position, was nearly entire, and was covered with its skin, to portions of which, long hairs were still attached. In 1804, a fisherman, on the shore of the Arctic Ocean, saw an enormous mass turn over on a bank of sand; he had noticed this mass five years before, but had not been able to give it a close examination. It was a fossil elephant. The fisherman carried away the tusks, and sold them for fifty roubles. Two years afterwards, Mr. Adam, now a professor at Moscow, paid a visit to the place: but the natives of the vicinity had torn off the flesh of the animal to feed their dogs. Wild beasts had also feasted on the same strange sustenance; which had been preserved through countless ages to satisfy their hunger. The skeleton, however, was almost entire; the hinder part was garnished with a long mane; and the skin was covered with black hairs and a reddish wool. What remained of the animal was so heavy that ten persons could with difficulty carry it. More than thirty pounds weight of hair was found, which the white bears had buried in the moist soil, while devouring the flesh. This elephant was a male; his tusks were more than nine feet long, without reckoning the curvatures, and his head, without the tusks, weighed above four hundred pounds. Mr. Adam took the greatest care to collect what remained of this unique specimen of an ancient world: and he redeemed the tusks, which the fisherman had sold. This great curiosity, the acquisition of which cost eight thousand roubles, is now in the Academy of St. Petersburgh.

The bones of this species of animal are so common in Siberia, that the natives of the country, ignorant of the true cause of their presence there, have invented a fable to account for it. They say that these bones belong to an animal which lives under the earth, like a mole, and which dies the moment

that it perceive the light of day. They have given it the name of *mammout*, or *mammouth*; and they call the fossil tusks, the horns of the mammouth. These horns, or tusks, are so numerous and so well preserved, especially in the northern regions, that they are applied to the same uses as the tusks of the modern elephant; and they are so important an object of commerce, that the Czars of Russia formerly claimed the monopoly of them.

This fable of a subterranean animal was not unknown to the Chinese, who named the horns of the mammouth *Tien-schu-yu*; that is, the teeth of the Tien-schu. In the great Chinese work on Natural History, which was composed in the fifteenth century, there is the following article respecting the mammouth, or Fossil Elephant:—'The animal named Tien-schu, of which mention has already been made in the ancient work on the ceremonial, is also called Tyn-schu, or Yu-schu; that is to say, the 'mouse which hides itself.' It dwells continually in subterranean caverns. It resembles a mouse, but is equal in size to a bull or a buffalo. It has no tail; its colour is dark. It is very strong, and digs itself caverns in places which abound with rocks and forests.'

The accuracy of the Chinese in Natural History may be estimated from this specimen. The remains of the Fossil Elephant have also given rise to many other errours. As, among animals, some of the bones of the elephant are those which most resemble the bones of man, so have they often been mistaken for them; and such was probably the origin of all those pretended discoveries of the tombs of giants, which are related in the authors of antiquity and of the middle ages. Even the most learned naturalists have fallen into the same mistake. Thus, in 1577, the celebrated Felix Pater, professor of Medicine at a German University, affirmed that some bones, which had been disinterred seven years before, were those of a man nineteen feet high. At other times, the errour has been created and fostered by avarice; as, for instance, at the commencement of the seventeeth century, a French surgeon exhibited at Paris some bones, which had been found beneath the earth, near the shores of the Rhine; and the better to excite curiosity, and draw people to his show, he distributed a little pamphlet, wherein it was affirmed that those bones had been discovered in a sepulchre thirty feet long, on a stone of which was this inscription:—*Teutobochus rex*. Almost everybody believed this fable; and the bones of the elephant passed for the mortal remains of a King of the Cimbri, who had fought against Marius.

We may dispense with offering to our readers any proof, that the species of elephant, of which we have been giving the history, is really extinct—or that the animals lived in the same places where their remains are found, and that their bones have not been brought thither by inundations, of greater or less extent;—since these truths have been placed beyond a doubt by the admirable labours of Cuvier.

At one period, England was ravaged by innumerable bands of wolves. There is not now a single wolf in England, Scotland, or Ireland.

SPANISH LOCUSTS.

Locusts are continually seen in the southern parts of Spain, particularly in the remote and uncultivated districts of Estramadura, where they generally feed on wild herbs, without attacking the fields or gardens, or entering the houses. Unless very numerous, their appearance attracts little notice. The number of these insects is usually kept within a certain limit, by the fact that there are many more males among them, than females; if, on the contrary, there were more females than males, or an equal number of each, their increase would be such as to devastate the whole kingdom; and even man would not escape their ravages. In 1754, when the proportion of females was larger than usual, they laid waste La Mancha and many other fruitful provinces, and the whole of Portugal. When their number is great, they move in vast bodies, composed of myriads, beginning their flight about ten o'clock in the morning; they first rise to the height of five hundred feet in the air, darkening the sun like a thunder cloud; then fly to a distance of about two leagues, always against the wind, and alight on a garden or cornfield, the destruction of which is the work of a single moment. They seem merely to touch the ground, and take flight again; in which brief space they destroy every green thing on the soil. They eat all sorts of garden vegetables, aromatic plants, and poisonous herbs, filling their omnivorous maws with melons, lavender, thyme, rosemary, mustard, onions, garlic, hemlock, deadly night shade, the acrid crow-foot, furze, rue, and wormwood; nor do they seem to make any distinction between the most delicious fruit and the rankest poison. If they chance to alight where garments are left to dry upon the ground, they devour every shred of them. They have even been known to commit sacrilege by entering the churches, and eating the silken vestments of the priests, and the decorations of the altars. This infernal insect has a head about the size of a pea, mouth large and open, and black eyes, rolling with a timid aspect; their jaws are furnished with four incisory teeth, crossing in the manner of shears, so as either to gripe or cut. When an army of them is in motion, the sound of their innumerable wings is like the rustling of a forest. Both tradition and history speak of these locusts as having been a plague to the fertile land of Spain, from ages immemorial.

The Hudson's Bay Company have a post on Rainy Lake, for carrying on trade with the Indians of the Northwest. Their supply of spirits for one year (and probably it was their ordinary annual supply,) was sixty kegs of what are called High Wines—or alcohol of such strength, that each keg was equal to four kegs of rum. Mr. Cameron, the chief agent, said, that, though the streams were high from the melting of the snows, yet they should run as high with liquor, if the Indians required it. Thus all the sparkling rills, where the sons of the wilderness once quaffed the pure element, are now made to overflow with poison.

Magnetic Poles.—The Magnetic Poles revolve round the poles of the earth, in periods never exceeding four thousand years.

SALT; ITS ORIGIN AND MANUFACTURE.

Salt is obtained from various sources; as from sea water, from lakes and springs, and from solid masses of the substance, either above or beneath the surface of the earth. It is estimated that the thirtieth part of the water of the ocean consists of salt; but the proportion is largest at the equator, and decreases towards the poles. In hot countries, where the earth is dry and sandy, the surface of large tracts is frequently covered with a layer of salt. In Persia, there are very extensive plains, strewn with salt in flakes; it is often met with in the deserts of Arabia; and in Abyssinia, the traveller journeys four days over a plain of salt. The appearance, probably, is somewhat like that of our fields in winter, beneath their shroud of snow. In the south of Africa, there are abundance of salt lakes, where the salt crystallizes in masses as hard and solid as rock. In Spain, there is a mountain, between four and five hundred feet high, and nearly three miles in circumference, which is one enormous lump of solid salt; as it is transparent, extremely hard, and not easily soluble in water, the people apply it to the manufacture of various kinds of ornaments and utensils, such as vases, urns, and candlesticks. In some parts of Turkey, salt is said to be used, like blocks of granite, to build houses with. There are also mines of salt, among which that of Weliska, in Poland, is the most extensive, and affords the most fruitful supply. This mine is, in fact, a subterranean city, containing chapels and palaces, and colonnades which, by the blaze of torches, gleam with all the colours of the rainbow.

Salt springs are found in Switzerland, France, England, and America. The whole of the valley of the Ohio, from its head waters to Shawnee town in Illinois, according to a writer in the American Journal of Science, is based on a saliferous rock, which lies at the depth of from five to twelve hundred feet beneath the surface, and when perforated, yields water of extreme saltness. There are tokens of its existence along the course of the Alleghanies, over a tract one hundred miles wide, and several hundred miles in length. It is supposed that the ancient inhabitants of the West were acquainted with the use and manufacture of salt; for, in digging wells at the Scioto salines and elsewhere, the remains of furnaces, and fragments of earthen vessels, have been found at considerable depths. The tusks and grinders of the Elephant and Mastodon have likewise been met with in similar situations, whither they had doubtless resorted to eat salt.

The American writer, to whom we have just alluded, has given a copious and interesting account of the salt manufacture in the valley of the Ohio. For many years after the settlement of that region, all the salt was obtained from the Atlantic states, and was transported across the mountains on horseback. The price was then so high, that salt was almost considered a luxury, rather than an article of common and necessary use. Its manufacture was first attempted in 1798, at the Old Scioto salt works, where wells were dug to the depth of twenty or thirty feet, into which the water oozed, through fissures in the saliferous rock, or bed of salt. The water was but weakly impregnated with the saline substance; and from six to eight hundred gallons were required, to make one bushel of salt weighing fifty pounds. This salt, though very dark coloured and impure, sold at the rate of three or four dollars per bushel. In 1808, the present method of obtaining the saline fluid, by boring or drilling, was first put in practice, on the Great Kenawha. The lowest depth, to which the auger was then driven, was seventy or eighty feet; but as it was found that, at greater depths, the water increased in strength, the bores were gradually deepened to three hundred and fifty feet. The water became so powerfully saline, that seventy-five gallons would now produce a bushel, or fifty pounds weight, of salt. In 1817, salt was first manufactured on the Muskingum; and two years afterwards, Mr. Fairlamb contrived a method of boring for it by machinery, connected with a water mill. On some parts of this river, below Zanesville, the salt rock lay eight hundred and fifty feet beneath the surface of the earth, and the water was so intensely strong, that fifty gallons yielded fifty pounds of salt. It was sometimes necessary to bore through a bed of flint, from nine to twelve feet deep, before reaching the salt rock. This flint is so hard and sharp grained, that it wears out the steel of the auger, nearly as fast as it is cut by it; and three weeks of constant labour, by day and night, are required to perforate a thickness of ten feet. Except through those beds of flint the boring is not difficult. The auger is pointed with the best cast steel, from twelve to fourteen inches in length, and three or four inches wide; its progress downward through the various strata is from one inch to six feet per day, proceeding more slowly as the depth increases.

The water is drawn from the wells by pumps, and is evaporated in large iron kettles, by means of furnaces. From five to six cords of wood per day will suffice for a furnace of thirty or forty kettles, producing weekly three hundred bushels of salt, which is sold at twenty five cents per bushel. There is no perceptible difference in the quantity of salt obtained from the water, whether a well have lain idle a few weeks, or be worked continually; nor, in the time that has elapsed since salt was first manufactured in the West, is there the slightest diminution of the supply; although, for several years past, upwards of a million of bushels have been annually produced. Undoubtedly, a sufficient quantity of salt is laid beneath the valley of the Ohio, to last till the inhabitants shall cease to need it—till the earth's means of supplying sustenance to her children shall be entirely exhausted; when, being destitute of food, they may dispense with salt.

On Cape Cod, and in Martha's Vineyard, and perhaps elsewhere on the seacoast of New England, salt is made from the ocean water, by exposure to the sun in ranges of broad and shallow wooden troughs, which may be covered in rainy weather. The pumps, connected with these salt works, are set in motion by sails, like those of wind mills; which, as they briskly revolve, contribute much to enliven the scenery of the barren shores. Salt making in this part of the country, is rather a tedious process.

From the bountiful scale on which Nature has

distributed salt throughout the earth, both on its surface and beneath it, and in the ocean that surrounds it, we might at once conclude, that it is almost as necessary to our existence as vital air. It is applied to many uses in the arts; among others, to the manufacture of glass, to bleaching, the glazing of earthenware, assaying metals, casehardening steel, and rendering iron malleable. Salt is indispensable to the health, and indeed to the life of man; it is probable that saline particles, from various sources, are diffused through the air, even at a distance from the sea, and being inhaled with the breath, preserve the blood from corruption. Without this seasoning, no sort of prepared food would be either palatable or wholesome. 'With every bushel of flour,' says the English Penny Magazine, 'about one pound of salt is used in making bread; thus it may be presumed that, in bread alone, every adult consumes about two ounces weekly.' There is an old saying, in derision of an idle and good-for-nothing person,—'He cannot earn his salt;'—and considering what a heap of salt a man devours, during his lifetime, it certainly requires some industry to earn it. Homer and Plato have termed salt Divine. Our Saviour, in his Sermon on the Mount, to express to his disciples the relation which they bore towards the mass of mankind, as counteracting its tendency to corruption, told them,—'Ye are the Salt of the earth.'

AGRICULTURE ON THE PRAIRIES.

The first ploughing of the Prairies of the West is difficult, and requires a team of six oxen, on account of the strong roots of the Prairie grass. It is sometimes performed by contract, at the rate of two dollars an acre. The plough has a broad share, and cuts a turf about eighteen inches wide, but only two or three inches deep; and it is remarked that this shallow ploughing destroys the Prairie grass, by dividing its roots in a vital part. Indian corn, in the proportion of a bushel to ten acres, is dropped into every third furrow, and is covered by the cut turf of the furrow next to it. The crop (which is called sod corn, because raised from the fresh sod) comes to maturity and is harvested, without any further trouble of cultivation. Fifty bushels per acre is the average crop. Wheat is next sown, after merely harrowing the ground, without again passing the plough over it. Half a bushel of seed is used, to the acre, and the average crop is twenty-five bushels. Mr. Timothy Flint, describing the Mamelle Prairie, states that it generally yields forty bushels of wheat, or seventy bushels of Indian corn, to the acre, and that the vegetable soil is forty feet deep. Earth thrown from the bottom of wells, according to this writer, is equally fertile with the soil on the surface. An English agriculturalist, who visited the spot, questions the correctness of Mr. Flint's account; nor is it very probable that such fertility exists, save in the rich soil of a poetical fancy. Clover seed, or artificial grass, is never sown on these Prairies;—the natural herbage is suitable both for pasture and hay.

The Winter of Lower Canada is five months long, of Upper Canada four months, and of Illinois two months.

Diamond Mill.—In the city of Amsterdam there is a diamond mill, owned by a Jew. The main wheel is turned by four horses, and sets in motion a number of smaller wheels, in a room above. The cogs of the latter wheels act on circular metal plates, and cause them to revolve. The plates are strewn with pulverized diamond; and the precious stone, which is to be ground or polished, is fastened to the end of a stick, by means of an amalgam of zinc and quicksilver, and thus submitted to friction. There is no other substance that will make an impression on the diamond. In cutting the diamond, the dust is made to adhere to a metal wire, which passes rapidly backward and forward, and saws the stone asunder.

Suicides in Canton.—It is estimated that eight or nine-tenths of the untimely deaths, which occur in Canton, are by suicide; and of these, six or seven tenths are supposed to be females. The most trivial disputes, and the least dissatisfaction or uneasiness, will suffice to impel them to this dreadful act. Persons sometimes destroy themselves, in order to throw suspicion of their murder upon others, and thus accomplish at once their enemy's destruction and their own. Young women, weary of life, and repining at their destiny, because they are females instead of men, form themselves into sisterhoods, and repair in numbers to the river—into which they plunge, and die. The awful prevalence of this crime is a proof and a consequence of the general demoralization, which pervades the whole empire of China. In other countries, when public and private corruption has reached a certain height, it is generally followed by great convulsions, and ultimate reform; but the Chinese are probably neither better nor worse than they were a thousand years ago.

The Martyr's Path.—It is recorded, as an old superstition, that the grass along the way, by which a Martyr had gone to execution, always afterwards remained paler than other grass; and it was the same with whatever tree or shrub chanced to grow there—the foliage would never wear a gladsome green. Were there any truth in this, there is more than one foot track in New England, where the grass ought to look pale, in spite of the rain and dew of ages. Boston, if grass grew in its streets, would show such a pathway, leading from the ancient prison place to the gibbet of the Quakers—a pale wavy line would be drawn across some of the green fields of Connecticut—and for Salem, there would be a blighted track, up Gallows Hill, as broad as the highway. But there are many, whose whole walk through life is a path of martyrdom; who are the martyrs of uncharitableness, which does not indeed kill the body, but grieves the heart; and yet the grass is none the paler, where their feet have been.

Oregon Range.—These are generally called the Rocky Mountains from their black and precipitous appearance. They are said to stand at about the same distance from the Pacific ocean, as the Alleghanies from the Atlantic. Some of their peaks have been supposed to be volcanic; but this has not been ascertained to be the fact.

The Escape of the Duston Family.

THE DUSTON FAMILY.

Goodman Duston and his wife, somewhat less than a century and a half ago, dwelt in Haverhill, at that time a small frontier settlement in the province of Massachusetts Bay. They had already added seven children to the King's liege subjects in America; and Mrs. Duston about a week before the period of our narrative, had blessed her husband with an eighth. One day in March, 1698, when Mr. Duston had gone forth about his ordinary business, there fell out an event, which had nearly left him a childless man, and a widower besides. An Indian war party, after traversing the trackless forest all the way from Canada, broke in upon their remote and defenceless town. Goodman Duston heard the war whoop and alarm, and, being on horseback, immediately set off full speed to look after the safety of his family. As he dashed along, he beheld dark wreaths of smoke eddying from the roofs of several dwellings near the road side; while the groans of dying men,—the shrieks of affrighted women, and the screams of children, pierced his ear, all mingled with the horrid yell of the raging savages. The poor man trembled yet spurred on so much the faster, dreading that he should find his own cottage in a blaze, his wife murdered in her bed, and his little ones tossed into the flames. But, drawing near the door, he saw his seven elder children, of all ages between two years and seventeen, issuing out together, and running down the road to meet him. The father only bade them make the best of their way to the nearest garrison, and, without a moment's pause, flung himself from his horse, and rushed into Mrs. Duston's bedchamber.

The good woman, as we have before hinted, had lately added an eighth to the seven former proofs of her conjugal affection; and she now lay with the infant in her arms, and her nurse, the widow Mary Neff, watching by her bedside. Such was Mrs. Duston's helpless state, when her pale and breathless husband burst into the chamber, bidding her instantly to rise and flee for her life. Scarcely were the words out of his mouth, when the Indian yell was heard: and staring wildly out of the window, Goodman Duston saw that the blood-thirsty foe was close at hand. At this terrible instant, it appears that the thought of his children's danger rushed so powerfully upon his heart, that he quite forgot their still more perilous situation of his wife; or, as is not improbable, he had such knowledge of the good lady's character, as afforded him a comfortable hope that she would hold her own, even in a contest with a whole tribe of Indians. However that might be, he seized his gun and rushed out of doors again, meaning to gallop after his seven children, and snatch up one of them in his flight, lest his whole race and generation should be blotted from the earth, in that fatal hour. With this idea, he rode up behind them, swift as the wind. They had, by this time, got about forty rods from the house, all pressing forward in a group; and though the younger children tripped and stumbled, yet the elder ones

were not prevailed upon, by the fear of death, to take to their heels and leave these poor little souls to perish. Hearing the tramp of hoofs in their rear, they looked round, and espying Goodman Duston, all suddenly stopped. The little ones stretched out their arms; while the elder boys and girls, as it were, resigned their charge into his hands; and all the seven children seemed to say.—'Here is our father! Now we are safe!'

But if ever a poor mortal was in trouble, and perplexity, and anguish of spirit, that man was Mr. Duston! He felt his heart yearn towards these seven poor helpless children, as if each were singly possessed of his whole affections; for not one among them all, but had some peculiar claim to their dear father's love. There was his first-born; there, too, the little one who, till within a week past, had been the baby; there was a girl with her mother's features, and a boy, the picture of himself, and another in whom the looks of both parents were mingled; there was one child, whom he loved for his mild, quiet, and holy disposition, and destined him to be a minister; and another, whom he loved not less for his rough and fearless spirit, and who, could he live to be a man, would do a man's part against these bloody Indians. Goodman Duston looked at the poor things, one by one; and with yearning fondness, he looked at them all, together; then he gazed up to Heaven for a moment, and finally waved his hand to his seven beloved ones. 'Go on, my children,' said he, calmly. 'We will live or die together!'

He reined in his horse, and caused him to walk behind the children, who, hand in hand, went onward, hushing their sobs and wailings, lest these sounds should bring the savages upon them. Nor was it long, before the fugitives had proof that the red devils had found their track. There was a curl of smoke from behind the huge trunk of a tree—a sudden and sharp report echoed through the woods—and a bullet hissed over Goodman Duston's shoulder, and passed above the children's heads. The father, turning half round on his horse, took aim and fired at the skulking foe, with such effect as to cause a momentary delay of the pursuit. Another shot—and another—whistled from the covert of the forest; but still the little band pressed on, unharmed; and the stealthy nature of the Indians forbade them to rush boldly forward, in the face of so firm an enemy as Goodman Duston. Thus he and his seven children continued their retreat, creeping along, as Cotton Mather observes, 'at the pace of a child of five years old,' till the stockades of a little frontier fortress appeared in view, and the savages gave up the chase.

We must not forget Mrs. Duston, in her distress. Scarcely had her husband fled from the house, ere the chamber was thronged with the horrible visages of the wild Indians, bedaubed with paint and besmeared with blood, brandishing their tomahawks in her face, and threatening to add her scalp to those that were already hanging at their girdles. It was, however, their interest to save her alive, if the thing might be, in order to exact a ransom. Our great-great-grandmothers, when taken captive in the old times of Indian warfare, appear, in nine cases out of ten, to have been in pretty much such a delicate situation as Mrs. Duston; notwithstanding which, they were wonderfully sustained through long, rough, and hurried marches, amid toil, weariness, and starvation, such as the Indians themselves could hardly endure. Seeing that there was no help for it, Mrs. Duston rose, and she and the widow Neff, with the infant in her arms, followed their captors out of doors. As they crossed the threshold, the poor babe set up a feeble wail; it was its death cry. In an instant, an Indian seized it by the heels, swung it in the air, dashed out its brains against the trunk of the nearest tree, and threw the little corpse at the mother's feet. Perhaps it was the remembrance of that moment, that hardened Hannah Duston's heart, when her time of vengeance came. But now, nothing could be done, but to stifle her grief and rage within her bosom, and follow the Indians into the dark gloom of the forest, hardly venturing to throw a parting glance at the blazing cottage, where she had dwelt happily with her husband, and had borne him eight children—the seven, of whose fate she knew nothing, and the infant, whom she had just seen murdered.

The first day's march was fifteen miles; and during that, and many succeeding days, Mrs. Duston kept pace with her captors; for, had she lagged behind, a tomahawk would at once have been sunk into her brains. More than one terrible warning was given her; more than one of her fellow captives, —of whom there were many,—after tottering feebly, at length sank upon the ground; the next moment, the death groan was breathed, and the scalp was reeking at an Indian's girdle. The unburied corpse was left in the forest, till the rites of sepulture should be performed by the autumnal gales, strewing the withered leaves upon the whitened bones. When out of danger of immediate pursuit, the prisoners, according to Indian custom, were divided among different parties of the savages, each of whom were to shift for themselves. Mrs. Duston, the widow Neff, and an English lad, fell to the lot of a family, consisting of two stout warriours, three squaws, and seven children. These Indians, like most with whom the French had held intercourse, were Catholics; and Cotton Mather affirms, on Mrs. Duston's authority, that they prayed at morning, noon, and night, nor ever partook of food without a prayer; nor suffered their children to sleep, till they had prayed to the christian's God. Mather, like an old hard-hearted, pedantic bigot, as he was, seems trebly to exult in the destruction of these poor wretches, on account of their Popish superstitions. Yet what can be more touching than to think of these wild Indians, in their loneliness and their wanderings, wherever they went among the dark, mysterious woods, still keeping up domestic worship, with all the regularity of a household at its peaceful fireside;

They were travelling to a rendezvous of the savages, somewhere in the northeast. One night, being now above a hundred miles from Haverhill, the red men and women, and the little red children, and the three pale faces, Mrs. Duston, the widow Neff, and the English lad, made their encampment, and kindled a fire beneath the gloomy old trees, on a small island in Contocook river. The barbarians sat down to what scanty food Providence had sent

them, and shared it with their prisoners, as if they had all been the children of one wigwam, and had grown up together on the margin of the same river within the shadow of the forest. Then the Indians said their prayers—the prayers that the Romish priests had taught them—and made the sign of the cross upon their dusky breasts, and composed themselves to rest. But the three prisoners prayed apart; and when their petitions were ended, they likewise lay down, with their feet to the fire. The night wore on; and the light and cautious slumbers of the red men were often broken, by the rush and ripple of the stream, or the groaning and moaning of the forest, as if nature were wailing over her wild children; and sometimes, too, the little red skins cried in sleep, and the Indian mothers awoke to hush them. But, a little before break of day, a deep, dead slumber fell upon the Indians. 'See,' cries Cotton Mather, triumphantly, 'if it prove not so!'

Uprose Mrs. Duston, holding her own breath, to listen to the long, deep breathing of her captors. Then she stirred the widow Neff, whose place was by her own, and likewise the English lad; and all three stood up, with the doubtful gleam of the decaying fire hovering upon their ghastly visages, as they stared round at the fated slumberers. The next instant, each of the three captives held a tomahawk. Hark! that low moan, as of one in a troubled dream—it told a warriour's death pang! Another!—Another!—and the third half-uttered groan was from a woman's lips. But, Oh, the children! Their skins are red; yet spare them, Hannah Duston, spare those seven little ones, for the sake of the seven that have fed at your own breast. 'Seven,' quoth Mrs. Duston to herself. 'Eight children have I borne—and where are the seven, and where is the eighth!' The thought nerved her arm; and the copper coloured babes slept the same dead sleep with their Indian mothers. Of all that family, only one woman escaped, dreadfully wounded, and fled shrieking into the wilderness! and a boy, whom, it is said, Mrs. Duston had meant to save alive. But he did well to flee from the raging tigress! There was little safety for a red skin, when Hannah Duston's blood was up.

The work being finished, Mrs. Duston laid hold of the long black hair of the warriours, and the women, and the children, and took all their ten scalps, and left the island, which bears her name to this very day. According to our notion, it should be held accursed, for her sake. Would that the bloody old hag had been drowned in crossing Contocook river, or that she had sunk over head and ears in a swamp, and been there buried, till summoned forth to confront her victims at the Day of Judgment; or that she had gone astray and been starved to death in the forest, and nothing ever seen of her again, save her skeleton, with the ten scalps twisted round it for a girdle! But, on the contrary, she and her companions came safe home, and received the bounty on the dead Indians, besides liberal presents from private gentlemen, and fifty pounds from the Governour of Maryland. In her old age, being sunk into decayed circumstances, she claimed, and, we believe, received a pension, as a further price of blood.

This awful woman, and that tender hearted, yet valiant man, her husband, will be remembered as long as the deeds of old times are told round a New England fireside. But how different is her renown from his!

The Dog.—Buffon says of the Dog:—'Without enjoying, like man, the light of intellect, the Dog has all the warmth of sentiment; he possesses, in a higher degree than man, fidelity and constancy in his affections; he is all zeal, all ardour, and all obedience. He is more mindful of benefits than of injuries; he is not repelled by bad treatment. If a wrong be offered him, he bears it patiently, and forgets it; or only remembers it as a motive to stronger attachment.' Can this beautiful character belong to a creature without a soul?—to one of the brutes that perish, and whose virtues perish with them? How high, then, should be the excellence of beings endowed with immortal souls, and whose virtues might also be immortal!

Heat Lightning is ascribed by some philosophers to the electric flashes of a thunder-storm, at such a distance that the thunder cannot be heard, and that the curvature of the earth conceals the clouds, although the gleams of lightning flicker up above the horizon. Others contend, that these flashes proceed from electric discharges in the air, where there is no condensation of vapour in the form of clouds; since electric light requires for its production only a rarefied state of the atmosphere, whether by heat or aqueous vapours. They say that heat lightning has been seen high up in the clear sky, towards the zenith.

Jewish Burial.—In Copenhagen, as in most other places, the Jews have a separate burial ground. They are buried in a standing posture, with their faces turned towards Jerusalem, for, in whatever country a Jew may be born, he still deems himself a native of the Holy City, and languishes to revisit it, as an exile yearns for his father land. Now that persecution has generally ceased, it is probable that the Jews will insensibly lay aside their peculiarities.

The Larynx.—The Larynx is the organ by which the voice is produced. Anatomists have compared it to a stringed instrument, a wind instrument, a reed instrument, a French horn, an Æolian harp, a drum, a reed and flute, and a bird call. Its powers are strengthened by exercise. The same effect is produced by the exercise of the muscles of the chest—and hence the deep, strong voice of a blacksmith.

Beds.—In many parts of the north of Europe, the beds are not long enough for a moderately tall man, and the only covering is another feather bed, four and a half feet square.

Paper.—Excellent paper can be manufactured of the husks of Indian corn, and of the pulp made of various kinds of wood and bark, especially of poplars.

UPPER CANADA.

The climate of Upper Canada has been compared to that of Italy in Summer, and to that of Holland in Winter; but the Russian climate probably bears a stronger similitude to it, in the latter season. The atmosphere is extremely dry, and, at such a distance from the sea, there are no particles of salt in the air; to which causes it is attributable that the tinned roofs of Montreal retain their lustre for such a length of time. At the end of half a century, they glitter as brightly in the sunshine as when the sheets were first laid on. But for the liability of tinned plates to tarnish and corrode in a moist and saline atmosphere, this fashion of roofing edifices would be both ornamental and economical, in all parts of our country. The same dryness of the air preserves the inhabitants of the province from the diseases that are prevalent in a damp climate. Consumption is comparatively rare. Common colds are not of frequent occurrence, even in Winter; and it is said that during divine services in the Cathedral of Montreal, where the audience consists of from three to five thousand persons, there is less disturbance by coughing than in any small parish church in England. The most common disorder is the fever and ague, which, though troublesome, is not viewed in a very serious light. Notwithstanding the general dryness of the atmosphere, there are seasons of heavy rain. The Canadian Winter is always preceded by rains; and the inhabitants have a proverb, that the ditches never freeze till they are full of water. After the rain comes the long, severe, and steady cold, enduring late into the Spring, when the rain sets in again, and continues till the middle of May. A satirical gentleman remarked, that, during two months of Autumn and two of Spring, the Canadians were up to their middles in mud; during four months of Summer, they were broiled with heat, choked with dust, and tortured by mosquitoes; and if, in the remaining four months of the year, they chanced to get their noses above the snow, they were sure to be snapped off by frost.

The agriculture of Upper Canada is very poor and inartificial, and nothing but the natural fertility of the soil could compensate for its defects. Successive crops of wheat are raised from the same tract of land, which is thus exhausted, and is seldom enriched by manure. In fact, so little use is made of manure, that it is not uncommon, when the dung heap has greatly accumulated, for the farmer to remove his barn to a new site, instead of scattering the odoriferous pile upon his fields. Yet, in spite of this bad husbandry, the average crop of wheat to the acre is represented as being greater than in England. Tobacco is cultivated to a considerable extent in the western district of the province. The culture of this plant is chiefly confided to the children, who can perform the operations of stripping, weeding, and worming, as well as grown persons, and with less inconvenience from a stooping posture. As a reward for their toils, the little cultivators are allowed to raise a second crop of tobacco, every Summer, for their own benefit; and though this is inferiour to the first crop, and is sometimes spoiled by the early frosts, yet, if safely gathered in, the proceeds supply them with funds throughout the year. The tobacco is not equal to that of Virginia. A few years ago, some German emigrants, from the banks of the Rhine, brought with them the Rhenish wine, the juice of whose grapes is so highly esteemed among the friends of the bottle. As the climate of Upper Canada is more favourable than that of some of the regions where this vine grows, it is thought that its culture may succeed there.

Most of the houses in the province are built of logs; but a thriving settler erects one edifice after another, and finishes with a stately mansion of brick and stone. In such cases, all his former houses are seen around the latest structure, each converted to some appropriate use; the shed or shanty, which he first occupied, is now a pig stye; the log house, which was his next habitation, serves as a barn or stable; and the frame house, whence he last migrated, is now attached to the rear of his brick mansion, as a kitchen.

When the province of Canada was surrendered to Great Britain, the religious privileges of the inhabitants were secured to them; and the maintenance of the Catholic faith was provided for by tithes, as well as endowments and foundations of religious communities. The liberal scale of these endowments may be estimated from the fact, that the Superiours of the Seminary of St. Sulpicius are Lords of the Manor—or, in other words, proprietors—of the whole island and city of Montreal, and entitled to demand rent as such. Neither the proprietorship, however, nor the rent, are probably more than nominal, at the present day. After the division of Canada into two provinces, the Parliament of Upper Canada abrogated the tithes and other provisions for the support of Catholicism. If we may credit the statement of the English writer, from whom most of the above facts are drawn,—the Canadians are less burdened with taxes, either civil or religious, than any other people in the world. The population in 1831, was about two hundred and thirty-five thousand, and the amount of taxes and duties was less than fifty thousand pounds, of which ten thousand was supposed to be actually paid by the United States, in the consumption of goods smuggled across the frontier. According to this calculation, the whole tax of each Canadian amounts to two English shillings, or forty-four cents, per annum; being, it is said, only one-tenth of the average tax of American citizens, and one twenty-fifth of that of the inhabitants of England.

LINES.—Carew.

He that loves a rosy cheek.
Or a coral lip admires,
Or from star-like eyes doth seek
Fuel to maintain his fires;
As old Time makes these decay,
So his flames must waste away.

But a smooth and steadfast mind,
Gentle thoughts and calm desires,
Hearts with equal love combined,
Kindle never-dying fires.
Where these are not, I despise
Lovely lips, or cheeks, or eyes.

Not one-fourth of the books published pay their expenses.

GREAT TIMBER SLIDE.

There are immense tracts of forest in our country, the trees of which would be invaluable in the market, but are now as worthless as so many overgrown weeds, for want of some mode of conveyance thither. Until recent times, there was a forest similarly situated in the Swiss canton of Underwalden. It consisted of spruce-fir, and stood on the southern side of Mount Pilatus, about three leagues from the Lake of Lucerne, but on a site so lofty, steep, and rugged, that no one had ever conceived the idea of bringing the trees to market. It was seldom or never visited, except by Chamois-hunters, who brought back wonderful stories respecting the extent of the forest and the magnificent size of the trees. It might probably have continued to flourish and decay for ages to come, as it had done for thousands of years past, but for the simple, yet grand contrivance of a German engineer, named Rupp. He formed the plan of bringing down the trees from the side of this almost inaccessible mountain to the shore of the lake, by no other force or moving power than their own weight. For this purpose, aided by the funds of a joint-stock company, he constructed a trough, in a cradle-like form, from the forest to the lake—a distance of more than eight miles in a horizontal line, to which should be added two thousand five hundred feet, being the height of the forest above the level of the water. The bottom of the trough, along its whole length, was composed of three sticks of timber, laid side by side; other trees were laid parallel to these; and the trough was about six feet wide at the top, and three or four feet deep. Thirty thousand trees were employed in its construction. The trough makes many bends in its course; it traverses three great ravines, and, in two places, passes under ground. The trees, which are to be conveyed down this singular railway, are divested of their bark and branches, and made tolerably smooth. In a few seconds after being launched in the trough, they acquire such an amazing velocity, that only six minutes are consumed in this passage from the forest to the lake; and in rainy weather, when the trough is wet and slippery, the distance has been performed in three minutes. This is at the rate of one hundred and sixty miles an hour, and is probably the most rapid mode of conveyance that has ever been contrived by human ingenuity. None but large trees will pass down the trough; the weight of the smaller ones being insufficient to keep them in motion. On arriving at the lake, the timber is rafted into the Rhine, passes down that river to Holland, and finds its way to the German ocean, a distance of a thousand miles, within a month after leaving the mountain side.

MANDATE OF THE INQUISITION.

[Glorente's History of the Inquisition.]

In the second year, after the establishment of the Inquisition, it issued the following Mandate, imposing penance on a confessed Heretic.

To all the faithful Christians to whom the present letters may be shown, Father Domingo, Canon of Osna, the least of his brethren, sends salvation in Christ. By the authority of the Lord Abbot of Cister, St. Bernard, Legate of the apostolic see, whose powers we exercise—we have *reconciled* the bearer of these letters, Poncio Roger, converted from the sect of the heretics, by the grace of God. And we have commanded him by virtue of the oath he has taken to obey our precepts, that upon three festivals of Sunday, he be led in his shirt by the priest, who shall scourge him from the gate of the city to the gate of the Cathedral. We impose, moreover, for penance, that he forever abstain from eating flesh, eggs, cheese, and other food derived from animals, except on the day of the Resurrection, the Pentecost, and the Nativity of the Lord, on which we command him to eat them, in token of his detestation of his former errours. That he keep three Lents in the year, by abstaining from fish; and that he always fast and abstain from fish, oil, and wine, three days in each week, unless corporal infirmity, or the labours of his situation, require dispensation. That he use religious garments, both in form and colour, having two small crosses sewn upon them, one on each side of his breast. That he hear mass every day if he have the opportunity, and on the festivals assist in the chapel at vespers. That he pray every day the daily and nightly 'horas,' saying, besides, the prayer of Pater Noster seven times in the day, ten times at the beginning of the night, and twenty times at the middle of the night. That he observe chastity, and show this letter every month in the city of Cereri to his parish priest, whom we command to watch over the conduct of Poncio, that he diligently fulfil all we have enjoined, until the Lord Legate manifest to us his further pleasure. And if Poncio shall fail in his observances we command that he be held for perjured, heretic, and excommunicated, and be separated from the society of the faithful.

THE SABBATH BELLS.—BY CHARLES LAMB.

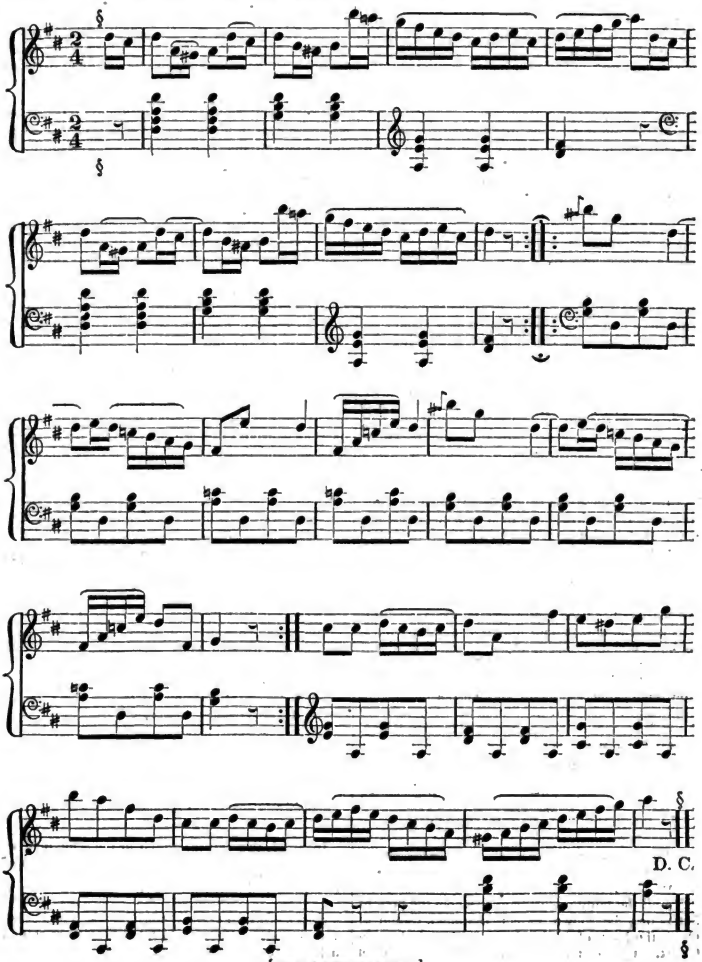
The cheerful Sabbath bells, wherever heard,
Strike pleasant on the sense, most like the voice
Of one, who from the far-off hills proclaims
Tidings of good to Zion: chiefly when
Their piercing tones fall *sudden* on the ear
Of the contemplant, solitary man,
Whom thoughts abstruse or high have chanced to lure
Forth from the walks of men, revolving oft,
And oft again, hard matter, which eludes
And baffles his pursuit—thought-sick and tired
Of controversy, where no end appears,
No clue to his research, the lonely man
Half wishes for society again.
Him, thus engaged, the Sabbath bells salute
Sudden! his heart awakes, his ears drink in
The cheering music; his relenting soul
Yearns after all the joys of social life,
And softens with the love of human kind.

In 1833, two catfish, united in the same manner as the Siamese Twins, were taken at the mouth of Cape Fear River, in North Carolina.

SLAVE SETTLERS.—A considerable number of run-away slaves, from the United States, are settled in the western part of Upper Canada.

THE PRUSSIAN QUADRILLE.

COMPOSED FOR THE AMERICAN MAGAZINE, BY CH: ZEUNER.



Statue of Washington.

CHANTREY'S WASHINGTON.

The statue of Washington (of which the preceding sketch will give the reader an accurate, though necessarily imperfect idea) was placed in its present situation in the latter part of October, 1827. It is constructed of white Italian marble, from the quarries of Carrara, and was completed at an expense of about fifteen thousand dollars. Chantrey, the most eminent of British sculptors, had been long employed upon this noble specimen of art, which, by the opinion of competent judges, is ranked among the best productions of his chisel. The edifice in which it stands, was built expressly for the reception of the statue, and is attached to the rear of the State-House, ascending as high as the second story of that structure. The interiour is an oblong square, thirty feet long by thirteen broad, with a dome at the top, throwing its light into the vaulted recess, ten feet by thirteen, where the statue is placed. The whole edifice appears like a recess in the large and lofty hall of the State-House, with which it communicates by means of three arched entrances.

As we ascend the successive flights of steps, which give access from Beacon Street to the portal of the State-House, we perceive the figure of Washington, in the long vista between the pillars of the hall. Even at that distance, its aspect of calm and thoughtful dignity impresses the beholder, and causes him to advance with some faint semblance of the feeling, with which he would have approached the presence of the illustrious original. The statue, which is seven feet in height, stands on a pedestal, with the left foot somewhat advanced, and the weight of the body resting chiefly on the right. The head is slightly turned towards the left. The right hand grasps a roll of manuscript, and the left supports the heavy folds of the ample cloak, which forms the drapery of the statue. The arrangement of this cloak was a most fortunate conception, on the part of the sculptor. Had he arrayed the modern Hero and Statesman in the garb of ancient Greece or Rome, or had he given him the stiff military coat, the flapped waistcoat, and small clothes, of a Revolutionary general, the effect would, in either case, have been almost equally objectionable. Canova's statue, which was recently destroyed by fire, at Raleigh, in North Carolina, represented Washington in the Roman military dress, with short curled hair, a garment shaped somewhat like a shirt, naked legs, and sandals on his feet. The garb of an Indian Chief would have been quite as graceful, and more appropriate to the American warriour. But Chantrey, while clothing the statue in the Revolutionary uniform, has taken advantage of the voluminous folds of the cloak, to give the figure of Washington a classic grace and dignity, and to hide all those details which, as belonging to a fashion so recently passed away, might excite ludicrous emotions in the spectator.

This statue is one of the chief objects of interest in the city of Boston; and there are few hours of the day, in which some admiring group may not be seen near its pedestal.

Bank of Amsterdam.—The nature of this institution is fully described in Smith's Wealth of Nations. Previously to the year 1609, the great trade of Amsterdam brought thither large quantities of clipped and worn coin, from foreign countries. Thus the whole currency became greatly debased; for whenever any coin was issued fresh from the mint, as the metal was worth more than its nominal and current value, it was immediately withdrawn from circulation, and exported, or melted down. In this state of things, merchants could not always find enough of good money to pay their bills of exchange. To remedy these inconveniences, a bank was established in 1609, which received all money, at its real value in standard coin, and gave the owners credit for the amount, after deducting a small per-centage for recoining and other expenses. A law was passed, that all bills of exchange, of the value of six hundred guilders, or above, should be payable only in this bank-currency—a regulation, which at once compelled all the merchants to open an account with the bank. As the city of Amsterdam became bound for the solvency of the bank, and as the paper-currency had many conveniences, the bank-paper was always at a premium, and could be sold in the money-market for more than its nominal value. Consequently, there was no inducement to demand payment of the bills. The bank professed to lend no part of the money that was deposited in its vaults, but to have the value in coin, always on hand, for all its certificates of credit. It is believed that this was really the case; for, on one occasion, when political events caused a run upon the bank, some of the coins, then paid out, bore the marks of having been scorched by a fire, which had occurred soon after the institution was established.

The Bank of Amsterdam, as we may perceive, differed in its character from the whole class of institutions, bearing the same name. The design and tendency of the latter is to increase the amount of the circulating medium. The operations of this bank had no such effect; its paper being merely a substitute for a certain quantity of the precious metals, which lay as inactive in the vaults of the bank, as if it had remained in the mines of Potosi.

Boatmen on the Rhone.—As an instance of the injurious effects of continual and violent bodily exertion, Mr. Edgeworth mentions a boatman at Lyons, whose hair was gray, his face wrinkled, his back bent, and his limbs and features exhibited all the marks of decrepitude. Yet he was only twenty-seven years of age. He informed Mr. Edgeworth that he was the oldest boatman on the Rhone, and that his younger brothers had been worn out, and died, before they were twenty-five years old. The labour of these men consists in rowing boats across one of the swiftest rivers in the world; and the destructive effects of their unintermitting toil are heightened by frequent draughts of brandy, with which stimulus they nerve themselves to momentary exertion, at the expense of rapid decay and early death.

Cocoa-Nut Leaves.—The principal food of Elephants, in a domestic state, is the leaves of the cocoa-nut.

POTTERY.

The ordinary white earthen ware is made of pure clay and pure flint, mixed together in the proportion of one part of the flint to five or six of the clay. The clay is previously worked with water, by means of machinery, until all the lumps are entirely broken up, and the mass assumes the consistence of cream. The flint is first burned, then ground in a mill, and worked with water, in the same manner as the clay; the unbroken pieces being returned a second time to the mill. When both are sufficiently fine, the flint and clay are mingled, and made into a paste, which is pounded, either by the hand or machinery, and thus becomes fit for the potter. He places a portion of the paste on a horizontal wheel, somewhat resembling a round table, and inserts his hand or finger into the middle of the lump, placing the other hand on the outside. The wheel is then made to revolve, with great rapidity, and the lump of clay is almost immediately transformed into a hollow vessel, which is shaped by the hand, or some simple tool, and completed with the celerity of magic. A wire is then passed between the wheel and the bottom of the vessel; and the latter being removed, another soon appears in its place, assuming the shape of a bowl, pitcher, jug, or other utensil, according to the will of the potter. The handles are made separately, and stuck on while the vessels are still wet. A similar process is used in the manufacture of the brown earthen ware, which is a great staple of the thriving town of Danvers, in this state; and the traveller may there observe hundreds of breadpans, bean-pots, mugs, plates, wash-bowls, and broad dishes for milk, drying in the sun, previously to being consigned to the oven.

The white ware requires somewhat more nicety in its manufacture, than this coarse, domestic pottery. After being taken from the wheel, the vessels are turned in a lathe, and smoothed, if necessary, with a wet sponge. They are then dried in a stove, and subsequently burnt in a kiln, in which state they are called biscuit. The next process is that of glazing. If the vessels are to be ornamented with figures, patterns are engraved on copper, and printed on coarse paper, with ink that is calculated to stand the action of fire. These are moistened, and applied to the porous surface of the vessel, which absorbs the ink, and retains it in the original figure, after the paper has been washed off.

It is but about seventy years, since the first good pottery, was made in England. Before that period, all the white and figured earthen ware was imported from Delf, in Holland, whence it received the name of Delf Ware, as porcelain is still called China. The annual exportation, from the English manufactories, is now thirty-eight millions of pieces.

NEW ENGLAND MILITIA—Ninety Years Ago.

In 1746, upon an alarm from a French Squadron, 6400 men well armed, and with provisions for fourteen days, assembled on Boston common; some of them had marched seventy miles in two days. They came from the inland parts of the province; the militia of the maritime counties remained at home for the defence of the seacoast. Connecticut was to have sent 6000 men, if the alarm had not proved to be false. It was observed by a distinguished French officer, 'that the French officers who were prisoners, being allowed freely to view Boston and the neighbouring country, would effectually discourage any attempt on the part of France, to invade a country so well peopled.' British ships of war, it is said, were much more frequently stationed at Boston in peace than in war, when they were required elsewhere. It seems that both friends and enemies deemed New England competent to defend herself. Massachusetts was then estimated to contain 41000 white men of sixteen years of age and upwards. The population of Boston was about 18000.

FESSENDEN'S POEMS.*

An American bard, the commencement of whose literary career dates more than a quarter of a century back, is truly a remarkable phenomenon. He appears with a classic dignity among the poets of yesterday and to-day, and has a claim upon the respect of his audience, apart from the merits of his song. If, in addition to this claim, the veteran bard offers us a production which has received the applause of a former day—and if it be found to possess the rare merit of originality, and an excellence peculiar to itself—the present public should give its sanction to the favourable judgment of their fathers, with even more earnestness of praise than would be the due of a younger aspirant. Such would be no more than an act of justice, in requital of the neglect that has permitted his name to fade, for so long an interval, from the list of those whose effusions are deemed honourable to their country. And his tuneful brethren (if brethren they may be called, the eldest of whom were listening to their nurse's lullaby, when his strains had already gained the applause of England and America,) should pay him such reverence as Ben Jonson, the survivor of the Shaksperian age, was wont to receive from the wits at the Mitre-tavern, and Dryden from the more modern luminaries of Queen Anne's age. The severe simplicity of our republic recognises no Poet Laureate, as an officer of state; but the poets of America might place a laurel crown upon his honoured head, and acknowledge him the leader of their choir.

Such, we think, should be the reception of the author of these poems. To many of our readers he is well known, as the Editor of the New England Farmer; but comparatively few are aware, that, at an early period of life, he was a poet of greater European celebrity, than any other native American, before or since. 'Terrible Tractoration,' the longest poem in the volume, passed through two London editions, in the course of a few months; and the present impression is the third that has been published in America. The main design of the production was to satirize the opponents of the Metallic Tractors, certain implements which caused a prodigious sensation in the medical and philosophical world, about the commencement of the

* Terrible Tractoration, and other Poems.—By Christopher Caustic, M. D.

present century. But the author's fancy was too affluent, and his powers of ridicule too universal, to be confined within the narrow scope of his nominal subject; and accordingly, there was no folly nor humbug of the day, but what became the theme of his laughing muse. In the edition now before us, he has been equally successful in introducing most of the new absurdities, of which the present age is no less fruitful than any preceding one. Some of these passages it would violate the neutrality of our Magazine to extract. We therefore select a few stanzas which will sufficiently illustrate the queer originality of thought, and aptness of ludicrous expression, that distinguish this poet from all others of his day. Among other notable contrivances of Doctor Caustic—an old crack-brained visionary, whom Nature seems to have gifted with a tenfold proportion of wit, in lieu of the least modicum of common sense—he enumerates the following. His patent Author's mill, by the way, would be a great convenience to ourself, and thereby to our readers:

'We next crave liberty to mention
Another wonderful invention;
A sort of stenographic still,
Alias a Patent Author's mill.

We fill its hopper with a set
Of letters of the alphabet,
And turn out eulogies, orations,
Or themes for July celebrations,—

News, both domestic and extraneous,
Essays, and extracts miscellaneous,
We manufacture by the means
Of said superlative machines.

This last invention also reaches
To making Congress members' speeches;
Would they adopt it, though we've said it,
T' would cent per cent enhance their credit

We hammer'd out a lawyer's jaw mill
Which went by water like a saw-mill
With so much clamour, fire and fury,
It thunderstruck the judge and jury.'

Among the minor poems, there is one, now for the first time published, entitled the Cultivator's Art. We extract a paragraph, which is full of ideas so infinitely grotesque, that they actually become sublime.

'We farmers are a sort of stuff
Tyrants will always find too tough
For them to work up into slaves,
The servile tools of lordly knaves.
Those men who till the stubborn soil,
Enlighten'd, and inur'd to toil,
Cannot be made to quail or cower
By traitor's art or tyrant's power,
They might as well attempt to chain
The west wind in a hurricane;—
Make rivers run up hill by frightening,
Or steal a march on kindled lightning—
The great sea-serpent, which we've read of,
Take by the tail and snap his head off—
The firmament on cloudy nights,
Illume with artificial lights,
By such an apparatus as
Is used for lighting streets with gas—
Or, having split the north pole till it 's
Divided into baker's billets,
Make such a blaze as never shone,
And torrefy the frozen zone—
With clubs assail the polar bear,
And drive the monster from his lair—
Attack the comets as they run
With loads of fuel for the sun,
And overset by oppugnation
Those shining soldiers of creation—
The Milky Way McAdamize,
A railway raise to span the skies,
Then make, to save Apollo's team,
The Solar Chariot go by steam.
These things shall tyrants do, and more
Than we have specified, before
Our cultivators they subdue,
While grass is green, or sky is blue.'

We should be glad to enrich our pages with the full length portrait of Miss Tabitha Towzer; but it would be doing the author injustice to give no specimen of his powers in a more serious style of composition. We admire the thoughts, and the strong expression, of the following stanzas.

'THE EVILS OF A MISCHIEVOUS TONGUE.

'Many have fallen by the edge of the sword, but not so many as have fallen by the tongue.'—Eccl. Apoc. xxviii. 8.

Tho' millions, the sword of the warriour has slaughter'd,
While fame has the homicide's eulogy rang:
Yet many more millions on millions are martyr'd;
Cut off by that cowardly weapon, the tongue.

One sword may be match'd by another as keen,
In battle the bold man a bolder may meet,
But the shaft of the slanderer, flying unseen
From the quiver of malice, brings ruin complete.

An *insolent tongue*, by a taunt or a gibe,
Enkindles heart-burnings and bloody affrays;
A *treacherous tongue*, when impell'd by a bribe,
The guiltless condemns, or a nation betrays.

A *smooth subtle tongue* vile seducers employ
The fair sex to lure to libidinous thrall;
A *slip of the tongue* may its owner destroy,
And *the tongue of the serpent* occasion'd the fall

Then be it impress'd on Columbian youth,
That the tongue is an engine of terrible force;
Not govern'd by reason, not guided by truth,
A plague, which may desolate worlds in its course.'

At the present day, there is a vast fund of what is called poetic sentiment, diffused throughout the community; and nothing is requisite but a sort of mechanism, to mould it into a new shape. But when Mr. Fessenden began his career, an innate fire, and originality of thought, were necessary to constitute a poet. These gifts he had—nor has age yet robbed him of them.

Americanisms.—A *span* of horses is the usual expression, instead of a pair, in New York, throughout New England, in Upper Canada, and probably in the Southern States. The word is derived from the Dutch language, and originated from the Dutch settlers of New York; it is also in use at the Cape of Good Hope, where the inhabitants are partly of Dutch extraction. 'I guess'—'I calculate'—'Tarnation'—phrases which have been called purely American, were originally brought hither by emigrants from Suffolkshire, in England. The word, '*riley*,' has been supposed of American coinage. A Yankee landlord apologizing to some Englishmen, because the water in a jug was so *riley*, his guests were inclined to laugh at him; till one of them hinted that the word was still commonly used in Devonshire.

Plumbago.—This substance, commonly called black-lead, may be melted, in small quantities, by the application of very intense heat. It runs into globules, which are white and transparent, and so hard as to scratch the hardest glass.

View of a Chinese Pyramid.

CHINESE PYRAMID.

The cut represents a Chinese feat of strength and dexterity, superiour to any thing that may be witnessed among our amusements of the Circus; although many of these are astonishing specimens of the extent to which the physical powers of man may be improved. The spectacle, here exhibited, is called the Pyramid, and is constructed in the following number. Four men, of great strength, place themselves side by side, sufficiently close together to form a solid base for the structure, which is to be reared upon them. Two others, mounting on their four shoulders, compose the second story of the edifice, and, in their turn, support a third person, who likewise sustains a fourth. The latter reaches this elevation by means of a double ladder. Standing at the summit of this human pyramid, he causes another man (who is probably the slenderest and lightest of the party) to be hoisted up, and seizing the poor fellow with his right hand, elevates him above his head. After holding him, a considerable time, in this position, and balancing him in the air, while he balances himself on his right foot, he suddenly tosses him upward, leaving him to find his way to the earth as he best can. Down he comes, head foremost, into the midst of the spectators, who spread out their arms to receive him, amid the loud acclamations of the multitude. Whether he invariably reaches the ground with whole bones, we cannot say; but his position, like that of all men who are elevated above the heads of the multitude, and sustained on the shoulders of their fellow-beings, can be considered neither safe nor agreeable.

THE ROYAL HOUSEHOLD BOOK.

Thirty or forty years ago, the society of Antiquaries in London published a volume, containing the regulations and ordinances for the government of the royal household, during the reigns of several English sovereigns. We derive from it the most minute and curious details concerning the domestic affairs of the Court; and (though such knowledge can hardly be deemed useful, in our democratic age, and republican country) we should feel qualified to act either as groom of the bed-chamber to Henry the Seventh, or as Maid of Honour to his Queen. We could likewise superintend the preparations for a royal feast, both on fish-days, and flesh-days, and enumerate the ingredients of every dish that was set before the King. The following list of eatables would answer for an ordinary occasion. Pottage, a chine of beef, venison, cooked in various ways, mutton, young veal, goose or stork, capons of grease and conies of grease, together with baked carp, as the first course; and for the second, jellies, wild-fowl, tarts, pastry, and fruit. On Fridays and Saturdays, nothing but fish was to be served, and, among other varieties, congar-eels, porpoises, and seals. Captain Basil Hall mentions having eaten part of a porpoise, and that it resembled very coarse beef; but we are not aware that the flesh of seals is reckoned among modern articles of food. Nothing is more remarkable, in the domestic economy of the middle ages, than the absence of tea and coffee, and the consumption of ale and wine, in large quantities, by the Queen and all the court ladies. The maids of honour, were allowed one gallon of ale in the morning, another gallon in the afternoon, and two gallons of ale and a pitcher of wine in the evening; and all this appears to be over and above what they drank at their regular meals.

Other entries enable us to form an estimate of the style in which great personages appeared at court. Dukes and Archbishops were allowed stabling and 'herbage' for twenty-four horses, and nine beds for their servants, who probably were accustomed to sleep double or treble. A Dutchess, if a widow, was allowed twenty horses and seven beds. The Queen's maids of honour, among them all, had six horses and three beds. The whole number of the King's horses (this was in the reign of Henry the Eighth) was one hundred and nine.

Among the ordinances of Henry the Seventh, are particular directions for making the king's bed, prescribing the exact manner in which the feather-bed was to be beat up, the placing of the bolster and pillows, and the spreading of the sheets and other bed-clothes; and when this important affair was happily accomplished, 'then shall the Usher draw together the bed-curtains, and an Esquire for the body shall cast holy water on the bed; then shall the Esquires and Ushers, and all other that were at the making of the bed, goe without the chamber; and there to meet them bread, ale, and wine; and soe to drink together.' Henry the Seventh appears to have set more weight upon such ceremonious trifles, than any monarch before or since his time. He ordains the method that was to be observed at the coronation of the King, the reception and coronation of the Queen, her delivery in childbed, the marriage of a princess, and every other event that could befall the royal family. Nor does he neglect to prescribe the method of conducting the king's obsequies; but, as if to conceal from the vulgar crowd, that a monarch must finally humble himself to undergo the same fate with the meanest of them, the directions on this subject are given in Latin. It was not fit that ordinary men should know, that perfumes and spices were requisite to stifle the smell of mortality, in a royal corpse. We, however, shall be irreverent enough to translate the passage.

When an anointed king shall pass from this temporal to the eternal state, first of all, in his bedchamber, shall his body be washed with warm water. Then shall it be anointed all over with balsam and aromatics, and, afterwards, enveloped in a waxed linen-cloth, so that only the face and beard shall remain uncovered. Waxed linen shall likewise be wound about his hands and fingers, in such manner that each finger and thumb shall be separately covered, and the hands, covered with the waxed cloth, shall remain open. But the groom of the bed-chamber must take care of the king's brains and bowels. Moreover, the corpse must be clothed in a garment extending from head to foot, above which must be spread a regal pall. The beard must be carefully combed over the breast, and then a royal crown or diadem shall be placed on the dead monarch's head. Afterwards, a ring of gold is to be put upon the middle finger of his right hand; and the same hand shall hold a golden ball, in which shall be fixed a gilded rod, having the sign of the holy cross at the top, which must rest upon the bosom of the corpse. In the left hand shall be a gilded sceptre, extending from the hand to the left ear. And lastly, the legs and feet must be clothed in stockings and shoes. The king being adorned after this fashion, and honourably attended by the prelates and nobles of his realm, shall be borne to the place appointed for his sepulture.

ANCIENT BRITISH NAVY.

In the time of Edward the Third, whose reign commenced in 1327, the English fleet is said, in a statement made at the period, to have consisted of seven hundred vessels, manned by about fourteen thousand men. This statement, however, must have included the whole number of vessels and mariners belonging to England, whether in the public service, or merchantmen. Nearly two hundred and fifty years after, in 1575, during the reign of Elizabeth, the English navy consisted only of twenty-four vessels, the largest of which was of one thousand tons, and the smallest, of about fifty tons. Their armament and equipage appear rather singular, in contrast with those of a ship of war, at the present day. The largest ship, called the Triumph, had a crew of seven hundred and eighty men, of whom four hundred and fifty were mariners, fifty gunners, and two hundred soldiers. The number of cannon is not mentioned; which omission is the more singular, as the harquebusses, or muskets, bows, and sheaves of arrows, pikes, bills, and corslets, are all particularly enumerated. We suspect that the great guns formed a much less important part of the armament, than in latter times, and that naval battles were decided chiefly by sharp shooting with muskets and bows, and hand-to-hand conflicts with sword and pike. The smallest vessel in our navy, with the advantage of modern science, would probably prove an over-match for Queen Elizabeth's heaviest ship of the line. At the last mentioned period, the number of English vessels, above forty tons burden, was seven hundred and ninety-one; besides which there were about a hundred sail of hoys, and an infinite number of fishermen and small craft.

THE SPINA CHRISTI.

['Three Weeks in Palestine.']

The Spina Christi is supposed, and not without reason, to be the plant of whose branches the crown of thorns was plaited, with which mockery decked our Saviour's brow. It resembles a young willow in growth and flexibility, the leaves being much of the same form, but somewhat longer, and the thorns an inch in length and very strong and sharp.

Transportation of Fish.—Dr. Smith is of opinion, that not only the eggs of fish are carried by birds, in their flight from one country to another, and that the various species are thus propagated in distant regions; but that the living fish sometimes perform similar journeys, in the stomachs of birds. Lampreys have been found alive, hundreds of miles from the sea, in small pools, whither they could have been conveyed by no other means. The nature of this fish is such, that it can dispense with breathing even a mouthful of water, during many hours. It is a curious fact, that small eels, after being swallowed alive by birds of prey, have been seen to make their escape from the bird's stomach.

MOONLIGHT.

[Mudie's 'Observations of Nature.']

The beams of the Moon, as has been said, contain little of the red or the heating rays; and it is well known how very efficient moonlight is in performing those operations which are more immediately performed by the rays towards the deoxidizing end of the spectrum. Every housewife knows how nicely her linen is whitened if she can leave it out during the moonlight; and many know that muslins which the sun would render yellow or brown can be preserved as white as snow if dried by the light of the moon. Every farmer, too, that takes notice (and surely the most unobserving farmers watch the progress of their crops,) must have observed how very rapidly the moonlight, not merely whitens, but actually matures and ripens his corn. In that respect, one fine moonlight night is equal to at least two days of sunshine; and that circumstance, while it lets us see that moonlight has other qualities besides poetical beauty, tell us, that Nature is a Whole, and that the parts which we would suppose to be the most distant and unconnected yet co-operate with each other in the most perfect and wonderful manner.

In consequence of that obliquity in the earth's path round the sun which gives Summer and Winter alternately to the two hemispheres, and a regular succession of the four Seasons to all the temperate latitudes, and in consequence of an additional obliquity in the moon's path round the earth, the full moon rises just at sunset for about a week together. That takes place during the harvest; its mean season being about the twenty-second of September, and the middle of it never more than fifteen days sooner or later than that. That is called the Harvest Moon, and though in the early districts, where there is plenty of solar action to ripen the crops, it be not much heeded, it is very beneficial in the cold districts; and as the obliquity to which it is owing increases as the latitude increases, the Harvest Moon continues for the greatest number of nights in the cold climates. Thus we see how far the influence of what we would deem a simple cause extends in the operations of nature, and how well that which our ignorance is apt to regard as a disadvantage, works for our good. Indeed, there is not an object or an occurrence in nature which has not its use, if we would but look for it; and it is just because we are ignorant of the uses of little things, that we fail in the execution of great ones.

It is in the perceiving of these connexions which appear remote and unexpected, that men who combine science and observation together have so much the advantage of mere men of science or mere surface observers. One would not at first suppose that the study of the mere motions of the earth and moon, and the fact that the light of the moon is a secondary or reflected light, had any thing to do with the whitening of linen or the ripening of corn; and yet the two are as closely connected as if they were parts of one single process.—That should teach us not to pass any one thing or occurrence unobserved, or any one observation without reflecting on it; because there is knowledge in them all; and, at a time when we may have no means of obtaining it, we may be greatly at a loss for that very knowledge which we pass over unheeded.

There is another circumstance connected with moonlight which is worthy of notice; and that is, that where there is least sunshine there is most moonlight. The full moon is not always directly opposite to the sun, but sometimes a little higher and sometimes a little lower than the point opposite; but directly opposite is the average place of the full moon; and thus the full moon is, on the average, just as long above the horizon and shining, as the sun is below it and set; and if the sun is high at noon, the moon is low at midnight; also, if the midday sun is low, the midnight moon is correspondingly high. The influence, or action of the light, both of the sun and the moon, is in proportion to the length of time that they shine, and also to their height above the horizon; and thus, during Winter, there is the greatest duration as well as the greatest strength of moonlight; and always as one goes into a higher latitude, the Winter full-moons shine longer and more brightly. The Lapland moon is an object far more beautiful than they who live in more genial climates and have the atmosphere loaded with vapour can easily imagine. The intense frost there sends down every particle of water in a state of finely powdered snow, each little piece as hard and bright as rock crystal; and the strong power of crystallization so holds the particles of those little pieces together, that even when there is a glimmer of midday sun, that produces no vapour. The Winter sky is, in consequence, perfectly pure, dry, and transparent. No sapphire can rival the depth of its blue; every star blazes like a diamond; and the light of the moon, of which every particle is sent down through the pure air, well deserves Milton's epithet of 'peerless.' It is so bright and silvery, and so gratifying, without being the least painful to the eye, that it is probably the most glorious sight in nature. But it can be seen only at some distance from the unfrozen sea, and the collected habitations of men, as there is always some action in the atmosphere at such places.

EXTINCT ANIMALS.

[Translated from the Magasin Universel.]

Cuvier has given the name of Great Mastodon to a quadruped very like the elephant, as respects his tusks, and the nature and arrangement of his bones, but which differs essentially from the latter animal as to his jaw-teeth; these being papillous, and so large, that some have been found weighing ten or eleven pounds. Its height did not surpass that of the elephant; but its length was somewhat greater, and its limbs were rather more thick, with a smaller abdomen. It used its teeth in the same manner as the hog and the hippopotamus; its principal food must have been tender vegetables, roots, and aquatic plants. This sort of aliment would naturally lead the Mastodon to moist and marshy soils; but it was not formed to swim, or pass any considerable part of its time in the water, like the hippopotamus. It was, in all respects, a land-animal.

The Great Mastodon appears not to have in-

habited what are termed the elder quarters of the globe. It is on the shores of the Ohio, a river of North America, that its bones are most frequently met with. They are also found, although in less number, in all the temperate regions of North America, in whatever direction it is traversed. The most extraordinary of these deposits has been found in Virginia; and a very remarkable circumstance was there observed:—among the bones was found a half-bruised mass of little branches, and of leaves, some of which were those of a reed, still common in that part of the country. The whole was enveloped in a sort of bag, which was supposed to be the stomach of the animal; and there can be no doubt that these were substances which he had devoured.

As many fables have been propagated about the American Mastodon, as of the Russian Mammoth. The Indians, in some parts of the country, believe that, when these animals existed, there were likewise men of a proportionate stature, and the Great Spirit launched his thunderbolts at them both. Those of Virginia say, that a multitude of these enormous beasts having destroyed the deer, buffalo, and other animals created for the use of the Indians, the Great Man on high took his thunder, and slew all but the largest male, who, presenting his horns to the thunderbolts, shook them off as they fell. But being at length wounded in the side, he leaped over the mountains and continued his flight towards the great lakes, where he is living till this day.

Our limits will not permit us to describe the four species of the Mastodon; nor can we do more than mention the four species of the hippopotamus which are found in a fossil state; and we shall say merely a few words on two of the four species of Rhinoceros, which naturalists have enumerated.

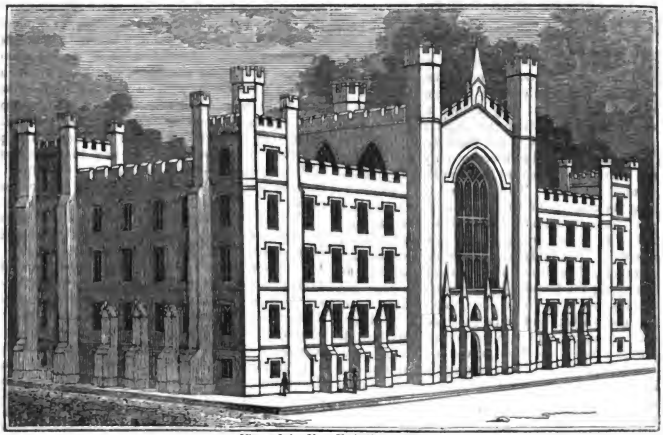
The first species appears to have inhabited the countries of the north, from Germany to the remotest part of Siberia. This Rhinoceros had the nostrils separated; its head was larger than that of the species which now exists; its shape was lower, and calculated for a creeping posture; there were none of those protuberances, or irregular bony bunches, which render the head of the unicorn rhinoceros so hideous, but it was smooth, like that of the bicorn of the Cape. The second species appears to have been peculiar to Italy. Its nostrils were not separated; it was more lank, and stood higher on its legs, and was less bulky, than the preceding; its head was not so long in proportion, and the animal must have borne a greater resemblance to the bicorn of the Cape. Both species were covered with hair, which was very abundant at the snout and especially on the feet; while, in the rhinoceros of India and of the Cape, the latter part was entirely destitute of hair.

But of all these extinct animals, there is none which so little resembles any existing species, as the Tapir, which is called the Gigantic. It was above twenty feet long, by twelve in height; its size was equal to that of the great elephants, and of the Great American Mastodon, although the tapir at present existing is hardly the size of a small cow. It appears that these Gigantic Tapirs were of the same date as the Mastodons and fossil elephants, that they lived in company with them, and were destroyed by the same catastrophe; since their bones are found in the same spots, and sometimes intermingled with those of the other animals.

The species of which we have hitherto spoken, although different from those which exist, have nevertheless sufficient analogy with them to bear a comparison. But there are others, which are now completely extinct, and which cannot be compared with any living genus. Such were the *sophiodontes*, and the *talaeotheriums*, whose stature varied according to the species, from that of a horse to that of a rabbit. The *anoplotheriums*, whose shape was also extremely variable, but who, by their dentary system, were all assimilated to the ruminating order. The *megatherium*, which was about fourteen feet from the head to the commencement of the tail, and eight or nine feet in height to the shoulder-joint. It lived on vegetable food, and principally on roots; it was slow in its gait; but the length and power of its claws afforded it sufficient means of defence, so that its safety did not depend on swiftness. It appears to have been covered with scales; and it had a very short tail, but garnished with tufts. The *megalonix* was so called on account of the length of his teeth; a characteristic which makes it a genus by itself, without analogy among living animals; especially when it is considered that it belonged to the order *edentes*, which comprehends only mammiferous animals of small stature; while the megalonix was larger than a horse. According to Mr. Jefferson, formerly president of the United States, who first made this animal known to the learned world, it was more than six feet high, and weighed little short of nine hundred pounds. It must have been the Mastodon's most terrible enemy. Cuvier has proved that it possessed a hand, composed of five fingers, of which the middle and ring-finger, were large, short, and armed with very strong nails.

We will finish this essay on extinct species, by drawing the reader's attention to the fact, that fossil bones are not scattered indifferently and at random among the different layers which envelope the earth, but that, the deeper we go beneath the surface, the more do the animals differ from those which now inhabit our modern world.

A Man's Wife.—A witness in a case of Riot, testifying how the mob hustled him and bore him off his feet, said,—'If I touched ground, I wish I might never see my wife again.' Lord Chief Justice Jeffreys, who was on the bench, told the witness,—'Now whether that be a curse that thou layest upon thyself, or no, I can't tell.' It is remarkable, that jokes upon matrimony, are never out of date, nor grow stale by repetition; the one here extracted has lain in a musty old book these hundred and fifty years; yet were a judge to repeat it to-morrow, it would still set the court in as hearty a roar as it doubtless did in old Jeffrey's time. And after all, there is no great wit in it. Are we to conclude, that, since matrimony is so easily laughed at, it must in its nature, be very ridiculous? If so, we hope, in our time, to be laughing-stocks as well as our neighbours.



View of the New York University.

NEW YORK UNIVERSITY.

This University is an institution of recent date. The building, of which we give a sketch; has a front of one hundred and eighty feet, by one hundred feet wide, and is situated on Washington Square, in the city of New York. It is constructed of marble from the quarries at Sing Sing. The central edifice is fifty-five feet broad and eighty-five deep, and is loftier than the adjacent wings; it contains the chapel, which is lighted principally by one spacious and noble window, twenty-four feet wide, and fifty feet high. The wings of the structure, on each side of the chapel, are of four stories, and are flanked by towers which ascend one story higher, and are embattled at the top. The wings and central building have likewise an embattled parapet. In the interiour, arrangements have been made, on the most extensive scale, for the accommodation of professors, and of classes in the different branches of science, as well as for libraries, and museums of natural history, the fine arts, and antiquities. The style of architecture is similar to that of the collegiate edifices, in the venerable Universities of Oxford and Cambridge.

The officers of government and instruction, in the New York University, form a numerous list, comprising not a few names of eminent men. A greater amount of preparatory learning, than has heretofore been usual in American colleges, is required of those students who intend to pursue the whole academical course, and to become candidates for a degree. The system of instruction is such, that a young man, to whom it may not be necessary or expedient to learn all that is taught in the University, may apply himself exclusively to any of the various branches. This arrangement is in accordance with the spirit of the age, and is likely to extend the usefulness of the institution, by relieving practical knowledge from the incumbrance of dead literature.

Uneducated persons are apt to form very exaggerated ideas of the advantages of what is termed a liberal education. They consider it impossible that young men should not be deeply learned, after spending years within the walls of a University, in constant intercourse with the best qualified instructors, and with every facility for the acquisition of knowledge. In all these matters, however, there is more show than substance. Without personal experience and observation, it is difficult to realise how empty a head may be covered by an academical cap, and how gross a degree of ignorance may be rewarded with a Latin diploma. The advantages of a University are absolutely nothing, unless the student go thither with an earnest wish, and steadfast resolution, to profit by them to the utmost. Now such a wish and resolution will enable any young man, in whatever situation of life, to bring his mind to a degree of improvement, which may be even the greater for the difficulties that seemed to impede it. Tutors and professors are comparatively unimportant accessaries, in the business of education. All really educated men, whether they have studied in the halls of a University, or in a cottage or a work-shop, are essentially self-educated. Whatever knowledge they have acquired, it must all have been gained by the vigorous toil of their own intellects; and such toil never fails of its reward, in the increase of mental aliment, and of the mind's capacity to digest it. Let no youth, therefore, be turned back from the field of science, by the idea that the only path thither leads through the portal of a collegiate edifice, and that his guide must wear a professor's gown. Such a guide may indeed be desirable; but where none such is at hand, let the student go boldly and firmly onward, and he will seldom go astray.

USES OF DEAD ANIMALS.

In a Number of Silliman's Journal of Science, we find an article, translated from the French, which treats of the various uses that may be made of dead animals. Some of the details, we confess, are calculated to produce an unpleasant effect on delicate stomachs; but they include a great deal of curious information, which we shall endeavour to abstract for the benefit of our readers.

The writer states that there is only one disease among animals, of a nature that renders them absolutely unfit for food. This is called the Carbuncle, deriving its name from the tumours that take place on the diseased animal, and which, when accompanied with sores, are generally covered with a black crust. The body of a creature, that has died of carbuncle, should be buried without handling it, or permitting the blood to drop upon the soil; but grain may be sown over the grave, where it will thrive luxuriantly; and after two years, the bones should be dug up, and applied to several valuable purposes. But it has been proved in various ways, and especially by the provisioning of armies, that no ill-effect results from eating cattle that have died of any other disease, even though it be contagious. Animals, the carcasses of which have communicated mortal sickness to the persons who cut them up, may be eaten without danger. In general, no harm is to be apprehended, either from handling the dead bodies, or using them as food. The workmen in cat-gut manufactories, and in glue-maker's shops, where animal matter, often diseased and putrescent, is boiled down, experience no deleterious effects. Sheep affected with the rot (a kind of small pox) have no unwholesome qualities.

The skin of a dead animal, if damaged so as to be unfit for the tanner, should be cut into small pieces, and boiled in six times the quantity of water, over a small fire, for seven or eight hours. With salt and seasoning, it makes an agreeable and nutritious jelly. The bristles, hair, wool, or feathers, should be dried in an oven, after the bread is taken out. Horse-hair may be used without any preparation of this sort; the longest hairs make excellent clothes' lines, which are very durable, and do not spot the clothes that are hung upon them; and the short hair is fit for stuffing saddles, sofas, and mattresses. Or, together with fur, it forms an admirable manure, which operates mildly, and for a great length of time. Feathers, mixed with moist earth, answer the same purpose; and a profit may thus be derived from such feathers as are fit for nothing else. The shoes of oxen, horses, asses, and mules, are taken off and preserved. The spurs of fowls, and the horns and hoofs of animals, if sufficiently large, and free from defect, and of a light colour, are sold to toymen; or, if unfit for their purposes, they find a market among the manufacturers of Prussian blue. They may also be rasped very fine and converted into manure, which is so powerful, that the four hoofs of a horse are considered equal to a small load of dung. The bones are sold to factories of ivory-black, or of toys, if there be any such establishments within a convenient distance; if otherwise, they are reduced to small pieces and thrown upon the land, where their beneficial effect is experienced for five or six years afterwards. If the soil be very poor and dry, this species of manure does not begin to operate in a less time than fifteen or twenty years. Another kind of animal manure is made by heating the blood in a large kettle, and stirring it constantly with an iron rod, until reduced to a moist powder, in which state it is to be mixed with dry mould, and spread upon the soil. Raw blood may be used in a similar manner. The putrid flesh of animals may be torn from the bones, with long-handled instruments, and strewn over the land, as manure; it should be slightly covered with earth.

The fat is to be cut into small pieces, melted, and set aside for greasing axle-trees, harnesses, and shoe-leather. But the most singular purpose, in our opinion, to which dead animals are applied in France, is yet to be mentioned. The flesh, blood, and bowels, are kept purposely for the sake of producing maggots, which are sold in Paris at the rate of about a dollar a bushel, and are used as food for pheasants, and also for fattening fish in ponds.

Even the smallest animals may afford some profit. The skins of rats sell at seventy-five cents per hundred, and those of moles at more than double that price. The entire carcass of a horse is worth above ten dollars in the country, and a still higher sum at Paris. Cats and dogs, also, are valuable articles, not only on account of their skins, but of their fat. The flesh of horses, cats, and dogs, when of a fine red colour, and sullied by no brown or livid spots, is secretly made use of as food for man—probably by keepers of eating-houses at Paris. But the French writer appears to see no harm in all this. He states, apparently from his personal knowledge, that rats and polecats are good and wholesome eating; although they require (especially the polecats) an unusual quantity of pepper and spice to counteract their very peculiar taste and odour. Beseeching Heaven to defend our readers and ourself from the heathenish devices of French cooks, we shall here drop the subject.

Opals.—Several varieties of opal are found in the mines of Hungary, among which the Irridescent Opal is the most beautiful and valuable. There is abundance of this variety in the mines, but generally in such minute portions, that a piece of the size of a shilling may not be met with, perhaps, in the course of years. The largest opal ever found is of the size of a man's fist, and weighs seventeen ounces. It has been treasured, for more than two centuries, in the imperial cabinet at Vienna, and must be of immense value; for the smallest specimen, if beautiful, sells for fifteen or eighteen dollars; and there is one at Kasehau, no bigger than a crown-piece, for which ten thousand dollars were offered. In the irridescent opal, all the shades of every colour of the rainbow are blended in countless diversity, and throw out the most brilliant and beautiful reflections.

Lightning.—Silk dresses have guarded the wearers from injury by lightning.

Hyenas.—In 1821, a den of hyenas (in a fossil state) was discovered in Yorkshire, England.

SPOILS OF THE JEWISH TEMPLE.

[Translated from the Magasin Universel.]

After the conquest of Judea by Titus, and the taking of Jerusalem, the Roman Senate decreed that a triumphal arch should be erected in honour of the victor. This monument is one of the most remarkable in ancient Rome, and is equally interesting to the antiquary and the historian. The sincere Christian cannot contemplate it without deep emotion; and the Jews are so overcome with the recollections which it excites, that no man of their nation willingly passes beneath the triumphal arch of Titus.

It is situated on the eastern declivity of the Mount-Palatin, and constructed of white marble. Its original form must have been a perfect square; but it is now considerably dilapidated by time, although the centre, a single column on each side, the frieze, and the attic, are in excellent preservation. Over the bend of the arch are winged figures, representing Renown; and on the frieze, is a sacrifice. The triumph of Titus is seen in two bas-reliefs, one of which shows the Emperour drawn on a car, by four horses abreast; while, in the other, are sculptured the spoils which were taken from the Temple at Jerusalem. These are the chandelier with seven branches, the table of gold, and the trumpets of silver, borne by figures crowned with laurels

Josephus, the Jewish historian particularly mentions these sacred things, in narrating the triumph of Vespasian and his son. He adds, that the Emperour formed the design of erecting a Temple of Peace, wherein to deposit these precious trophies of his glory. He was desirous, moreover, that the Tables of the Law, and the Purple Veil of the Sanctuary, should be kept in the imperial palace. They remained there more than three hundred years, until, in 455, Genseric possessed himself of them, and carried them to Carthage. Belisarius afterwards transported them to Constantinople, then the capital of the Empire; whence, by a strange vicissitude of fortune, they were brought back to Jerusalem. From that period, nothing is certainly known of their destiny, although some believe that Chosroës seized upon them, in 641.

These sculptures of the candlestick with seven branches, the table of gold, and the silver trumpets, are representations of the originals, which are mentioned in the twenty-fifth and following chapters of Exodus. Except on the triumphal arch of Titus, no copy of them exists. Thus Rome, in spite of the ravages of time, is still the sole depository of a faithful image of those mysterious symbols, the origin of which ascends to the Deity himself. After eighteen centuries of persecution, a monument still subsists, for the explanation of some of the most important passages of Scripture. Moses announced the chastisement which would be inflicted upon the Jews, for their incredulity; and the triumphal arch, which commemorates their total ruin, was erected less than half a century after the moment, in which the Saviour himself had warned them of its approach. His prophecies are recorded in the sacred volume; and the Jewish nation, scattered all over the world, without the power of re-union, are witnesses that the word of the living God is accomplished.

If the actual situation of the Jews, at the present day, is an incontrovertible fact, the events, which have produced it, are likewise attended with all the certainty of which history admits. The Roman medals, which were struck to commemorate the conquest of Jerusalem, represent, on one side, a female figure sitting under a palm-tree, in an attitude of mourning, with the words: JUDEA CAPTA. On the other side, is the head of Vespasian, or of Titus.

TRENTON FALLS.

On one of the balmiest mornings that ever broke, we descended the rude steps leading to the bed of the Trenton Falls. We reached the bottom, and stood upon the broad, solid floor, a hundred feet down in the very heart of the rock; and my first feelings were those of astonishment at the sublime grandeur of the scene. In a few minutes we stood below the first fall. The whole volume of the river here descends fifty feet at a single leap. The basin which receives it is worn into a deep, circular abyss, and the dizzy whirl and tumult of the water is almost overpowering. We ascended at the side, and at a level with the top of the fall, passed under an immense shelf, overshadowing us almost at the height of a cloud; and advancing a little further, the whole grand sweep of the river was before us. It was a scene of which I had never before any conception, and I confess myself inadequate to describe it. To stand in the bed of a torrent, which flows for miles through a solid rock, at more than a hundred feet below the surface; to look up this tremendous gorge, and see, as far as the eye can stretch, a river rushing on with amazing velocity, leaping at every few rods over a fall, and sinking into whirlpools, and sweeping round projecting rocks constantly and violently; to see this, and then look up as if from the depths of the earth to the giant walls that confine it, piled apparently to the very sky, this is a sensation to which no language that would not seem ridiculous hyperbole could do justice.

When the first surprise is over, and the mind has become familiar in a degree with the majestic scope of the whole, there is something delightfully tranquillizing in its individual features. We spent the whole day in loitering idly up the stream, stopping at every fall, and every wild sweep of the narrow passes, and resting by the side of every gentle declivity where the water shot smoothly down with a surface as polished as if its arrowy velocity were the sleep of a transparent fountain. There is nothing more beautiful than water. Look at it when you will—in any of its thousand forms, in motion or at rest—dripping from the moss of a spring, or leaping in the thunder of a cataract—it has always the same wonderful, surpassing beauty. Its clear transparency, the grace of its every possible motion, the brilliant shine of its foam, and its majestic march in the flood, are matched unitedly by no other element. Who has not 'blessed it unaware?' If objects that meet the eye have any effect upon our happiness, water is among the first of human blessings. It is the gladdest thing under heaven. The

inspired writers use it constantly as an image for gladness, and 'crystal waters' is the beautiful type of the Apocalypse for the joy of the New Jerusalem. I bless God, for its daily usefulness; but it is because it is an every day blessing, that its splendour is unnoticed. Take a child to it, and he claps his little hands with delight; and present it to any one in a new form, and his senses are bewildered. The man of warm imagination, who looks for the first time on Niagara, feels an impulse to leap in, which is almost irresistible. What is it but a delirious fascination,—the same spell which, in the loveliness of a woman, or the glory of a sunset cloud, draws you to the one, and makes you long for the golden wings of the other?

I trust I shall be forgiven for this digression. It is one of feeling. I have loved the water from my childhood. It has cheated me of my sorrow when a homesick boy, and I have lain beside it in the summer day when an idle student, and deliciously forgot my dry philosophy. It has always the same pure flow, and the same low music, and is always ready to bear away your thoughts upon its bosom, like the Hindoo's barque of flowers, to an imaginative heaven. *Willis.*

THE PLAGUE.

['Three Weeks in Palestine.']

The cause of the breaking out of the plague in Acre was the opening of a trunk belonging to a Fransciscan monk, who had fallen a victim to it four or five years since. A new Superiour, who had but lately arrived, insisted upon its being opened, that he might take possession of the effects of the deceased. Upon the hesitation of the others, he laughed at their fears, and proceeded to open the box himself; the consequence was that he died in the course of twelve hours, and all the brethren in the convent were swept off in a very short time.

When this pestilence reaches a place from the northward, it is invariably more virulent, fatal, and extensive in its ravages, than when derived from the south, and it is then denominated the Black Plague. At Constantinople they esteem it of little consequence, when it arrives from Smyrna or Egypt; but if it comes from Trebizond, and the shores of the Black Sea, it fills them with dismay. It is a most singular disorder, defying the researches of the most eminent physicians when they attempt to investigate its nature. It is unattended with fever, but there is an utter, rapid prostration of strength, accompanied with boils in all the glandular parts of the body. If the constitution has strength to support the breaking of these tumours, the patient will recover, and is less liable to another attack, though not, as the Turks suppose, entirely exempt. Those among them who have thus recovered are distinguished by a peculiar turban, and are employed in attending the sick, and removing the bodies of the dead.

The plague usually ceases suddenly in the height of its ravages, and is seldom heard of after June; March, April and May, are the months during which it is most prevalent. The Levantines abstain with superstitious horrour from the mention of it by name; they say the *disease*, or *disorder*, but never the plague. It had broken out at Smyrna just before our arrival; of course our first inquiry upon landing, was about '*la peste.*' Two or three persons whom we addressed turned away without giving us any answer; at last, one replied, '*Sinori, siamo sporco.*' 'Gentlemen, we are unclean.' The question each morning was, not how many had died of the plague during the night, but how many '*accidents*' had occurred. It is altogether contagious: there is no danger in standing within two feet of a plague subject, provided there is no contact. Of one remarkable fact I was assured, that the moment the bodies of its victims become cold, they no longer communicate contagion, though the clothes retain it for years.

OVENS FOR HATCHING CHICKENS.

['Three Weeks in Palestine.']

At Damietta we inspected the ovens for hatching chickens, 'la manifattura di Gallina,' as our guide called it, but unfortunately arrived too late to see the little animals ushered into the world. On each side of a low narrow passage, in which we could not stand upright, were ranged these ovens, of a circular form with arched roofs, constructed of clay, in which were placed the eggs wrapped in tow. Once a week a hatching takes place; we found about two thousand chickens running about, which are kept in the ovens for twenty-four hours after hatching, and then sold at the rate of forty for a piastre, or five pence English. I know not whether it be owing to this unnatural mode of incubation, but the Egyptian fowls are very diminutive and bad flavoured. The Eggs are not larger than a bantam's; rank, and reckoned peculiarly unwholesome; we, however, experienced no bad effects from them, although frequently compelled to use them in considerable quantities, being unable to obtain other food.

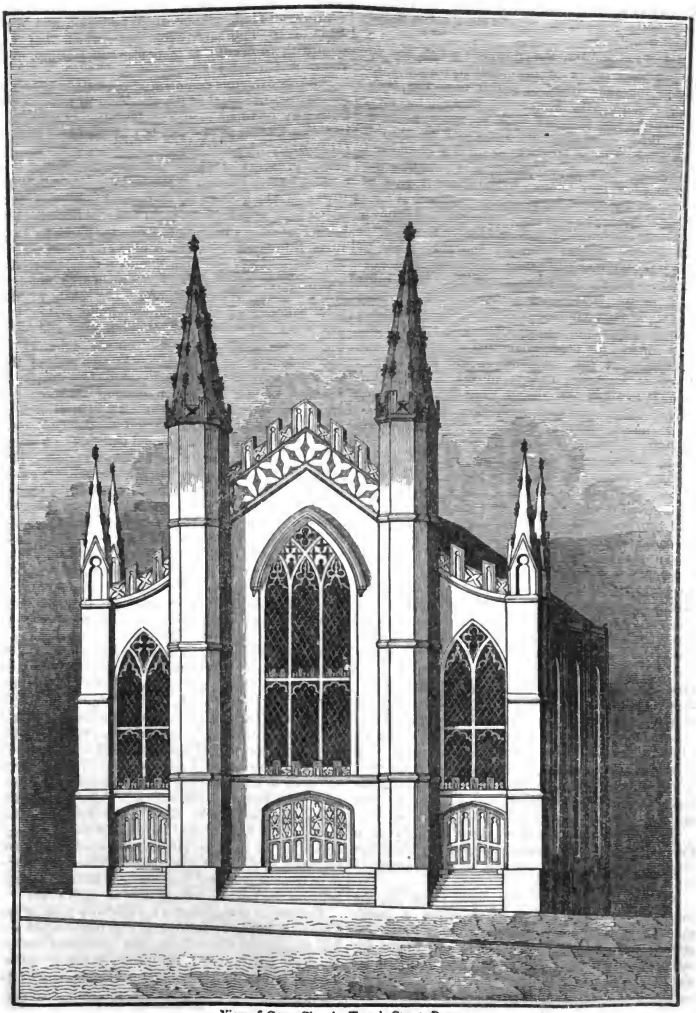
TOMB OF A YOUNG AMERICAN.

['Three Weeks in Palestine.']

We visited the Christian burying ground (outside the walls of Jerusalem) where are seen numerous Greek, Latin and Armenian tombs. Upon those of the Greek were rudely carved the tools significant of the occupation of the defunct. Among those of the Latins was one which afforded a melancholy interest, covering the remains of a young American named Bradford, who had died the previous year at the Franciscan Convent, and had been converted on his death-bed to the Roman Catholic faith, or as his epitaph ostentatiously sets forth, from the Lutheran heresy to Christianity.

During our stay at Jerusalem, Signor Damiani came from Jaffa to reclaim this youth's baggage from the Superiour of the Convent; and requested us to be witnesses to making an inventory of his effects; very little was forth coming, and neither money nor letter of credit could be found, which made us shrewdly suspect that his father confessors had thought fit to repay themselves for the trouble of his Conversion.

Man's like a candle in a candlestick,
Made up of tallow and a lighted wick.
John Bunyan



View of Grace Church, Temple Street, Boston.

GRACE CHURCH.

We consider ourself fortunate in obtaining the following interesting particulars respecting this beautiful edifice, and the Society which has erected it.

To find the germ of the enterprise which has resulted in the erection of this Church, we must go back to the year 1828, at which time the Rev. Alonzo Potter was the Rector of St. Paul's in this city. His ministry was attended with so much success, that in three years after his settlement, his church became full, and the idea was then first conceived by some members of his parish, of attempting the erection of a new Church in the westerly part of the city, and considerable attention was paid to a lot in Bowdoin Street (near the Congregational Church afterward erected there) as a suitable location.

Before any decided measures had been taken to carry this plan into effect, two circumstances occurred which led the individuals, who had been most active in the contemplated undertaking, to cease for a while their efforts. One was, the movement of the proprietors of Trinity Church to rebuild, and the other was the determination of the minister and a majority of the members of the Presbyterian church in Piedmont Square, in the South part of the city, to apply to the State Convention of June, 1829, for admission into connexion with the Episcopal Church, and they were organized and received under the name of Grace Church.

The unfavourable location and situation of the building occupied by this new parish, stood much in the way of ultimate success, and although a few zealous and devoted members of the other Episcopal Churches in the city, endeavoured by personal effort and pecuniary contributions to aid in sustaining the undertaking, still others, who were equally desirous of establishing another Episcopal place of worship, were satisfied that it was best to wait for a more auspicious beginning, particularly as it regarded location.

Early in 1832, the building in Piedmont Square, was given up, and a part of the parish with its officers, together with some members from St. Paul's and the other Churches, commenced anew in a small wooden building in Bedford Street, which they occupied until August, 1833, when they removed for better accommodation to Boylston Hall.

In October, 1834, they determined to make an effort to build a Church, and considering it very important that it should be located in a situation where it would best accommodate a large surrounding population, the Westerly part of the city was again fixed upon as best suited to the purpose.

A subscription for shares was soon opened, and in the course of about two months, a Building Fund was obtained sufficient to secure the accomplishment of the contemplated object.

The Subscribers met for organization on the evening of 31st December, 1834, when a Building Committee was chosen and authorized to proceed in the work with full powers. An Act of Incorporation was obtained in January, 1835, under the title of 'Grace Church in the City of Boston.' —The lot on which the Church now stands in Temple Street comprising about 6500 square feet was purchased, and a contract made with Messrs. J. Washburn and brothers (William Washburn, Architect) for the erection of the present edifice. The parish removed from Boylston Hall to the New (Amory) Hall, corner of Washington and West Streets in February, same year, which they will continue to occupy as their place of worship, until the new Church is completed.

The contractors commenced operations in March following, and reached the main floor in June, on the 30th day of which month at six o'clock in the morning, the Corner Stone was laid by Rt. Rev. Bishop Griswold with suitable and impressive services, and in the presence of a large and attentive audience.

The exterior length of the building, including the towers, (which are of the Octagonal form) is eighty-seven feet, breadth sixty-eight feet, the height of the basement story, divided into two large rooms for Lectures, Sunday-School, &c. is nine and a half feet in the clear; the height from the main floor above the basement to the centre of the main arch, is forty-five feet;—an arch is thrown over each of the side galleries which is intersected by arches opposite the three windows on each side, and resting on each side upon four cluster columns of twenty-four inches diameter. At each end of the Church, sunken arches rest upon four parts of columns of the same size, making at the sides and ends, sixteen in all. The main central arch is seventy-eight feet in length and of the depressed Gothic style, and is ornamented with bold rib work, with plaster rosettes, &c. at the intersections. The base on each side rests upon an ornamented cornice which is supported by one section of the cluster columns, which is continued up for that purpose. The centre window in front is 36 feet in height, and the two side front windows 22 feet. The side windows of the Church are 25 feet. The front of the Church, except the pinnacles and battlements is constructed of Quincy Granite,—the towers and buttresses being laid in regular courses, and the remainder of rubble-work. The stone work of the Towers is 67 feet in height and the Pinnacles twenty-eight and a half feet, making the entire elevation ninety-five and a half feet. The stone-work is carried 18 feet around each corner, and the remainder of the sides and the rear, are of brick. The Pulpit is placed in the centre of the Chancel with the Reading desk, and Communion table in front, and these, together with the railing around the Chancel, (which is constructed of Gothic panel work,) and the capping of the pews are made of black walnut. The number of pews on the floor is 106, and 18 in each side gallery, total 142. The organ, building by Mr. Thomas Appleton, is a model of the front of the Church, and the spaces occupied by the windows give suitable openings for the reception of the front pipes, besides which, there are to be three ornamental pipes between each of the four belts on the towers, making nine on each tower.

Permanent arrangements are made for lighting the Church with gas by substantial iron tubes, which are laid throughout the building, and concealed within the floor, pillars, &c. The young architect, before named, formed the design and has superintended its execution in all its departments, and with what success, the readers of this will be best able to judge, when the building is ready to be placed among the consecrated sanctuaries of Almighty God. W. S.

HAIR.

[Encyclopædia Americana.]

Hair, is of a vegetative nature, and appears in animals of the lower orders, and, indeed, in all animals which have a distinct epidermis; therefore in insects. In the crustaceous animals, it sometimes appears in particular places, as the feet, on the margins of the shell, on the outside of the jaws, and grows in tufts. Hair is most distinctly developed in those insects—as caterpillars, spiders, bees, &c.—which have a soft skin; in this case, it even appears of a feathery form; and butterflies are covered all over with a coat of woolly hair, of the most variegated and beautiful colours. The same variety and brilliancy are displayed in the feathers of birds, which may be considered as analogous to hair; whilst the two other classes of animals—fishes and reptiles—have no hair whatever. In quadrupeds, hair is of the most various conformation, from the finest wool to the quills of a porcupine or the bristles of the hog. The colour of the hair generally affords an external characteristic of the species or variety; but climate, food, and age, produces great changes in it. The human body is naturally covered with long hair only on a few parts; yet the parts which we should generally describe as destitute of it, produce a fine, short, colourless, sometimes hardly perceptible hair. The only places entirely free from it are the palms of the hands and the soles of the feet. Each hair originates in the cellular membrane of the skin, from a small cylindrical root, which is surrounded by a covering, or capsule, furnished with vessels and nerves, called the *bulb*. The root is tubular, and contains a clear, gelatinous fluid. The pulp on which the hair is formed, passes through the bottom of the bulb, in order to enter the tube of the hair, into which it penetrates for a short distance, never in common hairs, reaching as far as the external surface of the skin. According to Vanquelin, black hair consists of, 1. an animal matter, which constitutes the greater part; 2. a white concrete oil, in small quantity; 3. another oil, of a grayish-green colour, more abundant than the former; 4. iron, the state of which in the hair is uncertain; 5. a few particles of oxide of manganese; 6. phosphate of lime; 7. carbonate of lime, in very small qantity; 8. silex, in a conspicuous quantity; 9. lastly, a considerable quantity of sulphur. The same experiments show that red hair differs from black only in containing a red oil instead of a blackish green oil; and that white hair differs from both these only in the oil being nearly colourless, and in containing phosphate of magnesia, which is not found in them. The human hair varies according to age, sex, country, and other circumstances. At birth, an infant generally has light hair. It always grows darker and stiffer with age. The same is the case with the eye-brows and eye-lashes. Late in life, it begins gradually to lose its moisture and pliability, and finally turns gray, or falls out. These effects are produced by a scanty supply of the moisture above mentioned, and a mortification of the root. But age is not the only cause of this change; dissipation, grief, anxiety, sometimes turn the hair gray in a very short time. It begins to fall out on the top of the head. The hair of men is stronger and stiffer; that of females longer (even in a state of nature,) thicker, and not so liable to be shed. Blumenbach adopts the following national differences of hair: 1. brown or chestnut, sometimes approaching yellow, sometimes black, soft, full, waving; this is the hair of most nations of central Europe; 2. black, stiff, straight, and thin, the hair of the Mongolian and native American races; 3. black, soft, curly, thick, and full hair; most of the South Sea Islanders have it; 4. black, curly wool, belonging to the negro race. The hair, with the nails, hoofs, horns, &c. is one of the lower productions of animal life. Hence, in a healthy state, it is insensible, and the pain which we feel when hairs are pulled out arises from the nerves which surround the root. It grows again after being cut, and, like plants, grows the more rapidly if the nutritive matter is drawn to the skin by cutting; yet, in a diseased state, and particularly in the disease called the *plica polonica*, it becomes sensitive and inflamed to a certain degree, bleeds, and is clotted by a secretion of lymph, which coagulates into large lumps. Hair not only serves as a cover or ornament to the body, but exercises an important influence on absorption and perspiration; when the hair is thick, the perspiration is freer. If the root is destroyed, there is no means of reproducing the hair; but if it falls out, without the root being destroyed, as is often the case after nervous fevers, the hair grows out again of itself. If the skin of the head is very dry and scurvy, mollifying means will be of service; if the skin is weak, strengthening ointments should be applied. This shows how little reason there is in recommending oils in all cases, while the falling out of the hair may be owing to very different causes. Though hair, in a healthy state, grows only on the external parts of the body, cases are not unfrequent in which it is formed inside of the body in diseased parts. How much the hair differs in its character from the other parts of the body, (being, as we have said, of a vegetable nature,) is strikingly shown from the circumstance that it continues to grow after death.

DOMESTIC HAPPINESS OF THE AMERICANS

[Abdy's United States.]

Two features struck me forcibly in the domestic character: (of the people of New York)—and, I presume, the remark has a wider application. The one is, that the different members of the family are firmly united together; the other, that they are at peace with the rest of society—I mean, that there is much attachment at home, and very little scandal abroad. Unlike the feudal system, which teaches us to rally round our chief, and attack our neighbours, private life resembles state government; —compact in itself, inoffensive to others, and tributary to the general union. Its members 'stick together' without 'pulling other people to pieces.' That respect for the feelings of others, which, in mixed society, induces mutual forbearance and forbids familiarity, is not, as in too many places, laid aside where it is most wanted. It is not a currency which falls in the house as it rises without. There seems to be a sort of correspondence between the political institutions of the country and its family

arrangements. No privilege is annexed to birth, and no inequalities exist, but what may be traced to causes which must be admitted to be just and natural.

THE VEGETATING WASP.

['Natural History of Insects'—Second Series.]

A species of *hymenapterous* insect was first made known under the name of Vegetating Wasp, by a Spaniard, named Father Torrubia, at Madrid, in the year 1754. The following curious account was given by him. He found, two leagues from the city of Havana, in New Spain, in 1749, some dead wasps in a field; from the belly of each wasp a plant germinated, which grows about five spans high. The natives call this plant Gia, and it is full of sharp prickles, which are supposed by them to proceed from the belly of the wasp. Edwards, in his work on birds, has copied the figures. They are represented as having taken possession of the plant, and are flying away with their booty attached to their bodies, though the original observer stated that he found them dead in the field. Some others were found in the Island of Dominica. They had very much the appearance of the drone after they buried themselves in May; they began to vegetate towards the end of July, or rather they are found so about that time. When the tree has arrived at its full growth, it resembles a coral branch about three inches high, bearing several little pods, which are supposed by the inhabitants to 'drop off and become worms, and from thence flies.' This plant is considered to be a species of clavaria similar to the one which is sometimes found on dead horses' hoofs. An interesting account has been given by a gentleman who, while botanizing in America, found lying on the ground a wasp's nest, which had, by some means unknown to him, been separated from a branch of a laurel, near which it had fallen. The creatures were in a strange condition after this accident to their dwelling; some were flitting about over their cells, and from the softness of their wings, and the faintness of their colours, were easily known to have been hatched but a short time. Many of them were lying dead on the ground; and on examining these he instantly perceived vegetables proceeding from their bodies, which were uniformly attached to the thorax. He collected about fifty of the vegetating wasps. On inspecting the nest, he found a considerable proportion of the cells empty; this, however, was not the case with all, for there were still some that contained young wasps in the state of larvæ. He drew them from their cells, and satisfied himself that there was an incipient vegetation, and moreover that its progress had kept pace with the growth of the insect. Yet, in some instances, the vegetation is considered to commence only when life has ceased. In confirmation of this opinion, it is related that in Trinidad a wasp was found apparently in a perfect state, glued somehow by one of its wings to a leaf of a tree. From all parts of its body issued filaments from one to three inches long: they were shining black, and resembled the plant called Spanish beard.

The pupæ of a species of cicada common in Martinique and Dominica, have been found with a plant attached to them. As they bury themselves under the dead leaves to wait their change, it is supposed that, when the season is unfavourable many perish. The seed of the fungus finds a proper bed on this dead insect, and grows. Mr. Edwards thinks that they are not dead pupæ, but that before the insect is about to change, the fungus dries and falls off. Messrs. Kirby and Spence mention one of this genus in their cabinet 'with a kind of Sphœria with a twisted thickish stripes and oblong head, springing up in the space between the eyes.' Dr. Hill says, in speaking of the cicada, 'This you may be assured is the fact, and all the fact, though the untaught inhabitants suppose a fly to vegetate: and though there exists a Spanish drawing of the plant growing into a perfoliate tree, and it has been figured with the creature flying with this tree upon its back.'

> 'So wild are the imaginations of man,
> So chaste and uniform is nature.'

Most authors have supposed that the seeds are swallowed by the larvæ of these insects and cause their death, and that they then become the soil or base upon which the vegetables fasten themselves, and thus germinate in the decaying remains. On the other hand, if it be supposed that they are propagated by seeds in the ordinary mode, it plainly appears that the seeds would, on being wafted through the air, alight upon the most exposed part of the unhatched insect that was fitted for its reception, and this would, of course, be near the head. Being there fixed, the plant would increase with the enlargement of the insect, and, drawing nourishment from its body, would continue to grow, even after it had attained its last and perfect state, until the plant has destroyed the life of the insect. This opinion is more likely to be the accurate one. As insects often pass no small portion of their life in a state of torpidity, in which they remain chiefly without motion, it will not seem wonderful, should any partial moisture accidentally accumulate upon them, that it affords a seed-plot for certain minute fungi to come up and grow in.

BACON.

[Cobbet's Cottage Economy.]

About Christmas, if the weather be coldish, is a good time to kill. If the weather be very mild, you may wait a little longer; for the hog cannot be too fat. The day before killing, he should have no food. To kill a hog nicely is so much of a business, that it is better to pay a shilling for having it done, than to stab and hack and tear the carcass about. There are two ways of going to work to make bacon; in the one you take off the hair by *scalding*. This is the practice in most parts of England and all over America. But the *Hampshire* way, and best way, is *to burn the hair off*. There is a great deal of difference in the consequences. The first method slackens the skin, opens all the pores of it, makes it loose and flabby by drawing out the roots of the hair. The second tightens the skin in every part, contracts all the sinews and the veins in the skin, makes the flitch a solider thing, and the skin a better protection to the meat. The taste of the meat is very different from that of a scalded hog; and to this chiefly it was

that the Hampshire bacon owed its reputation for excellence. As the hair is to be *burnt off*, it must be *dry*, and care must be taken, that the hog be kept on dry litter of some sort the day previous to killing. When killed he is laid upon a narrow bed of straw, not wider than his carcass, and only two or three inches thick. He is then covered all over thinly with straw, to which, according as the wind may be, the fire is put at one end. As the straw burns, it burns the hair. It requires two or three coverings and burnings, and care is taken, that the skin be not, in any part burnt, or parched. When the hair is all burnt off close, the hog is *scraped* clean, but never touched with *water*. The upper side being finished, the hog is turned over, and the other side is treated in like manner. This work should always be done *before day-light*; for, in the day-light, you cannot so nicely discover whether the hair be sufficiently burnt off. The light of the fire is weakened by that of the day. Besides, it makes the boys get up very early for once at any rate, and that is something; for boys always like a bonfire.

ICE HOUSES.

[Cobbet's Cottage Economy.]

The places for salting and keeping meat should, like a dairy, always be cool, but always admit a *free circulation of air: confined* air, though *cool*, will taint meat sooner than the mid-day sun accompanied with a breeze. Ice will not melt in the hottest sun so soon as in a close and damp cellar. Put a lump of ice in *cold water*, and one of the same size before a *hot* fire, and the former will dissolve in half the time that the latter will. Let me take this occasion of observing, that an ice-house should never be *under ground*, nor *under the shade of trees*. That the bed of it ought to be three feet above the level of the ground; that this bed ought to consist of something that will admit the drippings to go instantly off; and that the house should stand in a place *open to the sun and air*. This is the way that they have ice-houses under the burning sun of Virginia; and here they keep their fish and meat as fresh and sweet as in Winter, when, at the same time, neither will keep for twelve hours, though let down to the depth of a hundred feet in a well. A Virginian, with some poles, and straw, will stick up an ice-house for ten dollars, worth a dozen of those ice-houses, each of which costs our men of taste as many scores of pounds.

THE SEA UNICORN.

We wound our way along the precipitous sides of the rude barrier, which encompassed us, towards the bite, or bottom of the bay; and, rather wearied, gained a rude and jutting ledge of rocks, forming a small platform, nearly half-way to the summit. There I seated myself, lighted my pipe, and looked down on the entire bay, which lay under my feet; and, further onwards, the bay of Bonny, which, banked in by islands on the sea-side, appeared an extensive lake. Looking down on the water, its aspect was flat and unruffled; many of the picturesque proas of the natives were scudding in with the last of the sea-breeze. On the narrow strip of bright sand, which lay round the water like a golden frame to a dark, oval Venetian picture, lay our little boat, the fishing-net drawn over, and its ends spreading along the beach, like a black spider veiled in its gray web.

My hawk-eyed Arab now pointed out to me a line of dark spots, moving rapidly in the water, rounding the arm of the sea, and entering the great bay. At first I thought they were canoes capsized, coming in keel uppermost; but the Arab declared they were sharks, and said, 'The bay is called Shark's Bay; and their coming in from the sea is an infallible sign of bad weather.' A small pocket telescope convinced me they were large blue sharks. I counted eight; their fins and sharp backs were out of the water. After sailing majestically up the great bay, till they came opposite the mouth of a smaller one, they turned towards it in a regular line; one, the largest I had seen any where, taking the lead, like an admiral. He had attained the entrance, with the other seven following, when some monster arose from the bottom, near the shore, where he had been lurking, opposed his further progress, and a conflict instantly ensued. The daring assailant I distinguished to be a sword-fish, or sea-unicorn, the knight-errant of the sea, attacking every thing in its domain; his head is as hard, and as rough as a rock, out of the centre of which grows horizontally an ivory spear, longer and far tougher than any warriour's lance; with this weapon he fights. The shark, with a jaw larger and stronger than a crocodile's, with a mouth deeper and more capacious, strikes also with his tail, in tremendous force and rapidity, enabling him to repel any sudden attack by confusing or stunning his foe, till he can turn on his back, which he is obliged to do ere he can use his mouth. This wily and experienced shark, not daring to turn and expose his more vulnerable parts to the formidable sword of his enemy, lashed at him with his heavy tail, as a man uses a flail, working the water into a syllabub. Meanwhile, in honour, I suppose, or in the love of fair-play, his seven compatriot sharks stood aloof, lying to with their fins, in no degree interfering in the fray. Frequently I could observe, by the water's eddying in concentric ripples, that the great shark had sunk to the bottom, to seek refuge there, or elude his enemy by beating up the sand; or, what is more probable, by this manœuvre to lure the sword-fish downwards, which, when enraged, will blindly plunge its armed head against a rock, in which case its horn is broken; or, if the bottom is soft, it becomes transfixed, and then would fall an easy prey. I knew a country vessel to be struck by one of these fish, (perhaps the fish mistook her for a whale, which, though of the same species, it often attacks,) with such velocity and force, that its sword passed completely through the bow of the vessel; and having been broken by the shock, it was with great difficulty extracted. It measured seven feet; about one foot of it, the part attached to the head, was hollow, and of the size of my wrist; the remainder was solid, and very heavy, being indeed the exquisite ivory of which the eastern people manufacture their beautiful chess-men. But to return to our sea-combat, which continued a long time, the shark evidently getting worsted. Possibly,

the bottom, which was clear, was favourable for his enemy; whose blow, if he succeeds in striking while the shark is descending, is fatal. I think he had struck him, for the blue shark is seldom seen in shoal or discoloured water; yet now he floundered on towards the bottom of the bay, madly lashing the water into foam, and rolling and pitching like a vessel dismasted. For a few minutes his conquerour pursued him, then wheeled round and disappeared; while the shark grounded himself on the sand, where he lay writhing and lashing the shore feebly with his tail. His six companions, with seeming unconcern, wore round, and, slowly moving down the bay, returned by the outlet at which they had entered. Hastening down to the scene of action, I saw no more of them. My boat's crew were assembled at the bottom of the bay, firing muskets at the huge monster as he lay aground; before I could join them, he was despatched, and his dead carcass laid on the beach like a stranded vessel. *Trelawney.*

THE TRUMPET FISH.

A voyager in the West Indies gives the following description of a concert, performed by a party of these singular fish:—

'We were scarcely seated at dinner, when our attention was riveted by a new and most extraordinary phenomenon—it was no other than a concert; but the most original and singular that I had ever heard. I should scarcely have ventured to describe it, but that there is an account of similar music in White's Voyage to Cochin China. Immediately under our vessel we heard a commencement of wild and pleasing sounds, such as might have proceeded from a thousand Æolian harps, beginning in slow tones, but gradually swelling into an uninterrupted stream of harmony; to this might be added the booming of Chinese gongs, mellowed by distance; then again were heard sounds like the chorus of many human voices, chanting from the height of a treble to a deep bass. Indeed, it is useless to attempt a description; for I am not able to find any satisfactory similitude to it, either in nature or art. During the time of this submarine concert, we felt, or thought we felt, a slight vibration of the vessel.

'We paused at first from our meal, and each looked in the other's face with a vague inquiry. No one could afford information, until a sailor, who had formerly been a fisherman, explained that the music proceeded from a shoal of trumpet-fish. This fish is about thrice the thickness of a man's thumb, twenty-two inches long, including a singular kind of supplementary tail, or membrane growing out of its tail about the thickness of strong twine, but tapering to a fine thread. The most remarkable peculiarity of the trumpet-fish is its bill, about four inches long; but whether the sounds were caused by the fish's fastening to the vessel, or, as some say, they produce the music by elevating their trumpets, or bills, above the surface of the water, I will leave naturalists to decide. In about fifteen minutes, this singular 'sea-song' died away.'

The following is the account given of this phenomenon by Lieutenant White, an officer of the American navy. He was at that time ascending the river of Don-nai, in Cochin-China:—

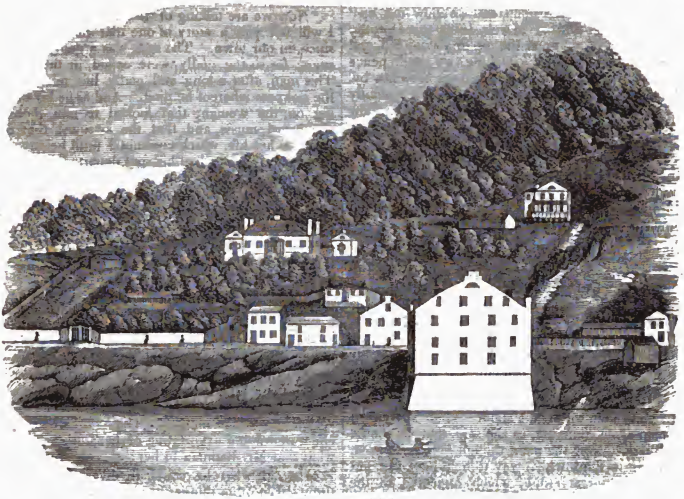
'Our ears were saluted by a variety of sounds, resembling the deep bass of an organ, accompanied by the hollow guttural chant of the bull-frog, the heavy chime of a bell, and the tones which imagination would give to an enormous Jew's-Harp. This combination produced a thrilling sensation on the nerves, and, as we fancied a tremulous motion in the vessel. The excitement of great curiosity was visible on every white face on board, and many were the sage speculations of the sailors on the occasion. Anxious to discover the cause of this gratuitous concert, I went into the cabin, where I found the noise (which I soon ascertained to proceed from the bottom of the vessel) increased to a full and uninterrupted chorus. The perceptions which occurred to me, on this occasion, were similar to those produced by the torpedo, or electric eel, which I had before felt. But whether these feelings were caused by the concussion of sounds, or by actual vibration in the body of the vessel, I could neither then, nor since, determine. In a few moments, the sounds, which had commenced near the stern of the vessel, became general throughout the whole length of the bottom.'

INSECTS IN CORFU.

[Sketches of Corfu.]

'We have here insect-flowers. I first saw one on my dress, and took it for a head of grass; but it moved, walked, and at last I found out it was an insect—a mantis. We have the brown and the green mantis, which last is also called the 'walking leaf,' and in very deed, its wings are exactly like long, slender, delicate green leaves. I kept one of them many weeks, and it used to sit for hours on my work-table. The mantis has an odd way of waving about two long feelers; so that they call it the 'praying mantis;' and the country people say, if a child loses its way, and has the luck to find one of these insects, it shows him the road with its feelers. We find also the nest of the mason-bee, a long purse buried in the earth, and neatly lined with a soft hairy substance, with a lid at top, which shuts down exactly, and is fastened with a hinge. Sometimes we amuse ourselves with watching the ant-lion, who burrows a deep hole in the sand, and lies snugly down at the bottom of it, covering himself slightly over; presently an unwary ant, trotting along with her burden, tumbles down the pit, and is devoured by the treacherous monster. But the most beautiful of all insects, after the mantis, is the green beetle that lives in the cistus—a gem bedropped with gold, in a palace of ivory.

MUMMIES.—'It is a curious fact,' remarks an eminent surgeon of our own country, 'that the most perishable of substances, the flesh of man, should present itself to us as one of the most ancient remains of human art. There is nothing which claims a higher antiquity than the mummies, not even the catacombs that enclose them, nor the pyramids in their neighbourhood.'



Cincinnati Water Works.

CINCINNATI WATER WORKS.

Contrivances for raising Water are so numerous, that in 1725, a work descriptive of them was published in two large folio volumes. In the interval that has since elapsed, there have probably been new inventions sufficient to fill a third. All machines for raising water may be divided into two classes;—first, those which put in motion a bucket or other vessel, and convey the fluid to the destined height, by successive fillings and emptyings;—and secondly, those which force the water through pipes and tubes. The latter kind have a vast advantage over the former, because, by means of them, the water may be raised to a great height, and in steady and continual streams; while those, which act by the filling and emptying of a bucket, can elevate it but little higher than the position of the machine, and must perform their work by a series of successive operations. Steam-engines belong to the former class. They may, of course, be made to excel all other hydraulic machines in power, and are consequently used in draining mines, where water is to be elevated from great depths below the earth.

The Cincinnati Water Works act by steam. The city stands on two parallel plains, one of which is elevated fifty or sixty feet above the other. The water is first raised one hundred and sixty feet above low-water mark, to the reservoirs, which are two in number, and capable of containing sixteen hundred thousand gallons. It is thence propelled through iron pipes to the upper plain, and distributed through all the principal streets by means of wooden pipes, which have an aggregate length of twenty-five miles. Families are thus supplied with water at a stipulated price. These Water Works were commenced in 1820, and are the property of a Joint Stock Company, which received its charter about ten years since.

JOHN BUNYAN'S WORKS.

John Bunyan's works, in the collected edition fill three large octavo volumes, every page of which is stamped with the peculiar impress of his mind. But the Pilgrim's Progress alone retains its popularity; which is secured to it, so long as the world shall endure, by the human interest with which the author has so strongly imbued the shadowy beings of his allegory. His other productions will always attract the attention of the curious reader, but have passed forever from the list of what may be called the People's Literature. In turning over one of them—The Life and Death of Mr. Badman,—we find a record of several wonderful incidents, which are narrated as facts, and which John Bunyan undoubtedly supposed to be such. For instance, the following:—

'But above all, take that dreadful story of Dorothy Mately, an inhabitant of Ashover, in the county of Derby. This Dorothy Mately, saith the relater, was noted by the people of the town to be a great swearer, and curser, and liar, and thief, (just like Mr. Badman:) and the labour that she usually did follow, was to wash the rubbish that came forth of the lead mines, and there to get sparks of lead-ore; and her usual way of asserting of things was with these kinds of imprecations: 'I would I might sink into the earth if it be not so!'—or, 'I would God

would make the earth open and swallow me up!' Now, upon the 23d of March, 1660, this Dorothy was washing of ore upon the top of a steep hill, and was there taxed by a lad for taking two single pence out of his pocket; (for he had laid his breeches by, and was at work in his drawers;) but she violently denied it, wishing that the ground might swallow her up if she had them. She also used the same wicked words on several other occasions that day.

'Now, one George Hodgkinson, of Ashover, a man of good report there, came accidentally by where this Dorothy was, and stood awhile to talk with her, as she was washing her ore. There stood also a little child by her tub-side, and another a distance from her, calling aloud to her to come away; wherefore the said George took the girl by the hand, to lead her away to her that called her; but behold, they had not gone above ten yards from Dorothy, when they heard her crying out for help; so looking back, he saw the woman and her tub and sieve twirling round, and sinking into the ground. Then said the man, 'Pray to God to pardon thy sin, for thou art never like to be seen alive any longer!' So she and her tub twirled round and round, till they sunk about three yards into the earth, and then for awhile staid. Then she called for help again, thinking, as she said, that she should stay there. Now the man, though greatly amazed, did begin to think which way to help her; but immediately a great stone, which appeared in the earth, fell upon her head and broke her skull; and then the earth fell in upon her and covered her. She was afterwards digged up, and found about four yards within ground, with the boy's two single pence in her pocket; but her tub and sieve could not be found.'

Here are two more judgments, equally terrible:—

'I have read in Mr. Clark's Looking Glass for Sinners, that upon a time, a certain drunken fellow boasted in his cups, that there was neither heaven nor hell; also he believed that man had no soul; and that, for his own part, he would sell his soul to any that would buy it. Then did one of his companions buy it of him for a cup of wine, and presently the Devil, in man's shape, bought it of that man again, at the same price; and so, in the presence of them all, laid hold on the soul-seller, and carried him away through the air, so that he was never heard of.

'He tells us also, that there was one at Salisbury, in the midst of his health, drinking and carousing at a tavern; and he drank a health to the Devil, saying, that if the Devil would not come and pledge him, he would not believe that there was either God or Devil. Whereupon, his companions, stricken with fear, hastened out of the room; and presently after, hearing a hideous noise and smelling a stinking savour, the tavern-keeper ran up into his chamber; and coming in, he missed his guest, and found the window broken, the iron bar in it bowed, and all bloody. But the man was never heard of afterwards.'

We doubt whether the present generation has not lost more than it has gained, by the philosophy which teaches it to laugh, rather than tremble, at such tales as these. Here is a beautiful story of sweet music round a death-bed.

'Now we are talking of the dying of Christians, I will tell you a story of one that died some time since, in our town. The man was a godly old Puritan; for so the godly were called, in times past. This man, after a long and godly life, fell sick of the sickness whereof he died. And as he lay drawing on, the woman, that looked to him, thought she heard music, and that the sweetest that she heard in her life, which continued until he gave up the ghost. Now when his soul departed from him, the music seemed to withdraw, and go further and further off from the house; and so it went until the sound was quite gone out of hearing. What do you think that might be? For aught I know, the melodious notes of angels, that were sent of God to fetch him to Heaven.'

The pen of John Bunyan, nor any other pen of uninspired mortal, never wrote a passage of more powerful simplicity and pathos, than the next which we shall select. The godly wife of Mr. Badman has been brought to her death-bed by her sense of her husband's iniquity, and by his unkindness to herself. She had seven children, six of whom followed their father's ways, but the seventh was a gentle and heavenly little creature, a girl, with the very nature of her mother. The wife first tries the effect of a dying exhortation on her husband. But what said Mr. Badman to her?'

'He did what he could to divert her talk, by throwing in other things; he also showed some kind of pity to her now, and would ask her what she would have; and with various kinds of words, put her out of her talk; for when she saw that she was not regarded, she fetched a deep sigh, and lay still. So he went down; and then she called for her children, and began to talk to them. And first she spake to those that were rude, and told them the danger of dying before they had grace in their hearts. She told them also that death might be nearer than they were aware of; and bid them look when they went through the church-yard again, if there were not little graves there. And, ah! children, said she, will it not be dreadful to you if we only shall meet at the day of judgment, and then part again, and never see each other more? And with that she wept; the children also wept. So she held on her discourse; Children, said she, I am going from you; I am going to Jesus Christ; and with him there is neither sorrow, nor sighing, nor pain, nor tears, nor death. Thither would I have you go also, but I can neither carry you, nor fetch you thither: but if you shall turn from your sins to God, and shall beg mercy at his hands by Jesus Christ, you shall follow me, and shall, when you die, come to the place where I am going, that blessed place of rest; and then we shall be forever together, beholding the face of our Redeemer, to our mutual and eternal joy. So she bid them remember the words of a dying mother, when she was cold in the grave, and themselves were hot in their sins, if perhaps her words might put a check to their vice, and that they might remember and turn to God.'

She spends her dying breath upon the child of her love; but in a manner so inferiour to the above, that we forbear to make a further extract.

PIGEONS.

[Cobbet's 'Cottage Economy.']

A few of these may be kept about any house; they are kept even in towns by labourers and artisans. They cause but little trouble. They take care of their own young ones; and they do not scratch, or do any other mischief in gardens. They want feeding with tares, peas, or small beans, and buck-wheat is very good for them. To *begin* keeping them, they must not have *flown at large* before you get them. You must keep them for two or three days, shut into the place which is to be their home; and then they may be let out, and will never leave you as long as they can get proper food, and are undisturbed by vermin, or unannoyed exceedingly by lice.

The common dove-house pigeon is the best to keep. They breed oftenest, and feed their young ones best. They begin to breed at about nine months old, and if well kept, they will give you eight or nine pair in the year. Any little place, a shelf in the cowshed; a board or two under the eaves of the house; or, in short, any place under cover on the ground floor, they will sit and hatch and breed up their young ones in.

It is not supposed, that there could be much *profit* attached to them; but, they are of this use; they are very pretty creatures, very interesting in their manners; they are an object to delight *children* and to give them the *early habit* of fondness for animals and of *setting a value* on them, which, as I have often had to observe, is a very great thing. A very considerable part of all the *property* of a nation consists of animals. Of course a proportionate part of the cares and labours of a people appertain to the breeding and bringing to perfection those animals; and, if you consult your experience, you will find, that a labourer is, generally speaking, of value in proportion as he is worthy of being entrusted with the care of animals. The most careless fellow cannot *hurt* a hedge or ditch; but, to trust him with the *team*, or the *flock*, is another matter. And, mind, for the *man* to be trustworthy in this respect, the *boy* must have been in the *habit* of being kind and considerate towards animals, and nothing is so likely to give him that excellent habit as his seeing, from his very birth, animals taken great care of and treated with great kindness by his parents, and now and then having a little thing *to call his own*. It is always of the highest importance, that children be brought up to set a just value upon all useful things, and especially upon all *living things*; to know the utility of them: for, without this, they can never, when grown up, safely take charge of them.

PERIODICAL CASTING OF THE SHELL OF THE LOBSTER.

[Roget's 'Animal and Vegetable Physiology.']

The process by which this periodical casting and renewal of the shell are effected, has been very satisfactorily investigated by Reaumur. The tendency in the body and in the limbs to expand during growth is restrained by the limited dimensions of the shell, which resists the efforts to enlarge its diameter. But this force of expansion goes on increasing, till at length it is productive of much uneasiness to the animal, which is, in consequence, prompted to make a violent effort to relieve itself; by this means it generally succeeds in bursting the shell; and then, by dint of repeated struggles, extricates its body and its limbs. The lobster first withdraws its claws, and then its feet, as if it were pulling them out of a pair of boots; the head next throws off its case, together with its antennæ; and the two eyes are disengaged from their horny pedicles. In this operation, not only the complex apparatus of the jaws, but even the horny cuticle and teeth of the stomach, are all cast off along with the shell; and, last of all, the tail is extricated. But the whole process is not accomplished without long continued efforts. Sometimes the legs are lacerated or torn off, in the attempt to withdraw them from the shell; and in the younger crustacea the operation is not unfrequently fatal. Even when successfully accomplished it leaves the animal in a most languid state: the limbs, being soft and pliant, are scarcely able to drag the body along. They are not, however, left altogether without defence. For sometime before the old shell was cast off, preparations had been making for forming a new one. The membrane which lined the shell had been acquiring greater density, and had already collected a quantity of liquid materials proper for the consolidation of the new shell. These materials are mixed with a large proportion of colouring matter, of a bright scarlet hue, giving it the appearance of red blood, though it differs totally from blood in all its other properties. As soon as the shell is cast off, this membrane, by the pressure from within, is suddenly expanded, and by the rapid growth of the soft parts, soon acquires a much larger size than the former shell. Then the process of hardening the calcareous ingredient commences, and is rapidly completed; while an abundant supply of fresh matter is added to increase the strength of the solid walls, which are thus constructing for the support of the animal. Reaumur estimates that the lobster gains, during each change of its covering, an increase of one fifth of its former dimensions. When the animal has attained its full size, no operation of this kind is required, and the same shell is permanently retained.

A provision seems to be made, in the interiour of the animal, for the supply of the large quantity of calcareous matter required for the construction of the shell at the proper time. A magazine of carbonate of lime is collected, previous to each change of shell, in the form of two rounded masses, one on each side of the stomach. In the crab these balls have received the absurd name of crab's eyes, and during the formation of the shell they disappear.

It is well known that when an animal of this class has been deprived of one of the claws, that part is in a short time replaced by a new claw, which grows from the stump of the one which had been lost. It appears from the investigations of Reaumur, that this new growth takes place more readily at particular parts of the limb, and especially at the joints; and the animal seems to be aware of the greater facility with which a renewal of the

claw can be effected at these parts; for if it chance to receive an injury at the extremity of the limb, it often, by a spontaneous effort, breaks off the whole limb at its junction with the trunk, which is the point where the growth more speedily commences. The wound soon becomes covered with a delicate white membrane, which presents at first a convex surface; this gradually rises to a point, and is found, on examination, to conceal the rudiment of a new claw. At first this new claw enlarges but slowly, as if collecting strength for the more vigorous effort of expansion which afterwards takes place. As it grows, the membrane is pushed forwards, becoming thinner in proportion as it is stretched; till at length it gives way, and the soft claw is exposed to view. The claw now enlarges rapidly, and in a few days more, acquires a shell as hard as that which had preceded it. Usually, however, it does not attain the same size; a circumstance which accounts for our frequently meeting with lobsters and crabs which have one claw much smaller than the other. In the course of the subsequent castings this disparity gradually disappears. The same power of restoration is found to reside in the legs, the antennæ, and the jaws.

LEECHES.

The best medicinal leeches are found in waters much inhabited by frogs, who form the principal part of their sustenance. Water alone is not their natural element; for, in winter, they penetrate to a great depth in the mud at the bottom, leaving a small aperture to their den. For medicinal purposes, they should be kept in large, unglazed stone jars, filled with pond or river-water half-way to the brim, in order that the leeches may have room to ascend above the surface. Water, which has stood for a fortnight or three weeks, is said to be preferable; because this fluid contains the animalcula, requisite for the food of the leeches, and of which fresh water is destitute. It need not (unless in very hot weather, or when the leeches are diseased,) be changed oftener than twice a month in Summer, and once in Winter.

GROTESQUES.

[Encyclopædia Americana.]

Grotesques, in painting, are often confounded with *arabesques*. All ornaments compounded in a fantastical manner, of men, beasts, flowers, plants, &c. are called sometimes *arabesques*, and sometimes *grotesques;* but there is a distinction between them. Arabesques are flower-pieces, consisting of all kinds of leaves and flowers, real or imaginary. They are so called from the Arabians, who first used them, because they were not permitted to copy beasts and men. As they were also used by the Moors, they are sometimes called *moresques*. The Romans ornamented their saloons with paintings, in which flowers, genii, men and beasts, buildings, &c. are mingled together according to the fancy of the artist. These ornaments are properly called *grotesques*, because they were found in the ruined buildings of the ancient Romans, and in subterranean chambers, which the Italians call grottoes. The origin of these fantastic compositions is traced, by Bottiger, to the carpets of Persia and India, adorned with all the wonders of oriental fable. In the baths of Titus and Livia, at Rome, in Adrian's villa at Tivoli, in the houses at Herculaneum and Pompeii, and many other places, such grotesques have been found; sometimes, indeed, showing an excess of ornament, but generally valuable for their arrangement and execution. Raphael was well aware of their beauty, and caused his pupils, particularly Giovanni da Udine, to use them as patterns in painting the porticoes of the Vatican. He likewise used them, as the ancients did for borders. The taste for grotesques, has, in part, degenerated into the monstrous and unnatural; *grotesque* has, therefore, become a term of art to express a distorted figure, a strange monster, the offspring of an unrestrained imagination.

PURCHASE OF AN IDOL.

[Oriental Annual.]

Before we quitted this temple, a circumstance occurred which strikingly displayed the selfish and equivocal casuistry of the mercenary Hindoo. I happened to take a fancy to one of the little brazen gods, placed upon a sort of altar in the most sacred part of the edifice. It was a very clumsy cast in brass; but one which I had never before seen, and was therefore anxious to possess. Knowing that these deities had been occasionally sold by the Brahmins from their very altars, I proposed to purchase this, and made for it what I considered a very liberal offer. The obsequious priest, bowing his head, placed his hand upon his breast with the most ludicrous humility, and said that he could not sell, since that would be a desecration of the holy sanctuary of which he was an unworthy minister, and that he could not give, because he was too poor to replace the treasure of which the temple would be thus deprived; but, he continued, 'suppose Sahib take, what can a poor Brahmin do?' Upon this hint I acted; and, without the slightest opposition from the good-tempered priest, took possession of the image. The holy man did not even offer a rebuke; but, on the contrary, extended his open palm towards me, into which I dropped a pagoda that I had previously held between my finger and thumb, and upon which he closed his hand with a courteous smile, bowing with the profoundest reverence the moment his flesh felt the delectable pressure of the gold.

Strengthening Plasters.—We give the following prescription on the authority of Lord Chancellor Bacon, who seems to have had faith in its efficacy;—'Whelps, or *young healthy boys*, to be applied to the stomach by way of strengthening-plaster.'

Swiftness of Pigeons.—We have heard it stated, that pigeons have been shot in New England with green rice, undigested, in their stomachs. The nearest rice-field, probably, is somewhere about a thousand miles from New England; and all this distance must have been traversed by the pigeon, during the few hours that were requisite to digest its food.

Chinese Idols.

IDOLATRY OF THE CHINESE.

The figures of this engraving are taken from a French publication, into which they were copied from a large design, sketched from the originals by a member of the Dutch embassy to China, in the seventeenth century. Idols, very similar in size and aspect, were seen by Lord Macartney, the English ambassador, in 1795. It will be perceived, by the diminutive appearance of the worshippers, who are kneeling or prostrate at their feet, that these figures are of gigantic stature. The one on the spectator's left hand is twenty feet in height, and represents Immortality; his companion, on the right, with the protuberant paunch and laughing countenance, is equally colossal. We have seldom seen a more perfect image of sensual pleasure. The haughty figure in the centre, adorned with such singular magnificence of apparel, and with a richly ornamented crown upon his head, is the supreme idol of the Chinese—the grand King-Kong himself.

The vast empire of China—misnamed the Celestial Empire—is given up to the vilest idolatry. Idols are encountered at every step, not merely in the temples, but in the houses, and even in the vessels, where a part of the forecastle is consecrated to them, as the most honourable place. The idol is dressed and adorned with a splendour proportioned to the wealth of the captain of the vessel, and daily receives an offering, composed of flesh and fruits, together with the smoke of perfumes. Besides this regular service, the captain makes a solemn sacrifice to his wooden deity, on all important occasions; as, for instance, in passing from one river into another, or in time of tempest, or when the sails flap idly in a calm. The Chinese have likewise a practice of deifying their dead ancestors, and of prostrating themselves before the monumental tablets which are erected to their memory. Yet they appear to have no real veneration for any of their idols; nor do they hesitate to profane the temples, by smoking their pipes and taking refreshments, and even by gambling within the consecrated precincts. The priests are shameless impostors. They practise the mountebank sciences of astrology, divination, necromancy, and animal magnetism, and keep for sale a liquid, which, they pretend, will confer immortality on those who drink it. The best account of the state of religion in China—if it be not a sin to apply the sacred name of religion to their absurd superstitions—is given by the Reverend Charles Gutzlaff, a recent missionary in that country.

Notwithstanding the wretched idolatry of the Celestial Empire, it is supposed that the knowledge of a purer faith was offered to its inhabitants, even in the early ages of Christianity. At a later period, in the course of the sixteenth century, great numbers of Jesuits took up their residence in China, and, during a long interval, were tolerated by the government. It is probable, however, that the Religion of Truth was unfaithfully taught by these missionaries, and became, in some degree, assimilated to the delusions of the country. There are points of the Catholic mode of worship, which idolaters might readily embrace, without experiencing any of those sacred influences that Christianity diffuses throughout all its various sects. The image of the Virgin, and the pictures of the Saints, might appear, to the gross imaginations of the Chinese, but little different from their own wooden deities;

and thus, while outward converts to Catholicism, they might, in fact, merely have become renegades from one system of idolatry to another. The Jesuits continued their labours until little more than a century ago; when, from a suspicion of their intermeddling with the politics of the Empire, they were banished, and the religion discountenanced, if not suppressed. Even at this day, however, expensive establishments are kept up at Macao, by the Italians, Spaniards, Portuguese, and French, for the purpose of maintaining their missions in the interior of the country.

The first protestant missionary, Dr. Morrison, was sent to China in 1807, by the London Missionary Society. The Americans have also a mission there, connected with which there is a lithographic press, at which portions of the Scripture, and other tracts, are printed for distribution among the Chinese. It is designed to publish a complete translation of the Bible, in the Chinese language, at the expense of the friends of missions in America. There appears reason to hope, that these and similar measures may, sooner or later, be attended with greatly beneficial results. The Chinese, Mr. Gutzlaff tells us, will bear with just reproof, and even heap eulogiums on those who faithfully administer it. However corrupt themselves, they are capable of estimating the value of moral integrity in others; and one of them expressed his admiration, that a Christian missionary should remain unmoved amid the stream of vice, which was sweeping away all besides himself. But, at present, if the Chinese look for any Heaven, it is the Heaven of sensual indulgence, such as has been pictured by all men, in every age and country, where purer ideas have not been received from Revelation. And—as the gross and sensual images, which our engraving presents to the reader, will fully show—they deify their own lusts, and fall down and worship them.

POTATOES.

Journal of Useful Knowledge.]

A French soldier placed half a dozen potatoes at the bottom of a cask upon a layer of sand and fresh earth, three or four inches thick; when the stalks had risen a few inches, he bent them down and covered them, four or five inches deep, with the same mixture. He continued this operation till the cask was full. Six or seven months after, upon emptying the vessel, which stood in a court-yard, he found that the half dozen potatoes had produced an enormous quantity of new ones from the portions of the mother stems which had been successively laid down and covered.

THE MAHOR.

[Notes on the West Indies.]

The Mahor, or wild Cotton-tree, grows in Cuba to a vast size. There is one, on an estate called Santa Anna, a hundred feet high. Its trunk, which is forty-six and a half feet in circumference at the base, rises to sixty-five feet, without a single branch or a single knot on its white bark. The branches are worthy of the stem, and cover a diameter of a hundred and sixty-five feet. This immense tree is in itself a world, and shelters and feeds millions of insects. Several parasitical plants attach themselves to it. Wild pine apples grow at the top, and the vine vegetates on the boughs, and, letting its branches droop to the earth, furnishes rats, mice, and the opossum, which would find it difficult to climb the smooth bark, a ladder, enabling them to reach the pine-cups, which form so many natural reservoirs for the rain water. The wood-louse founds extensive republics in this tree, and establishes its large and black cities at the juncture of some of the branches, whence it descends to the ground by a covered way, which it constructs of mortar, and of which it even provides two,—one to ascend, and the other to descend by. This little insect is of the size of a flea, is inoffensive, and a great treat to the inhabitants of the poultry yard, to whom it is given in its nest.

Silver Hills.—An idea prevailed among the early settlers of the eastern part of New England, that three hills, on the banks of the Saco river, were as full of silver as the mountains of Peru. In the year 1660, William Phillips of Saco, became proprietor of all this incalculable wealth, by purchasing the hills from an Indian Sachem, named Captain Sunday. The purchase money was probably no more than a few hatchets and a bottle of rum—and yet Captain Sunday had the best of the bargain.

Be Short.—These two words were written, in large letters, over the door of Cotton Mather's study, as an intimation to his visiters to be as sparing as possible of his precious time. The same inscription might be profitably posted up in many other places—for instance, in front of a pulpit, for the admonition of long-winded parsons; and, above all, it should be printed conspicuously, in letters of gold, on the walls of our legislative chambers.

Time-Pieces.—In some parts of India, a thin metal cup, with a small hole in the bottom, is placed in a vessel of water; wherein it sinks, in a certain number of hours, and thus marks the progress of time. There are innumerable families in the back settlements of our own country, who have no better method of noting the lapse of time, than by the height of the sun. To such, this Indian time-piece might be a valuable acquisition.

'A Frenchman,' says Cobbett, 'a Mr. Cusar, born in the West Indies, told me, that till he came to Long Island, he never *knew how the flour came*; that he was surprised when he learnt that it was squeezed out of little grains that grew at the tops of straw; for that he had always had an idea that it was got out of some large substances, like the yams that grow in tropical climates. He was a very sincere and good man, and I am sure he told me truth.'

May-Poles.—In the villages of Lower Canada, it is the custom to erect a high and splendidly painted May-pole before the door of the person, whom the inhabitants regard as their best citizen. Here they assemble, on the first of May, and gaily dance to the music of the violin; for which instrument the modern Canadians have an hereditary fondness, derived from their French ancestry.

THE MAHAL, OR PALACE-TOMB,

Of the Emperour Shah Jehan's Wife.

[Miss Roberts's 'Hindostan.']

The reader of Eastern romance may here realize his dreams of fairy land, and contemplate those wondrous scenes so faithfully delineated in the brilliant pages of the Arabian Nights. Imagine a wild plain, broken into deep sandy ravines, the picture of rudeness and desolation, a tract as unpromising as that which Prince Ahmed traversed in search of his arrow. In the midst of this horrid wilderness, a palace of deep red stone, inlaid with white marble, and surmounted by domes and open cupolas, appears. It is ascended by flights of steps; in the centre is a large circular hall, with a domed roof, and a gallery running round, all in the most beautiful style of Oriental architecture. This is the gate of the Taaje Mahal, a building which, in any other place, would detain the visitant in rapture at the symmetry and grandeur of its proportions, and the exquisite elegance of the finishing; but the eyes have caught a glimpse of a delicious garden, and the splendours of this noble entrance are little regarded. At the end of a long avenue of graceful cypresses, whose rich foliage is beautifully mirrored in marble basins, fed with water from numerous sparkling fountains, the Taaje rises, gleaming like a fairy palace. It is wholly composed of polished marble of the whitest hue; and if there be any faults in the architecture, they are lost in the splendour of the material, which conveys the idea of something even more brilliant than marble,—mother of pearl, or glistening spar. No description can do justice to this shining edifice, which seems rather to belong to the fanciful creations of a dream than to the sober realities of waking life—constructed of gathered moonbeams, or the lilies which spring in paradise. The mausoleum is placed upon a square platform of white marble, rising abruptly to the height of about twelve or fifteen feet, the steps being concealed, which is perhaps a blemish. The place of actual sepulture is a chamber within this platform; round it on three sides are suites of apartments, consisting of three rooms in each, all of white marble, having lattices of perforated marble for the free transmission of air, and opening to the garden. At each of the four corners of the platform, a lofty minaret springs, and the centre is occupied by an octagonal building, crowned by a dome, surrounded by open cupolas of inferiour height. Nothing can be more beautiful or more chaste; even the window-frames are of marble; and it would seem as if a part of Aladdin's palace had been secured from the general wreck, and placed in the orange groves of Agra. The plan of the building, which is purely Asiatic, is said to have been the design of the founder, who placed the execution in the hands of foreigners of eminence. The interiour is embellished with beautiful mosaics, in rich patterns of flowers, so delicately formed, that they look like embroidery upon white satin, thirty-five different specimens of cornelians being employed in a single leaf of a carnation; while agates, lapis lazuli, turquoise, and other precious materials, occur in profusion. The mausoleum, washed by the Jumna, looks out upon that bright and rapid river; and its gardens of many acres, planted with flowery forest trees, and interspersed with buildings and fountains, stretch to the banks of the stream. It is truly a place which a votary of Mohammed would form from his ideas of the paradise of the true believer, haunted by beautiful birds of variegated plumage, and filled with blossoms of every scent and hue.

At the distance of about a mile from the 'Palace-Tomb,' for that is the signification of its name, stands the fort of Agra, a place of great strength in former times, before the introduction of fire-arms. One side is defended by the river, the others are surrounded by high battlemented walls of red stone, furnished with turrets and loop-holes, and, in addition to several postern entrances, a most magnificent building, called the Delhi-gate. Perhaps Lord Byron himself, when he stood upon the Bridge of Sighs, his heart swelling with reminiscences of Othello, Shylock, and Pierre, scarcely experienced more overwhelming sensations than the writer of this humble paper, when gazing, for the first time, upon the golden crescent of the Moslems, blazing high in the fair blue heavens, from the topmost pinnacle of this splendid relique of their power and pride. The delights of my childhood rushed to my soul; those magic tales, from which, rather than from the veritable pages of history, I had gathered my knowledge of Eastern arts and arms, arose in all their original vividness. I felt that I was indeed in the land of genii, and that the gorgeous palaces, the flowery labyrinths, the orient gems, and glittering thrones so long classed with ideal splendours, were not the fictitious offspring of romance.

Europe does not possess a more interesting relique of the days of feudal glory than that afforded by the fort of Agra. The interiour presents a succession of inclined planes, so constructed (the stones with which they are paved being cut into grooves) that horses, and even carriages, may pass up and down. The illustrations of fortified places, in Froisart's Chronicles, offer an accurate representation of these ascents, where knights on horseback are depicted riding down a steep hill, while descending from the walls.

The fort is of very considerable extent, and contains many objects of interest and curiosity. The Mootee Musjid, or pearl mosque disputes the palm of beauty with the Taaje Mahal, and is by many persons preferred to that celebrated edifice. Neither drawing nor description can do it justice; for the purity of the material and the splendour of the architecture defy the powers of the pencil and the pen. An oblong hall stretches its arcades along one side of a noble quadrangle, surrounded by richly sculptured cloisters, whence at intervals spring light and elegant cupolas, supported upon slender pillars. The whole is of polished white marble, carved even to the very slabs that compose the pavement; and when moonlight irradiates the scene, the effect is magical.

'The only advantage which the world can gain from the publication of the lives of individuals, is the knowledge of the circumstances that tend to the formation of character.'

THE DEAD SEA AND THE RIVER JORDAN.

['Three Weeks in Palestine.']

Marshalling our forces, now increased by the Sheikh and his garrison, with the exception of one man left behind as a guard, we set out for the Dead Sea, distant about three hours, crossing the most dreary, parched, and desert plain imaginable, having the appearance of land left bare by the receding waters of the lake, which seems to have shrunk considerably.

At the first dawning, the tints of the rising sun, purple and gold, with the deep shadows concealing the nakedness of the land, gave beauty to the landscape. The mountains encircling the lakes, which lay sleeping and motionless beneath them, reflecting their images, supplied a noble outline which fancy might fill up at its pleasure with a thousand Edens; but as the sun ascended, the illusion was quickly dissipated; the full glare of day displayed the wilderness in its true colouring of awful desolation—a desolation that was felt, and that depressed the spirits. The mountains assumed one uniform dusty brown hue, unrelieved by even a passing shadow, for not a cloud was visible in the blazing heavens; the sea was of a dull, heavy leaden tint, unlike the fresh, transparent purple which the living waters of a mountain lake usually display. One could easily imagine them the Waters of Oblivion, in search of which Zadoc, in the Persian tale, was despatched by the tyrant Amurath. The ground over which we rode, riven into chasms and ravines, showed not a blade of verdure; the few stunted shrubs that had struggled into life were masses of thorns with scarcely a leaf upon them, and wore the brown garb of the desert. The whole scene was a fearful exhibition of the blasting of the breath of the Almighty's displeasure!

In the centre of the plain stood a huge vulture, looking like the evil genius of the place, who suffered us to approach within pistol shot, then sullenly rose with a loud scream of indignation at our invasion of his territories, and sailed slowly away over the lake to his eyry in the mountains of Moab. Enormous locusts, three and four inches in length, of a yellowish green colour, were flying about; they were so large, that, in the uncertain light of the morning, I at first mistook them for birds; and a miserable hare no larger than a rabbit, of a dusty gray colour, started from beneath a bush. These were the only wild creatures that we saw.

The shores at this northern extremity are remarkably flat, and strewed with vast quantities of drift-wood, white and bleached by the sun, which is brought down by 'the swelling of Jordan.' There were numerous shells resembling the cockle along the shore. One of my companions bathed in the waters, and his experience confirmed the accounts of their extraordinary buoyancy, which enabled him to float with a facility he had never known in the ocean. The lake was so shallow that he was obliged to wade a long way before he could obtain sufficient depth for swimming; the bottom, when stirred, threw up quantities of fixed-air bubbles, and the water, as it dried upon his skin, left a slight white incrustation, and was intolerably nauseous to the taste. My fellow traveller related the result of his bathing to one of the Frenchmen in company, who never went within two hundred yards of the lake, though he was there for the express purpose of writing a book. 'Ah, bah! monsieur,' he replied, 'it is all a fable!' So much for accuracy of investigation! My friend, being somewhat choleric, took him to task, upon which he beat a retreat.

The pilgrims, caring nothing about the philosophy of the Dead Sea, were eager to reach the sin-cleansing waters of the Jordan, and hurried off in that direction; and our guards annoyed us by urging us forward, and allowing us no time to linger here, as we would fain have done, alleging the everlasting bugbear of the Arabs, though not a single human being, except our own party, was visible.

Proceeding along the shore of the Dead Sea, we arrived at the mouth of the river, which was not more than fifty or sixty yards across, flowing between steep banks about fourteen feet high, with sedges growing thickly at the bottom; higher up, it is overshadowed by willows and other shrubs. Riding about two miles along the banks, and passing through a thicket of tamerisks and oleanders, at a bend of the river thickly shaded with willows, we found the spot where tradition says the Israelites marched over Jordan, and where our Saviour was baptized. It was here fordable,—not more than four feet deep; the current rapid. The pilgrims quickly stripped, and rushing down the steep bank, plunged into the sacred stream. Many had brought a white robe for this ceremony; among these was a Greek priest, who was busily engaged in dipping his compatriots 'seven times in Jordan.' The process of ablution lasted half an hour, and if it did not, as they fondly imagined, wash their souls white, it had that very desirable effect upon their bodies, which was in most instances highly needful. When they were reclad, and had filled their bottles with the holy water, and cut down branches of the willows to carry away as mementoes of the place, we returned towards Ribhah by a more direct route.

Kissing a Queen.—Pepys, in his diary, states that, in 1668, he went to Westminster Abbey, where by particular favour, he was permitted to see the body of Catherine of Valois, the Queen of Henry the Fifth. The upper part of her body was put into his hands; 'and,' says Pepys, 'I did kiss her mouth, reflecting upon it that I did kiss a queen; and that this was my birth-day, thirty-six years old, and that I did kiss a Queen!' Did her Majesty's half-decayed corpse we wonder, smell differently from meaner clay?

Transportation by Water.—In the seaports of England and America, or of any commercial nation, imported commodities may be had cheaper than in some parts of the country from which they are brought. This remarkable circumstance results from the greater facility of transporting merchandize by water, than by land. It is still more singular, that an article, which has been brought thousands of leagues on shipboard, may cost more in being transported through a few streets, by a hand-cart, than for its conveyance across the ocean.

THE TURCOMANS.

[Conolly's 'Overland Journey to India.']

The Turcomans pride themselves much on their hospitality, and feel affronted if a traveller passes their camp without stopping. When a stranger comes to an oubeh, he is invited into the first tent, the master of which welcomes him by taking his hands within his own, and, holding the bridle of his horse, orders his wife to prepare refreshment for their guest. There can hardly be a livelier illustration of the manners of the Patriarchs than this:—instance Abraham's running from his tent door in the plains of Mamre to meet and welcome the angels, praying them to rest themselves, and comfort their hearts with a morsel of bread; and then his desiring Sarah, his wife, to make ready quickly three measures of fine meal, knead it, and make cakes upon the hearth. The manners, in particular, of the pastoral nations in Asia have undergone so little change, that you may see among them illustrations of nearly all the customs described in Scripture; and a traveller in any part of the East will meet with the most satisfactory evidences of the unaffected veracity of the sacred writers. To a European, the description of many simple Oriental customs appears a romance; and, connected as they are with so much miraculous anecdote, it is gratifying to be assured that those who describe the lives and actions of the people of antiquity, did it not in any spirit of exaggeration, and that relations, which appear to us highly coloured, are told in the simple and natural idiom of the countries and days the writers lived in.

As far as giving to eat and drink, the Turcomans are hospitable; but the very man who gives you bread in his tent will not scruple to fall upon you when you are beyond its precincts. This same hospitality of wandering tribes has been so lauded by poets and others, that it has become a fashion to talk as if the virtue existed only among demi-savages; and the man who exercises it shall be excused though he be a thief and a cut-throat. Your person is sacred, and your life is to be dearer to him than his own while you are under the shadow of his tent;—but you cannot remain there forever. Perhaps at the very moment you are eating his salt, your host is thinking how, at a future occasion, he may best transfer part of your wealth to himself, and when you do meet him on his plain, the odds are very much against you.

We are taken with the poetically expressive idiom of the Arab, who, as a hint to a stranger to surrender his property, says, 'Cousin, undress thyself; thy aunt is without a garment;'—but we think it expedient to hang a man who translates and applies the saying in our own country. The fact is, that in our love for the romantic, we judge these wild people nearly by the same standard with which they measure themselves. The Arabs for instance,—we only think of them as a nation of freemen whose deeds have been chivalrous, and whose annals are told in high-sounding verse, and we overlook their vices; but the Bedouins are perhaps the greatest rogues who wander, (read Burckhardt's Summary of their character, and ask any one who has gone the land route to Mecca about them.) The virtues and vices of all Nomade people are much the same; they entertain exaggerated notions of hospitality and bravery, but they are generally greedy, mean, and thievish; and, though they may keep good faith with their own race, they will find means to evade the spirit of a pledge given to a stranger, if it be much their interest to do so. Their hospitality appears greater than that of settled people, because when travelling they rely upon each other for food and shelter; but they must of necessity do so. Perhaps in earlier times the feeling was exercised more as a virtue; but now there is to the full as much pride as generosity in it, for you will anger a man to the extent of making him your enemy if you pass his tent, though he may not have wherewithal to feed you; and even allowing that a generous feeling prompts his courtesy, it is not so strong a one but that avarice will get the better of it, if you have that which tempts him.—It is a wild scene, a Turcoman camp, all its tenants are astir at day-break, and the women, after a short busy period, retire to work within their tents. Towards the evening, the men get together, and sit in circles discoursing: the mistress of a tent is seen seated outside knitting; near her is an old negro woman, 'dry and withered as the deserts of Libya,' who is churning in a skin hung upon three sticks, or dangling the last born; and the young fry, dirty and naked, except perhaps a small jacket, or skull-cap, fantastically covered with coins, bits of metal, or beads and charms, run about in glee like so many imps, screaming and flinging dust on each other, the great game of these unsophisticated children of nature. As the day declines, the camels are driven in, and folded within the camp; soon after the sun has set, a few watchers are set; here and there perhaps in a tent, remain for a short time the 'light of the candle and the sound of the millstones,' but soon the whole camp is in repose.

There certainly is a charm about this mode of life, and I can understand the dislike a Turcoman has to living in a city. It has been thought that inhabitants of mountainous countries have the strongest feeling of love for their homes, because they retain the most vivid recollection of the bold scenery amidst which they were born; but the Swiss or Highlanders scarcely sigh more for their mountains than do the Arabs and the Turcomans for the desert—home is home all the world over.

FASHION IN OTAHEITE.

The attire of the Otaheitans, is amusingly described by travellers: it is said that 'they set the highest value on clothes of European manufacture; and are more proud of displaying them than are our ladies of diamonds and Persian shawls, or our gentlemen of the utmost refinements of fashion. As they know nothing of our fashions, they pay no sort of attention to the cut, and even age and wear do not much diminish their estimation of their finery; a ripped-out seam, or a hole, is no drawback upon the elegance of an article. These clothes, which are brought to Otaheite by merchant ships, are purchased at a rag-market, and sold here at an enormous profit. The Otaheitan, therefore, finding a complete suit of clothes very expensive, contents

himself with a single garment; whoever can obtain an English military coat, or even a plain one, goes about with the rest of his body naked, except the universally worn girdle; the happy owner of a waistcoat or a pair of trousers, thinks his wardrobe amply furnished. We saw the master of the ceremonies to the queen with a sailor's jacket, the only garment he bore; he was an immense man, and the sleeves only reached his elbows; his personal beauty was further heightened by an engraving of a compass with all its points tattooed upon that part of his person which a master of the ceremonies habitually exhibits to those who follow him. Such is the rage for pantaloons, that if an unhappy individual is unable to attain to the possession of a pair, he has an imitation of them etched upon his legs. The sole garment of many is a shirt; and others, as much oppressed by the heat under a heavy cloth mantle as they would be in a Russian bath, are far too vain of their finery to lay it aside. Shoes, boots, or stockings, are rarely met with, and the coats, mostly too tight and too short, make the oddest appearance imaginable; many of their wearers can scarcely move their arms, and are forced to stretch them out like the sails of a wind-mill, while their elbows, curious to see the world, peep through slits in the seams. Let any one imagine an assemblage of these people, convened upon any occasion of solemnity or form, perfectly satisfied of the propriety of their costume, and wearing, to complete the comic effect, a most ultra-serious expression of countenance, and he will easily believe that we found it difficult to refrain from smiles. The attire of the females, though not quite so absurd, is by no means picturesque; some wear white, or striped men's shirts, which do not conceal their knees, and others are wrapped in sheets. Their hair is unbecomingly cut close to the roots, and their heads covered with little chip hats of a most tasteless form, decorated with ribands and flowers, made in Otaheite. But the most valuable article of dress is a coloured gown, an indubitable sign of the possessor's opulence, and the object of her unbounded vanity.'

ALEXANDER WILSON, BURNS, AND FRANKLIN.

[Dunlap's 'History of the Arts of Design.']

Paisley, the birth-place of Wilson, had long known him as the author of Watty and Mag, a popular ballad, which I recollect, in my earliest school-boy days, to have heard in our streets. Within a year or two after his work was finished, his countrymen at Paisley were urgent in their inquiries of American travellers concerning him and his great production. 'You must allow, after all,' said they, 'that you are indebted to a Scotchman for the true account of the Birds of America. He was our townsman, and it gratifies us to learn any particulars of him. Near this place he was once a faithful weaver among us, and Watty and Mag please us even now.' Perhaps these expressions of popular feeling struck me with the greater force, inasmuch as an occurrence of a somewhat different complexion took place a day or two before. Encountering a Highland lad, who was discoursing sweet music to a song of Burns, I expressed my pleasure by remarking that we had no such poetry by American bards. 'You have not produced Burns,' replied he, 'but you have produced a greater man than all Scotland has,—Doctor Franklin—he taught the way to make money.'

TO THE OSTRICH.—By Thomas Pringle.

[Friendship's Offering.]

Lone dweller of the wild Karroo,
Sad is thy desolate domain,
Where grateful fruitage never grew,
Nor waved the golden grain.
What seekest thou midst these dreary haunts,
Where mourning Nature droops and pants
Beneath the burning skies?
'Freedom I seek; mankind I shun,
Tyrants of all beneath the sun!'
Methinks the bird replies.

Yes—this forsaken, silent waste,
Where only bitter herbs abound,
Is fitly furnished to thy taste,
And blooms thy garden ground.
A fountain, too, to thee is given,
Fed by the thunder-cloud from heaven,
And treasured in the cliffs;
For thee boon Nature plants and sows;
Thou reap'st the harvest as it grows,
Rejoicing in her gifts.

For ruthless foes thou reck'st not here,
In vain the slot-hound tracks thy foot:
The huntsman, should he wander near,
Soon flags from the pursuit.
Like winged galley o'er the main,
Thou speed'st across the boundless plain
To some deep solitude,
By human footstep never pressed,
Where faithful mates have scooped the nest
That screens your callow brood.

Thus thou art blest, shy, wandering bird;
And I could love to linger, too,
Where voice of man hath ne'er been heard,
Amidst the lone Karroo—
Free o'er the wilderness to roam,
And frame, like thee, my hermit home
In some untrod recess;
Afar from turmoil, strife, and folly,
And misery, and melancholy,
And human selfishness.

Botany Bay.—Until within a few years, this colony was the Paradise of evil-doers. Murderers, on the day of trial, might be seen carousing with their friends in a pot-house, in the presence of the constable. Thieves, fashionably dressed, walked arm-in-arm to trial, with the constable following respectfully behind, like a servant; while the bystanders offered their best wishes for the escape of the rogues. Receivers of stolen goods came to receive sentence, in splendid carriages, and attended by servants in livery. Such phenomena naturally resulted from the fact, that the mass of the inhabitants were familiar with vice, and had themselves been convicted criminals; so that sin was without its recompense of shame.

Ancient Ship.—Pepys relates, that when the wet dock at Deptford was constructed, a ship of five hundred tons was discovered in the mud of the Thames, where it had lain buried and forgotten, ever since the days of Queen Elizabeth. A great quantity of stone shot, eighteen inches in diameter, was found on board. Such balls were formerly used for cannon instead of iron.

THE GROUND PARROT.

This beautiful bird is found in the low meadow lands of New Holland, and is called the Ground Parrot, because, unlike most of the other varieties of its genus, it seldom perches on trees, but is usually found on the ground. Short and clumsy legs, and claws very much curved, are general characteristics of the Parrot family; but the Ground Parrot has long legs, and toes which enable it to walk with facility, while they unfit it for climbing trees. The upper part of the bird is a splendid green, and the under part, yellow; and these colours are curiously banded, striped, and mottled, with black and orange.

Naturalists have described nearly three hundred varieties of the Parrot tribe. They are found both in the eastern and western hemispheres; those of the former being known by the names of Cockatoos, Parrots, Lories, and Parrakeets; and those of the latter are the Aras, or Maccaws, Amazons, Criks, and Popinjays. They are numerous in the southern and south-western parts of the United States, but are said never to occur so far north as Pennsylvania. The species found in North America is called the Carolina Parrot, and has also been ascertained to inhabit Guinea. In Kentucky, Wilson observed them in flocks, like pigeons; and when they alighted on the ground, 'it appeared at a distance as if covered with a carpet, of the richest orange, green and yellow.' Audubon, the distinguished American naturalist, gives the following account of a Carolina Parrot, which was a particular favourite of his,—

'Anxious to try the effects of education on one of those which I procured at Big Bone lick, and which was but slightly wounded in the wing, I fixed up a place for it in the stern of my boat, and presented it with some cockle burs, which it freely fed on in less than an hour after being on board. The intermediate time between eating and sleeping was occupied in gnawing the sticks that formed its place of confinement, in order to make a practicable breach; which it repeatedly effected. When I abandoned the river, and travelled by land, I wrapped it up closely in a silk handkerchief, tying it tightly round, and carried it in my pocket. When I stopped for refreshment, I unbound my prisoner, and gave it its allowance, which it generally despatched with great dexterity, unhusking the seeds from the bur in a twinkling; in doing which, it always employed its left foot to hold the bur, as did several others that I kept for some time. I began to think that this might be peculiar to the whole tribe, and that they all were, if I may use the expression, leftfooted; but by shooting a number afterwards while engaged in eating mulberries, I found sometimes the left, sometimes the right foot, stained with the fruit, the other always clean; from which, and the constant practice of those I kept, it appears, that like the human species in the use of their hands, they do not prefer one or the other indiscriminately, but are either left or right footed. But to return to my prisoner: In recommitting it to 'durance vile,' we generally had a quarrel; during which it frequently paid me in kind for the wound I had inflicted, and for depriving it of liberty, by cutting and almost disabling several of my fingers with its sharp and powerful bill. The path through the wilderness between Nashville and Natchez, is in some places bad beyond description. There are dangerous creeks to swim, miles of morass to struggle through, rendered almost as gloomy as night by a prodigious growth of timber, and an underwood of canes and other evergreens; while the descent into these sluggish streams is often ten or fifteen feet perpendicular into a bed of deep clay. In some of the worst of these places, where I had, as it were, to fight my way through, the Parrakeet frequently escaped from my pocket, obliging me to dismount and pursue it through the worst of the morass before I could regain it. On these occasions I was several times tempted to abandon it, but I persisted in bringing it along. When at night I encamped in the woods, I placed it on the baggage beside me, where it usually sat, with great composure, dozing and gazing at the fire till morning. In this manner I carried it upwards of a thousand miles in my pocket, where it was exposed all day to the jolting of the horse, but regularly liberated at meal times, and in the evening, at which it always expressed great satisfaction. In passing through the Chickasaw and Choctaw nations, the Indians, wherever I stopped to feed, collected around me, men, women, and children, laughing and seeming wonderfully amused with the novelty of my companion. The Chickasaws called it in

their language '*Kelinky*,' but when they heard me call it Poll, they soon repeated the name; and wherever I chanced to stop among these people, we soon became familiar with each other through the medium of Poll. On arriving at Mr. Dunbar's, below Natchez, I procured a cage, and placed it under the piazza, where, by its call, it soon attracted the passing flocks; such is the attachment they have for each other. Numerous parties frequently alighted on the trees immediately above, keeping up a constant conversation with the prisoner. One of these I wounded slightly in the wing, and the pleasure Poll expressed on meeting with this new companion was really amusing. She crept close up to it as it hung on the side of the cage, chattering to it in a low tone of voice, as if sympathizing in its misfortune, scratched about its head and neck with her bill; and both at night nestled as close as possible to each other, sometimes Poll's head being thrust among the plumage of the other. On the death of this companion, she appeared restless and inconsolable for several days. On reaching New Orleans, I placed a looking glass beside the place where she usually sat, and the instant she perceived her image, all her former fondness seemed to return, so that she could scarcely absent herself from it a moment. It was evident that she was completely deceived. Always when evening drew on, and often during the day, she laid her head close to that of the image in the glass, and began to doze with great composure and satisfaction. In this short space she had learnt to know her name; to answer and come when called on; to climb up my clothes, sit on my shoulder, and eat from my mouth. I took her with me to sea, determined to persevere in her education; but, destined to another fate, poor Poll, having one morning, about daybreak, wrought her way through the cage, while I was asleep, instantly flew overboard, and perished in the Gulf of Mexico.'

Esquimaux Dog.

ESQUIMAUX DOGS.

The Esquimaux are supposed to have been driven, by the hostility of other savage tribes, from a more southerly clime to the wintry regions which they now inhabit. In intellect, and all the arts of life, they must be ranked among the lowest varieties of the human race. Their food consists of the flesh of seals, sea-horses, and occasionally rein-deer, all of which, until recently, they were accustomed to devour raw, and often in a putrid state. They keep great numbers of dogs, which serve as a guard to their huts, and likewise to draw their sledges, and in cases of necessity, are used as food. They are of a large size, and are distinguished from the rest of the canine species by their inability to bark, instead of which they send forth a long and dismal howl. Mr. Fisher, surgeon to one of the expeditions under Captain Parry, mentions that two families of Esquimaux, consisting of four men, four women, and nine children, were provided with no less than fifty or sixty of these dogs.

View of the Village of Economy, Penn.

VILLAGE OF ECONOMY.

The village of Economy is situated on the Ohio, eighteen miles below Pittsburgh, on a bluff, elevated about fifty feet above the low-water mark of the river. A colony of German emigrants originally settled in this vicinity, but afterwards removed further west; whence, however, they returned, about twelve years since, and laid the foundation of Economy. Factories of various kinds, with steam machinery, were established; the land was brought under high cultivation; and the inhabitants paid considerable attention to the culture of the vine, and produced very tolerable imitations of their native German wines. They called themselves Harmonists, and were subject to the patriarchal authority of Rapp, an aged German, of somewhat visionary notions in politics and religion. The leading characteristics of the sect, or colony, were a community of goods, and the prohibition, or discouragement, of marriage. We do not understand that, as among the Shakers, the latter regulation was based on religious tenets. It had been adopted by Rapp as a means of preventing the too rapid increase of his colony; and all the members were to live together as brethren and sisters, denying themselves a nearer and dearer intimacy, merely from motives of expediency. The ordinance of celibacy was not, however, so strictly observed, but that marriages did sometimes occur; and, even in cases where the ceremony had been omitted, the fruits of connubial intercourse would occasionally make their appearance. Although these infant proselytes to his sect might not be very welcome, Rapp received them graciously, and established a school for their education. We are not aware that any account of the condition of the settlement has recently been given to the public.

HABITATIONS OF MAN.

A description of all the methods by which people have sheltered themselves from the elements, illustrated with engravings of every kind of domestic edifice, would form a curious and interesting work. In some states of society, man has burrowed beneath the earth; in regions where all the year is Summer, he rears a bower of branches; within the Arctic circle, the Esquimaux use the eternal snows as a quarry, whence they hew the building-materials of their huts; in the southern islands, the houses are a kind of basket-work; in parts of India, they are a light fabric of bamboo; and, in more than one country, mud cottages may be seen, at no great distance from marble palaces.

The first habitations of the hardy settlers of our country were constructed of the ruins of the forest, which had fallen beneath their axes. The log-house was a rude, but comfortable dwelling, homely and substantial, like the characters of those who built it. In our memory, there is a vivid picture of such an edifice, which we used to visit in our boyhood, while running wild on the borders of a forest-lake. It had a little square window, the size of four panes of glass; the chimney was built of sticks and clay, like a swallow's nest; the hearth was a huge, flat, unhewn stone; and the fire place, where sat an old Revolutionary pensioner and his dame, occupied nearly the whole breadth of the house. Similar dwellings still exist in the remoter parts of New-England; a few of them are scattered along the road that leads through the heart of the White mountains.

The Laplanders build even ruder structures than these. Their wretched hovels, composed of sods, loose stones, turf, and bushes, have a fire-place in the centre, the acrid smoke from which continually circulates through the habitation, and is the only means of stifling its filthy smells. It is a characteristic distinction between these people and the American backwoodsmen, that the former spend their lives in the miserable huts which they inherited from their fathers, and bequeath them to their children; while the latter is almost certain to erect a smart frame-house, if not an edifice of brick or stone, on the site of his log-cottage.

Lapland Huts.

The Kaskaias, who roam through the Far West, have houses of buffalo-skins, which are taken down at every migration in their wandering life, and may be erected again, within a few moments after their evening-halt. There are six or eight poles, twenty or thirty feet in length, to every lodge. Four of these are tied together at the smaller extremities, and are covered with skins, while the but-ends rest upon the ground, and form the main support of the structure, which the remainder of the poles are employed in strengthening. Thus, in a very brief interval, the green space on the banks of a stream is covered with a little village of tall, conical-shaped lodges, the whole labour of constructing which is performed by the squaws. As short a time suffices for their removal; the skins are packed on the horses, belonging to the family; and men, squaws, and children mount, and take a new ramble through the wilderness, dragging their tent-poles at the horses' heels. By the broad traces which they leave behind, a domestic party, carrying their lodges along with them, may always be distinguished from a band of warriours, who leave only the track of their footsteps.

Kaskaia Skin Lodge.

The dwellings constructed by the Beaver are superior to many which shelter the heads of human beings. But, blessed be God, whether our habitation be a cave, a hut, a lodge of skins, or a marble palace, the name of home has a hallowing influence, which renders it the only spot on earth where true comfort may be found.

Russian Droski.

TRAVELLING IN RUSSIA.

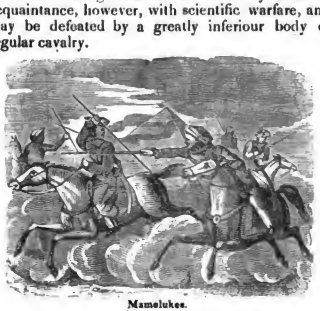
Every mode of conveyance will naturally be a subject of interest to Americans, who are emphatically a travelling people, but have a particular dislike to the use of their own feet, for the purposes of locomotion. In the streets of St. Petersburg, the capital of Russia, the places of the hacks and omnibuses, which constitute the public vehicles in

other cities, are supplied by what is called a Droski. Barrow, one of the latest travellers in Russia, describes it as having four wheels, with a narrow bench placed lengthwise between them, so near the ground that the skirts of a person's coat must either be covered with dust, or draggled with mud. If two passengers, besides the driver, ride in the Droski, one of them sits at the hinder part, leaning against the low back of the vehicle, and with his legs astride of the bench; while his companion is forced to sit sideways, without any support for his back. The driver, who likewise bestrides the bench, is separated from his foremost passenger only by a slender iron bar, about six inches in height, and is therefore often jostled against him. On his back he wears a tin-plate, inscribed with the number of his vehicle. These droski-men are represented as such filthy objects, that every decent gentleman, on alighting, feels an impulse to shake himself, in order to get rid of the vermin which may have been communicated from the driver.

WILD HORSEMEN.

Philosophers have always been puzzled to contrive such a definition of man, as should completely distinguish him from every other animal. We are not aware that, among the many attempts of this sort, he has ever been described as an animal that gets on horseback. Yet this is one of the most peculiar characteristics of the human race; for no animal, except man, systematically imposes on another the burden of his conveyance from place to place. This is a natural instinct of mankind; and in whatever country men and horses exist together, the four legs of the latter are compelled to perform the business of the biped's single pair.

Among the most famous horsemen in the world are the Mamelukes. These bold riders are of Turkish or Circassian origin, and, at an early age, are imported into Egypt as slaves. They are there instructed in the art of horsemanship, and the practice of arms, and become the only troops of the nation, which is therefore, in a great measure, under their sway. Their whole life being spent in the saddle, they acquire an incredible dexterity in the management of their horses, and, individually, are terrific antagonists in battle. They have no acquaintance, however, with scientific warfare, and may be defeated by a greatly inferiour body of regular cavalry.



Mamelukes.

The Sioux, otherwise called the Dacotahs, are an Indian people in the region of the Mississippi and Missouri, entirely distinct from any other nation of the red-men. In 1824, their numbers were estimated at twenty-five thousand, of whom six thousand were warriours. They have not, like many Indian tribes, any tradition of having emigrated from another country, but believe that the Great Spirit created their fathers, among the same prairies where they themselves are now riding the wild horses.

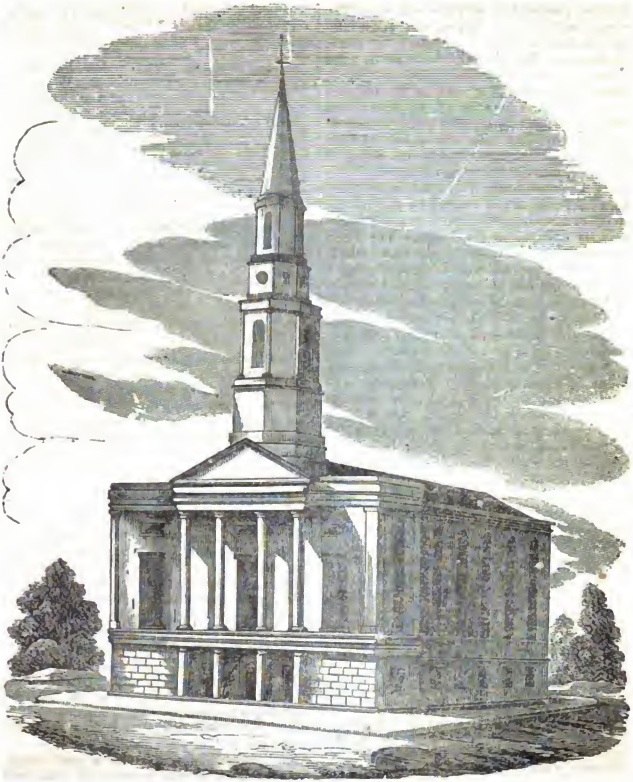
A Sioux on Horseback.

To the Sioux the art of horsemanship must have been an acquisition of modern date; for the herds of wild horses, which now trample the vast prairies of the West, are of European origin, and descended from sires, who had immemorially been subjugated to the service of man. Washington Irving, in his Tour on the Prairies, describes the taming of a young horse; a task so easily accomplished, that the steeds of the desert would appear never to have relapsed entirely into the wild state, but still to retain an hereditary fitness for the saddle.

Indian Juggler.—Major Long received, from a French trader, an account of a singular feat which was performed by an Indian Juggler. On a dry prairie, and at a distance from any stream or spring, this man offered to fill an empty keg with water. Being promised a keg of whisky, in consideration of his performing this seeming miracle, the Indian first turned the water-keg with the bung-hole downward, in order to convince the spectators that it was really empty. No water ran out. He then began to dance, lifted the keg toward heaven, and enacted various other mummeries; till presenting the keg to another Indian, he invited him to drink. It was then passed round among the spectators; and all, the trader himself not excepted, were convinced that the keg really contained good and pure water. Let our readers exercise their ingenuity to guess how this water came there.

Electricity.—Flashes of electric light are sometimes produced, by briskly tearing a piece of cotton cloth.

John Ziska, one of the leaders of the Hussites, (a religious sect, which was driven to take up arms by persecution,) ordered his skin, after death, to be made into a covering for a drum; that, though his voice would be heard no more, he might still stir up the hearts of his followers, as in his lifetime.



Third Presbyterian Church at Pittsburgh, Pennsylvania.

THIRD PRESBYTERIAN CHURCH AT PITTSBURGH.

On the spot where Pittsburgh is now situated, at the junction of the Alleghany and Monongahela rivers, stood Fort Du Quesne, a post of great military importance in the Old French War. After it fell into the hands of the British, in 1758, sixty thousand pounds were expended by them in strengthening the fortifications. The place, however, was never afterwards remarkable, as the scene of warlike events; although the troubled times of the Revolution, and its exposure to attack from the Indians, long prevented any considerable increase of the settlement. The rise of its present prosperity dates from the year 1793. The situation of Pittsburgh, at the head of the Ohio river, is a fortunate one; but the chief cause which rendered it, for a long time, the only manufacturing town in the Union, and which still keeps it the most noted one, is the great abundance of coal. On the opposite side of the Monongahela river, there is a coal-hill, upwards of three hundred feet high; and inexhaustible quantities of the same mineral are found in the vicinity of the city. The number of furnaces and fires, which are continually sending up their smoke, causes a gloomy cloud to hang over Pittsburgh, and darkens the interesting scenery in its neighbourhood.

Almost every variety of manufacture is here carried on. Those of cottons and woollens; pottery, copper-ware, iron-mongery, cutlery, and glass, are especially important. Specimens of cut-glass have been produced in Pittsburgh, which may compare

with the best productions of European art. The construction of boats and steam-boats constitutes another extensive branch of business. It would scarcely be conceived that the building of ships should employ a portion of the capital and labour of Pittsburgh, standing, as it does, at the distance of two thousand miles from the sea, by the shortest navigable course; yet ships, built and launched at this far inland city, find their way down the Ohio and Mississippi, and emerge, through the mouth of the latter river, into the boundless element.

In every American town, if its inhabitants thrive, their growing prosperity is marked by the number and beauty of the churches. Such to a considerable degree, is the case in Pittsburgh. The Third Presbyterian Church, of which we give a cut, stands at the corner of Third and Ferry Streets, having a front of sixty-seven feet on the former, and a depth of ninety-three feet on the latter. The entrance is by three doors in the centre of the basement story, which is built of stone, and contains a large lecture-room and two spacious school-rooms. The body of the church is brick, overlaid with Roman cement, in imitation of stone. The steeple is of wood, and ascends to the height of one hundred and sixty-three feet from the ground. On the floor of the church, there are accommodations for eight hundred people, and for four hundred in the gallery. The cost of the structure is estimated at about twenty-five thousand dollars.

REMARKABLES AT RANGOON.

Rangoon, the capital of Burmah, is situated on a branch of the Irrawaddy, called the river of Rangoon. It contains between forty and fifty thousand inhabitants, fifteen hundred of whom are priests. There are four principal streets, the houses of which are built entirely of bamboo, and covered and lined with matting. On account of the swampy nature of the soil, each edifice is elevated on bamboo poles, and all the filth and rubbish of the family is swept into the space beneath, through the interstices of the floor, which is a sort of bamboo open-work, carpeted with mats. Hogs wallow in this deposit of dirt; and a potent stench ascends through the floor, and taints the air on every side. The houses are open towards the street; so that, except in the back apartment, all the domestic arrangements of the family may be seen, in the same manner as if the walls of the edifices in one of our own streets, from the foundation to the eaves, were suddenly to be removed.

The inhabitants wear silks of gay and dazzling hues, which, by a peculiar art in the dying, are calculated to resist the powerful action of the sun, and retain their lustre till worn out. These silks are excessively dear, and scarcely form an article of commerce, as each family possesses a loom, in which it manufactures the fabric for its own use. Bamboo boxes are another article of domestic workmanship, which have a considerable sale; they are made in nests, fitting into each other, and are decorated with paint and varnish. The ordinary drinking-cups are likewise made of bamboo. Persons of rank, however, use none but gold or silver vessels, which are cast in a mould, and afterwards ornamented with the twelve signs of the zodiac, and various other devices. There is a strict prohibition against conveying these cups out of the country.

The women of Rangoon, and throughout the Burman empire, are permitted to walk the streets, at their own pleasure, and enjoy a degree of freedom which is granted to the females in no other part of India. They are generally pretty, but have their lips disagreeably died with red, and their teeth discoloured, by continually chewing the betel-nut. A still more unpleasant peculiarity in their appearance, and which is even shocking to an unaccustomed observer, is the position of their arms; the limb, by way of ornament, is dislocated in infancy, and dangles downward from the elbow, with the inner part turned outward. Whether this strange practice unfits them for domestic avocations, we are not able to say. The women are addicted to smoking cigars, and it is not unusual to see a mother take a lighted cheroot from her own mouth, and insert it into that of the infant at her breast.

The Burman law, in regard to debt, is one of extreme singularity. The creditor may seize his debtor's servants, or even his wife, and, in short, every thing that he possesses; but the debtor's own person is held sacred from the slightest molestation. It would not be amiss, while imprisonment for debt is so important a subject of discussion among our legislators, to enquire into the operation of this law.

There are two languages in Rangoon; the Burman, which is in ordinary use by all classes, and the Pali, or sacred language, which is confined to the priests, and in which the holy books are written. The books in the Burman language are made of strips of palm-leaves, on which the letters are beautifully marked with a small, sharp instrument; the leaves are strung together, and fastened at both ends. The Pali, or sacred volumes, are made of the bark of bamboo, cut and plaited, sometimes written in black letters, and sometimes in copper or silver.

There is no coin at Rangoon; all the currency consisting of ingots of silver, worth twenty-eight rupees; and when smaller change is needed, these ingots are cut in pieces and weighed, by means of weights formed of a mixture of gold, silver, and copper. Each weight is stamped with the figure of a goose, which is the national ensign of Burmah, as an eagle is that of the United States.

The inhabitants are believers in astrology, and put great confidence in lucky and unlucky days, and in all sorts of signs and omens. There was an ancient prophecy among them, that, when a vessel should come up the river to Rangoon, without the aid of oars or sails, the ruin of their country was at hand. Shortly before the taking of Rangoon by the British, a steamer arrived from Calcutta; and the people, deeming the prophecy about to be fulfilled, considered all further resistance as of no avail.

Flesh of the Boa.—In many parts of India, the natives go in pursuit of the Boa for the sake of its flesh. When captured, this immense serpent is cut into short pieces, and sold in the market.

OLD MAIDS IN FRANCE.

[Mrs. Trollope's 'Paris and the Parisians.']

Several years ago, while passing a few weeks in Paris, I had a conversation with a Frenchman upon the subject of old maids, which, though so long past, I refer to now for the sake of the sequel, which has just reached me.

We were, I well remember, parading in the Gardens of the Luxembourg; and, as we paced up and down its long alleys, the 'miserable fate,' as he called it, of single women in England was discussed and deplored by my companion as being one of the most melancholy results of faulty national manners that could be mentioned.

'I know nothing,' said he, with much energy, 'that ever gave me more pain in society, than seeing, as I did in England, numbers of unhappy women who, however well born, well educated, or estimable, were without a position, without an establishment, and without a name, excepting one that they would generally give half their remaining days to get rid of.'

'I think you somewhat exaggerate the evil,' I replied; 'but even if it were as bad as you state it to be, I see not why single ladies should be better off here.'

'Here!' he exclaimed in a tone of horrour: 'do you really imagine that in France, where we pride ourselves on making the destiny of our women the happiest in the world,—do you really imagine that we suffer a set of unhappy, innocent, helpless girls to drop, as it were, out of society, into the *néant* (nothingness) of celibacy, as you do? Far from us be such barbarity!'

'But how can you help it? It is impossible but that circumstances must arise to keep many of your men single; and, if the numbers be equally balanced, it follows that there must be single women too.'

'It may seem so; but the fact is otherwise; we have no single women.'

'What, then, becomes of them?'

'I know not; but were any Frenchwoman to find herself so circumstanced, depend upon it she would drown herself.'

'I know one such, however,' said a lady who was with us; 'Mademoiselle Isabelle B— is an old maid.'

'Is it possible!' cried the gentleman, in a tone that made me laugh very heartily. 'And how old is she, this unhappy Mademoiselle Isabelle?'

'I do not know exactly,' replied the lady; 'but I think she must be considerably past thirty.'

'C'est une horreur!' he exclaimed again; adding, rather mysteriously, in a half whisper, 'Trust me, she will not bear it long!'

———————————I had certainly forgotten Mademoiselle Isabelle and all about her, when I again met the lady who had named her as the one sole existing old maid of France. While conversing with her the other day on many things which had passed when we were last together, she asked me if I remembered this conversation. I assured her that I had forgotten no part of it.

'Well, then,' said she, 'I must tell you what happened to me about three months after it took place. I was invited with my husband to pay a visit at the house of a friend in the country,—the same house where I had formerly seen the Mademoiselle Isabelle B— whom I had named to you. I recollected our conversation in the Gardens of the Luxembourg, and inquired of our host for the lady who had been named in it.

'Is it possible that you have not heard what has happened to her?' he replied.

'No, indeed, I have heard nothing. Is she married, then?'

'Married!——Alas, no! she has *drowned herself*.'

Terrible as this denouement was, it could not be heard with the solemn gravity it called for, after what had been said respecting her. Was ever coincidence more strange! My friend told me, that on her return to Paris she mentioned this catastrophe to the gentleman who had seemed to predict it; when the information was received by an exclamation quite in character.—'Heaven be praised! then she is out of her misery!'

This incident, and the conversation which followed upon it, induced me to inquire in sober earnest what degree of truth there might really be in the statement made to us in this well-remembered conversation; and it certainly does appear, from all I can learn, that the meeting a single woman past thirty, is a very rare occurrence in France. The arranging a suitable marriage is in fact as necessary and as ordinary a duty in parents towards a daughter as the sending her to school. The proposal for such an alliance proceeds quite as frequently from the friends of the lady as from those of the gentleman; and it is obvious that this must at once very greatly increase the chance of a suitable marriage for young women; for though we do occasionally send our daughters to India in the hope of obtaining this much-desired result, few English parents have as yet gone the length of proposing to any-body, or to any-body's son, to take their daughter off their hands.

I have reason to believe, however, that my friend of the Luxembourg Gardens exaggerated a good deal when he asserted that there were no single women in France. They do exist here, though certainly in less numbers than in England,—but it is not so easy to find them out. With us, it is not unusual for single ladies to take what is called *brevet rank*;—that is *Miss* Dorothy Tomkins becomes *Mrs.* Dorothy Tomkins—and sometimes downright *Mrs. Tomkins*, provided there be no collateral Mrs. Tomkins to interfere with her; but upon no occasion do I remember that any lady in this predicament called herself the *widow* Tomkins, or the widow any thing else.

Here, however, I am assured that the case is different; nothing is more common than for unmarried ladies to assume the title of widow; so that, let the number of spinsters be great or small, no one but the near connexions and most intimate friends of the party know any thing of the matter. Many a *veuve respectable* (respectable widow) has never had a husband in her life; and I have heard it positively affirmed, that the secret is often so well kept, that the nieces and nephews of a family do not know their maiden aunts from their widowed ones.

This shows, at least that matrimony is considered here as a more honourable state than that of celibacy; though it does not quite go the length of proving that all single women drown themselves.

THE CASSAVA ROOT, OR MANIOCK.

[Ligon's 'History of Barbadoes,'—published in 1673.]

This, before it comes to be eaten, suffers a strange conversion; for, being an absolute poison when it is gathered, by good ordering, comes to be wholesome and nourishing; and the manner of doing it is this:—They wash the outside of the root clean, and lean it against a wheel, whose sole is about a foot broad, and covered with lattin, made rough, like a large grater. The wheel to be turned about with the foot, as a cutler turns his wheel. And as it grates the root, it falls down in a large trough, which is the receiver appointed for the purpose. This root, thus grated, is as rank poison as can be made by the art of an apothecary, of the most venomous simples he can put together: but being put into a strong piece of double canvass, or sack-cloth, and pressed hard, that all the juice may be squeezed out, and then opened upon a cloth, and dried in the sun, it is ready to make bread. And thus it is done:

They have a piece of iron, which I guess is cast round, the diameter of which is about twenty inches, a little hollowed in the middle, not unlike the mould that the spectacle makers grind their glasses on, but not so much a concave as that; about half an inch thick at the brim or verge, but thicker towards the middle, with three feet like a pot, about six inches high, that fire may be underneath. To such temper they heat this *pone*, as they call it, as to bake, but not burn. When it is made thus hot, the Indians, whom we trust to make it, because they are best acquainted with it, cast the meal upon the pone, the whole breadth of it, and put it down with their hands, and it will presently stick together; and when they think that side almost done enough, with a thing like a battledore, they turn the other; and so turn and return it so often, till it be enough, which is presently done. So they lay this cake upon a flat board, and make another, and so another, till they have made enough for the whole family. This bread they made, when we came first here, as thick as a pancake; but after that, they grew to a higher degree of curiosity, and made it as thin as a wafer, and yet purely white and crisp, as a new-made wafer. Salt they never use in it, which I wonder at; for the bread being tasteless in itself, they should give it some little seasoning. There is no way it eats so well as in milk, and there it tastes like almonds. They offer to make pye-crust, but very few attain to the skill of that; for, as you work it up with your hand, or roll it out with a roller, it will always crackle and chop, so that it will not be raised to hold any liquor, neither with, nor without, butter or eggs.

KILLING A TURTLE.

[Ligon's 'History of Barbadoes.']

When you are to kill one of these fishes, the manner is, to lay him on his back on a table, and when he sees you come with a knife in your hand to kill him, he vapours out the grievousest sighs, that ever you heard any creature make, and sheds as large tears as a stag, that has a far greater body and larger eyes. He has a joint or crevis about an inch within the utmost edge of his shell, which goes round about his body, from his head to his tail, on his belly side; into which joint or crevis you put your knife, beginning at the head, and so rip up that side, and then do as much to the other; then lifting up his belly, which we call his callippee, we lay open his bowels, and, taking them out, come next to his heart, which has three distinct points, but all meat above where the fat is; and if you take it out, and lay it in a dish, it will stir and pant ten hours after the fish is dead. Sure, there is no creature on the earth, or in the seas, that enjoys life with so much sweetness and delight as this poor fish the turtle; nor none more delicate in taste, and more nourishing than he.

'EARTH TO EARTH, AND DUST TO DUST.'

By Rev. G. Croly.

'Earth to earth, and dust to dust!'
Here the evil and the just,
Here the youthful and the old,
Here the fearful and the bold,
Here the matron and the maid
In one silent bed are laid;
Here the vassal and the king,
Side by side lie withering;
Here the sword and sceptre rust—
'Earth to earth, and dust to dust!'

Age on age shall roll along,
O'er this pale and mighty throng;
Those that wept them, those that weep,
All shall with these sleepers sleep.—
Brothers, sisters of the worm,
Summer's sun or winter's storm,
Song of peace or battle's roar,
Ne'er shall break their slumbers more.
Death shall keep his sullen trust—
'Earth to earth, and dust to dust!'

But a day is coming fast,
Earth, thy mightiest and thy last
It shall come in fear and wonder,
Heralded by trump and thunder;
It shall come in strife and toil;
It shall come in blood and spoil;
It shall come in empire's groans;
Burning temples, trampled thrones;
Then ambition, rue thy lust!—
'Earth to earth, and dust to dust!'

Then shall come the judgment sign;
In the East the King shall shine,
Flashing from heaven's golden gate,
Thousand thousands round his state,
Spirits with the crown and plume
Tremble then, thou sullen tomb!
Heaven shall open on our sight,
Earth be turned to living light,
Kingdom of the ransomed just—
'Earth to earth, and dust to dust!'

Then thy mount, Jerusalem,
Shall be gorgeous as a gem;
Then shall in the desert rise
Fruits of more than Paradise;
Earth by angel feet be trod,
One great garden of her God!
Till are dried the martyr's tears
Through a thousand glorious years!—
Now, in hope of him we trust,
'Earth to earth, and dust to dust!'

Salt Butter, if kept all night in milk, will become fresh.

GENERAL MARION.

[Paulding's Life of Washington.]

The States south of the Potomac had early partaken in the sufferings of the war. Virginia had been ravaged by Dunmore; and North Carolina, South Carolina, and Georgia had not escaped. South Carolina had most especially suffered. Many of the inhabitants of that State were loyalists, and bore an inveterate hatred, not only to the cause of liberty, but to all its supporters. Internal fires burned within the State, while the flames raged on its borders. The British, probably instigated and exasperated by the representations of the tories, repaid the wrongs alleged to have been inflicted on their friends, by retaliating with still greater severity. At one time the enemy even flattered himself that the Southern States were conquered. But there was still a spirit stirring within them, which might be repressed for a while, but could not be subdued. The flame of liberty was kept alive in the pine-barrens, the swamps, and the mountains, by Pickens, and Sumpter, and Huger, and Horry. Above all, there was Marion, who, when all seemed lost, retired to the woods, and with a few followers, worthy of such a leader, kept the war alive, when scarcely a spark was left to kindle it into a flame.

Among the fine spirits of the Revolution, there were few whose character and services were more worthy of remembrance and admiration than those of Francis Marion. He was a man of great talents as well as great courage. His patriotism was warm and thrilling, and his love of liberty unconquerable.

After the fall of Charleston, Tarleton and his myrmidons insulted and ravaged the lower parts of the State almost with impunity; and the tories were emboldened to new acts of ill-neighbourhood, if not of inhumanity, to their unfortunate countrymen. Their houses were burned, their plantations laid waste, and their wives, mothers, and daughters insulted and abused. There was no force that could make head against external and internal enemies, and the country lay at their mercy.

In this situation, the services of Marion were invaluable. Patient of fatigue, and capable of enduring every privation; intrepid and cautious; quick and persevering; a soldier and a philosopher; he never remitted his exertions to sustain what remained of the liberties of his country, nor ever despaired of her cause. Collecting together a little band of hardy and active spirits, he retired into the inaccessible swamps where he watched his opportunity, darted out on his enemies, struck his blow, and before it was known whence he came, was safe in his woods again. Within his sphere, he might be said to have carried on a war of his own, for the State authorities were distant, inaccessible, and almost destitute of power. His mode of subsisting himself and his soldiers is affectingly illustrated by the following striking anecdote, derived from an old friend and fellow-soldier of Marion, many years ago.

While occupying one of his fastnesses, in the midst of a swamp, a British Officer with a flag, proposing an exchange of prisoners, was one day brought blindfold to his camp. His exploits had made his name now greatly known, and the officer was curious to look at this invisible warriour, who was so often felt but never seen. On removing the bandage from his eyes, he was presented to a man rather below the middle size, very thin in his person, of a dark complexion and withered look. He was dressed in a homespun coat that bore evidence of flood and field, and the rest of his garments were much the worse for wear. 'I came,' said the officer, 'with a message for General Marion.' 'I am he,' said Marion, 'and these are my soldiers.' The officer looked around, and saw a parcel of rough, half-clothed fellows, some roasting sweet potatoes, others resting on their dark muskets, and others asleep with logs for their pillows.

The business being settled, the officer was about to depart, when he was rather ceremoniously invited by Marion to stay and dine. Not seeing any symptoms of dinner, he was inclined to take the invitation in jest; but on being again pressed, curiosity as well as hunger prompted him to accept. The general then ordered his servant to set the table and serve up dinner; upon which the man placed a clean piece of pine bark on the ground, and, raking the ashes, uncovered a quantity of sweet potatoes. These constituted Marion's breakfasts, dinners and suppers, for many a time that he watched the flame of liberty in the swamps of South Carolina.

Some jests occurred at this patriarchal feast, but in conclusion the conversation took a serious turn. The British officer learned, in reply to various questions, that Marion and his soldiers were serving without pay; living without quarters; sometimes half clothed, at others half starved; and expressed his pity for their situation. The reply of Marion ought never to be forgotten by my youthful readers.

'Pity not me,' said the soldier of freedom, smiling; 'I am happier than you, for I am fighting to free, while you are striving to enslave, your countrymen. When I am hungry, I comfort myself with the hope that I am doing something for my fellow-creatures; when I am cold and wet, I warm myself with the consciousness that I am suffering for my country; and when the cause in which I am engaged, and to which I have pledged my life, seems shrouded in gloom and despair, I still recollect that there is yet virtue in man, and justice in his Maker. The children of my country in after generations may never hear of my name, or know that I laboured in their cause; but on my soul, sir, the thought that I am now contending for their freedom and happiness, is what I would not exchange for the feelings of any man that lives or ever lived, who was the oppressor of his fellow-creatures.'

The soldier of Britain made no reply. He returned to his commander with a serious, nay, sorrowful countenance; and on being questioned as to the cause, made this remarkable answer:—

'Sir, I have seen an American general, his officers and soldiers serving without pay, without shelter, without clothing, without any other food than roots and water—and they are enduring all this for liberty! What chance have we of subduing a country with such men for her defenders.' It is said he soon after threw up his commission and

retired from the service, either in consequence of a change in his feelings, or of hopelessness in the success of the cause in which he had engaged.

SPEARING FISH.

[Head's 'Forest Scenes, in North America.']

April 21st,—The evening turned out remarkably fine, and the water was as smooth as a looking glass—Every thing was ready for my fish spearing expedition, the preparations for which were extremely simple. The fish spear consisted of a straight handle about fifteen feet long, to which a couple of barbed iron spikes, of sufficient size to pierce a moderate-sized salmon, were affixed. The birch-bark, for the purpose of light, was prepared in pieces three or four double, each the size of a large quarto book; and one at a time of these was stuck in a cleft pole five or six feet long, placed at the head of the canoe, overhanging the water in such a manner that the blazing bark might shine upon it. It was no sooner dark than I went to the water's edge, where Liberté and another Canadian were ready with the canoe. As he held the vessel to the shore, I steadied myself by his shoulder, stepped in cautiously, and took my seat in the middle. The canoe was a very eggshell, and as cranky as a washingtub, more fitted to carry ghosts than men; while Liberté was as ugly as Charon himself. A boy of twelve years old could have carried it, notwithstanding it was to hold three of us. We had an establishment of tinder and matches, and some pieces of fat pork cut into slips as a substitute for candles.

As soon as we embarked, the men paddled away along shore towards the head of the bay; and as soon as we came near some small streams which set into the bay, we stopped, and the men, having struck a light, kindled the birch bark in the cleft pole. Crackling like soft fat, the unctuous matter produced a clear flame, which lighted up the watery depth beneath us to the brightness of day. The soft ashes which fell occasionally from the fire caused a ripple, which for a moment confused the objects underneath; but otherwise at a depth of ten feet every thing was clear and resplendent. The slightest form was distinctly visible,—every pebble, even the beetle that crawled on the ground. We passed some perch lying close to the bottom, and soon afterwards a rapid quiver of the water announced the presence of some larger fish. Liberté now became animated, and pointing his spear in the proper direction, made signal to the man in the stern to give way. He struck once, twice, without success; but the third time brought a large fish up on his spear. It was a sucking carp; a worthless fish, full of bones, and very watery. However, we pursued the remainder, and killed two more. We advanced nearer the head of the bay, and at the same time saw two other lights proceeding from the canoes of Indians who had visited the neighbourhood, and were pursuing the same occupation with ourselves.

All of a sudden Liberté again sounded an alarm, and off we were again in pursuit of a fish, which I could not for a long time see; a fine salmon-trout, but of a nature infinitely wilder than the carp. We chased him like lightning, turning and doubling in his wake, till I was obliged to hold both sides of the canoe to keep myself from being thrown out into the water. However I caught sight of the fish, every now and then, when he was for a moment still; then he made a dart, and all again was obscure. We were some minutes after him, having lost him, and come upon him again; but in the end he eluded our pursuit, and made his way into deep water, till the glimmer of his silver sides was lost in the lurid yellow gleam that, becoming by rapid degrees more and more opaque, confined to its very narrow limits our subaqueous prospect. . I changed places with Liberté, with some risk of being upset, and I took the spear, kneeling down in the head of the canoe. (We had regularly replenished our lights, which burnt out every five minutes or thereabouts.) We went back to where we left the carp, and found them again. I struck at them several times, but without success. I found it not only difficult to hit them, from the refraction of the water, but impossible, even had I judged the distance correctly, to drive the spear, by its long bending handle, straight forward. I saw some perch close to the bottom, and I speared one of them. We were in about ten feet water, and I found it was necessary to aim a foot at least below the object. I had the less difficulty, as they were not in motion. I also saw at the bottom a hideous looking fish, yellow with black spots, the body like that of a snake, with a large head, about a foot and a half long, and somewhat in form resembling the small fish found under stones in running streams in England, and called the 'Miller's Thumb.' I speared him, and found him so strong, that I verily expected he would have broken the handle of my spear. He was what the Canadians call a Cat-fish. In his writhing he had a knack of twisting his supple body like an eel round the spear, and with a force that, considering his size, was quite surprising. He was, of course, not eatable.

ADULTERATIONS OF TEA.

[Desmarest's Chemical Recreations.]

The Chinese frequently mix the leaves of other shrubs with those of the tea plant; this fraud is easily discovered by adding to an infusion of it a grain and a half of sulphate of iron. If it is true *green tea*, the solution placed between the eye and the light assumes a pale bluish tint; if it is *bohea tea*, the solution is blue, inclining to black; but if it is adulterated, it shows all the colours, yellow, green, and black.

Ink.—The writing-ink, which is blackest when first applied to the paper, is not of the best quality. It owes its depth of colour to a deficiency of the tanno-gallate of iron—an ingredient which renders the ink more durable, the more abundantly it is contained in it, but which is deposited in the bottle by keeping. There is the greatest quantity of this ingredient in new ink, which is pale when it flows from the pen, but, in a few days, turns black upon the paper.

Constantinople was besieged twenty-nine times, between the years 477, before Christ, and 1453, of the Christian Era, when it was taken by the Turks.

IMPORTANCE OF FRESH AIR.

[Philosophy of Living.]

In all large assemblies the air is apt to become impure by being deprived of its oxygen; and hence the oppression, difficulty of breathing, head-ache, and fainting, aided, perhaps, by diminishing the capacity of the chest by a tight dress. The rooms of schools, and public schools especially, where many children are assembled, and those not the most cleanly, as well as churches, are hardly ever sufficiently ventilated. It is generally supposed that if a room is cool the air must be pure; but if it be even uncomfortably cold, and at the same time crowded with persons, it is just as necessary that the air should be constantly renewed, as if it were midsummer.

It is a matter of the first importance that the air should be subject to constant change and renewal at all times, but particularly in sleeping-rooms, and at night. Nothing is more common than for a person to retire into a small bed-room and close the door and windows, thus precluding all possibility of a supply of fresh air, and in the morning to complain of weakness and head-ache, without once suspecting the true cause. In the southern part of the United States it is not unfrequent for travellers to sleep in the open air, wrapped in a blanket, for many successive nights, and seldom is it that they ever take cold, or suffer in consequence, even when in delicate health. Where then is the propriety of excluding from our bed-rooms every breath of pure and wholesome air? The door may be left ajar, or the window a little open, to admit the external air, without allowing a current to blow upon the body, or incurring the least risk of unpleasant consequences. The air of school-rooms, and most other apartments heated with stoves, is rendered unfit for respiration by being deprived of its moisture, a certain portion of which is necessary for the due performance of the functions of the lungs. A heated, dry air cannot be inhaled, generally, for any length of time by a healthy individual, or one afflicted with a cough or predisposed to affections of the chest; a basin of water on a stove prevents a dry state of the air, and is a precaution which should in no case be disregarded. Besides the lack of moisture in the air of a stove-room, it is so rarefied by heat that a sufficient quantity of oxygen cannot be inhaled to carry on healthy respiration; and hence the uneasy, suffocating sensation of those confined to such an atmosphere, the effect being precisely the same as if but half a breath were taken.

To render the air unfit for respiration, and unable to sustain life, it is not necessary that any noxious or otherwise injurious matter should be added to it; merely depriving it of oxygen causes it to produce as fatal effects as when the most deadly poisons are blended with it. The same mortality may be caused in one latitude as another by confinement of the atmosphere,—on the top of the Alleghanies as in the black hole of Calcutta. This is one, among many reasons, why the poor, inhabiting the basements and cellars in cities, are more obnoxious to disease, and particularly to cholera, than those who live in well-ventilated apartments. As many houses are constructed, there is no possibility of having them ventilated; they are built for the poor, and no pains are taken to make them comfortable; and there is as little chance to pass a current of air into the basement as into the hold of a ship, or even a well sixty feet deep. Much pains were taken by our corporation, (that of New York,) and much money expended, during the years of 1832 and 1834, to cleanse the streets and all other places from filth; load after load of chloride of lime was sprinkled over the city, in alleys and cellars, and through highways and byways; but I very much doubt whether a single aperture was made in any house to supply its inmates with pure fresh air. Chloride of lime may neutralize offensive effluvia; and if there be such a thing as contagion, destroy it —but it can never restore oxygen to the atmosphere when once it has been deprived of it. No house should be built without being so constructed as to allow every room to be freely ventilated at any time; and this could be done with little additional expense, and without the slightest inconvience.

SIMILITUDES.

[Monthly Magazine.]

What can Love be likened to?—
To the glittering, fleeting dew;
To heaven's bright, but fading bow;
To the white, but melting snow;
To fleeting sounds, and viewless air;
To all that's sweet, and false, and fair.

Whereto can we liken Hope?—
To the arch of heaven's wide cope,
Where birds sing sweetly, but are flying;
Where days shine brightly, but are dying;
So near, that we behold it ever;
So far, that we shall reach it never.

What can Beauty's semblance boast?—
The rose resembles her the most;
For that's the sweetest among flowers—
The brightest gem in Flora's bowers;
And all its sweetness soon is past,
And all its brightness fades at last.

And what are Dreams, that light Night's gloom?
Doves that, like Noah's, go and come,
To teach the soul this orb of clay,
Shall not its prison be for aye—
That Time's dark waves shall soon subside,
And brighter worlds spread far and wide.

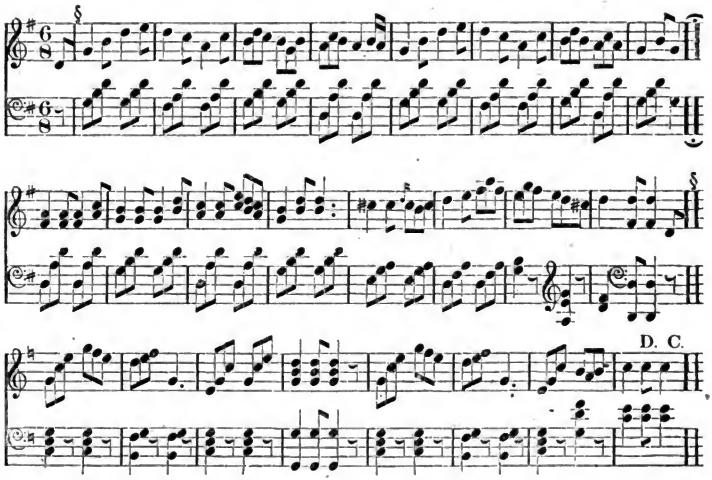
And what's like Popular Renown,
When the destroyer it doth crown?—
The honey which the wild bee's power
Wrings from the bosom of the flower;
The harmless drones no honey bring,—
They win the sweets who wear the sting.

And what is like Ambition's flight?—
The eagle, on his airy height;
On whose broad wings the sunbeam plays,
Though from the world they hide his rays,
Drinking the dew before it falls,
For which the parched earth vainly calls.

INFECTION.—Some people dying of the plague in England, their bodies were buried together on a hill. Nearly a hundred years afterwards, five persons happened to be digging there, and uncovered some decayed fragments of linen. Recollecting the tradition that this was the burial-place of those who died of the pestilence, they threw the earth back into the hole, as speedily as possible. Nevertheless, they all sickened of putrid fever, and three of the number died.

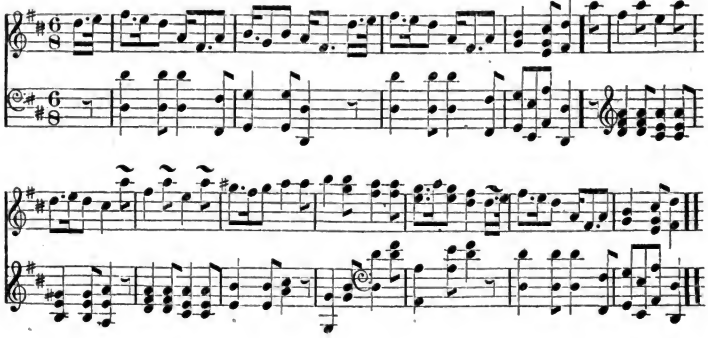
THURINGIAN QUADRILLE.

COMPOSED FOR THE AMERICAN MAGAZINE, BY CH: ZEUNER.



KINLOCK OF KINLOCK.

A FAVORITE SCOTCH AIR, ARRANGED FOR THE PIANO FORTE.



JULY.

Second Baptist Church, Albany, New York.

The site of the new Baptist Church in Albany, near the corner of Pearl street and Maiden-lane, was formerly occupied by a venerable structure, known as the Vander Heyden Palace. This latter edifice was constructed in 1725, with bricks imported from Holland, and in a style of architecture that probably originated in the streets of Amsterdam. So long as it existed, there was no better specimen of the mansions which were erected by the old Dutch nobility of the province; and the ancient structure has been immortalized, we believe, in one of the delightful sketches of Washington Irving. It would appear something like sacrilege to destroy any of the few monuments of past magnificence, that may exist among us, unless to supply their place by the best efforts of modern architecture. The beauty of the new church, however, an engraving of which accompanies this article, will not permit us to regret that the old brick walls of the Vander Heyden Palace have been torn down, to make room for such a successor. The foundation of this edifice was laid in 1834. Its front, which is on the western side of North Pearl street, is ornamented by a stately and elegant portico, of the Ionic order; and the roof is crowned by a dome and lantern, the extreme height of which, above the ground, is one hundred and twenty feet.

Napoleon's Mother. Madame Letitia Bonaparte died at Rome, aged eighty-five years, on the third of February last. The widow of a Corsican officer, she was the mother of the greatest potentate that ever lived, and of a whole brood of lesser kings. Since 1814, she had resided at Rome. Of late years, she had lost her sight, and suffered greatly from the infirmities of age, being chiefly confined to her bed.

[Peasants on Stilts.]

In the Landes, a province of Gascony, in France, the country people are accustomed to walk on stilts —a method of travelling, the most convenient that they could adopt, on account of the deep sands which impede their progress on foot. To a distant spectator, being elevated from three to five feet above the ground, while the legs of the stilts are invisible, they appear as if walking in the air. A long pole, like that used by a rope-dancer, is necessary to enable them to keep their balance. Being habituated to this mode of walking, from infancy, they acquire the most astonishing dexterity, and can run races as fleetly as a horse, and dance with equal grace and agility. They can take leaps, and, what is even more remarkable, they can stoop, so as to pick up the smallest object from the ground. Among other convenient effects, these stilts keep the wearer's feet from the burning sands in Summer, and from the ice-cold water which overflows the country in Winter; and by elevating him to so considerable a height, enable him to view the surrounding landscape to a much wider extent, than would otherwise be practicable. Eight or ten miles an hour is said to be no extraordinary speed, for a man on stilts. When the Emperour Napoleon was travelling through Landes, he had out-ridden the horsemen of his guard; but their place was supplied by the country people, who assembled around his carriage, on stilts, to the number of two hundred, and kept pace with it for two hours, at the rate of seven miles an hour. It would appear that, the legs being so much lengthened by the stilts, the speed of the traveller is proportionably increased.

Such instruments might be convenient appendages to the natural leg, on the further extremity of Cape Cod, where the sands are at least as deep as in any other region of the globe. Even in case of a tumble, the yielding nature of the ground would protect the wearer from material injury. But elsewhere in our country, the soil is too rugged, and the rocks too abundant, to render it advisable for any man to risk a broken nose, by elevating himself above the heads of his fellow-citizens.

LIGHTNING RODS.

In Belgium and the Netherlands, buildings are defended by lightning-rods of a peculiar construction, which, instead of relieving a thunder-cloud of its electricity, drive it into a distant region of the air. It would appear, however, that the effect is not invariably beneficial. From a manuscript letter of Professor Van Mons, the distinguished horticulturalist of Antwerp, we translate the following passage:—'We have had two Winters successively without frost, and two Summers without rain. In the course of each Summer, thirty storms have threatened to burst upon us, but have invariably been prevented from exploding by the lightning-rods. Finally, the clouds have gathered in regions so high, as to be beyond the controul of the rods, and have there burst forth, sending their moisture to the earth in the shape of huge hail-stones. Before the introduction of lightning-rods, we had, at every change of the moon, in Summer, a storm in the lower regions of the air, accompanied with an abundance of warm rain. These rains are now no longer known.'—This, truly, is a most remarkable instance of a change of climate effected by human agency. A modification of the temperature of the air, so as to render the seasons colder or warmer, would have been hardly more wonderful. Yet we derive the same moral from the result, as from the tale of the astronomer, in Rasselas,—that the administration of the Elemental Kingdom would only be changed for the worse, by the interference of man.

Walrus.—This misshapen sea-monster is taken in great abundance on the coast of Finland. The oil derived from its fat, and the ivory of its tusks, are particularly excellent in their quality; and its hide, though not hitherto applied to any use in manufactures, is said to be well adapted for carriage-traces and braces; being of superiour strength to any other kind of leather. The Walrus uses its tusks for the purpose of detaching shell-fish or crustaceous animals from the rocks, at the bottom of the sea. Sometimes, when inclined to sleep, he fastens himself by his tusks to a rock; and during his nap, the tide ebbs, and leaves him suspended in such a manner that he is unable to extricate himself. In the morning, probably, the poor Walrus wonders how he came to be hung upon a peg.

A Sign of Life.—It was a rule among ancient physicians, that, as long as a sick person's eye was so clear that the nurse could discern her own image in the pupil of it, his recovery was not to be reckoned hopeless.

FOGS OF LONDON.

[Mudie's 'Observations of Nature.']

In the evening, the land, especially where it is bare and dry, cools much sooner than the water; and as it is the change of temperature, and not the absolute temperature that produces the change of exaporation, vapour then gathers over the pools and marshes, and the courses of the rivers; and among bare hills with deep valleys, and lakes and rivers, the fog is often seen white and dense, in the hollows, as if some white fluid had been poured into them.

City fogs, such as the fog of London, which is at times very annoying, and always very offensive, are owing to a similar cause; (temporary local heat,) only in the case of these, that cause is in the city. In the early morning, when the production of fog has been lessened by the slackening of the fires during the hours of rest, and the upper air, which may be very dry and tranquil without the limits of the city-heat both upwards and laterally, may have melted the fog of the preceding day, the air may be moderately clear. But when the half-million of fires are lighted, and send up their heat, the whole moisture of the surrounding air is poured over the city; and that, mingling with the evaporation from the city itself, becomes so dense, that the charcoal, and the nitrate of ammonia, and all the other matters which, at ordinary times, the air disperses in great part, float, mixed with the watery vapour, and produce an atmosphere approaching as nearly to the consistency of a quagmire in the air as it is perhaps possible to obtain.

But unpleasant and inconvenient as the London fog is, and much as it prevents all means of observation, there is still something in it worthy of attention to the observer of nature. The fog is a natural production, though some of the elements of it are brought together by artificial aid; and thus, though they be somewhat dismal charms, it has still some of the charms that belong to all natural phenomena. It is curious to find a sort of twilight representation of London in that very substance which completely hides London itself; and yet such is the case. It is not to be understood that the wards, and cities, and boroughs, which compose the metropolis are as well represented by their several fogs as they are by other means; but still they are represented by these.

The air over London moves upwards and downwards with the tide of the river; and over rivers of such magnitude the light winds are more frequently in the direction of the tides than in the cross direction. The light winds that accompany the fog, though they barely reach the streets, and are not indeed very perceptible when so little can be seen, are usually from the east. Hence, if the tide is upward and the wind at east, the fog will be borne slowly westward, until the fog, which is produced at Blackwall may reach as far as Chelsea before the turn of the tide. That is one of the causes which produces, or at least enables a person at Chelsea to see, the 'fog-map.' But again, as the heat of the population and their fires, and the smoke of the latter, produce the fog, the fog must be most dense where those are most abundant; and though the quantity added as the moving mass creeps westward, must, to some extent, weaken the shades of density as first produced, yet these are not altogether obliterated. Hence, if one takes post somewhere about Earl's court, on a morning with the wind at east, first comes the fog of Brompton, and a part of Chelsea and Knightsbridge; then comes the Green Park, a great deal lighter. St. James's is not very dense, because the houses there are large, and the fires not many. It then gradually thickens to St. Giles's, and the hundreds of Drury, Lincoln's Inn Fields lighten the prospect a little; but the thick mass of buildings all the way to St. Paul's make it soon dark again. St. Paul's is but a speck; and after that it is usually dark as Erebus till you are quite tired of it. If the fog of one of the great breweries, or other works, which bountifully bestow all their smoke on the neighbourhood, happens to pass over you, it is perfect obscurity, more especially if the air which is now passing over you happened to be there when they were feeding the fire.

The London fog is no indication of rain, nor, indeed, are any of the creeping fogs that are formed in the hollows. They are, indeed, the very reverse —they show that the upper air resists and keeps down the fog, so that the temperature of its own humidity is not altered. But the London fog has a rain of its own, and that rain is filthy to man and pernicious to vegetation. It rains soot and a 'villanous combination' of acrid matters, which soil the people and their provisions, even while they are in the act of eating. Broccoli, and also the close-leaved vegetables, always have a nauseous bitter taste in thick fogs.

But the fog depends on the quantity of moisture there is in the earth, or mud, or whatever happens to be exposed to the air; and so the density of the fog must vary with that. Some parts of London are on a thick bed of fine dry sand and gravel, which allows the water to sink into the ground, so that it is not these that cause fog. Others are on sludge or mud, natural or artificial, and that works up between the stones of the pavement, forms mire on the surface, and converts the street into a very successful manufactory of fog: and other parts again are on an exceedingly tough clay the surface of which is kept cold by continual humidity and evaporation.

We may here find a use in observing the effects of the London fog; for it will be found, where other circumstances are the same, to be no bad indicator of the healthiness of the different places. When the air is more than usually humid, and the surfaces of the walls in consequence cold, they melt dew out of the warmer and humid air, just as the windows of a room, in which there are many people, melt dew out of the moist and warm air within; or as the surface of the air and of vegetables melts dew out of the warm air of the evening, which does not cool so fast as these solid substances. The dew of the fog takes the coat of the fog along with it; and thus, wherever the bricks and stones become soonest discoloured, and the former show symptoms of decay, and the latter get discoloured with green mould, and other little plants, the place, whatever

may be its height above the mean level, is always the most damp and unwholesome. Wherever the bricks lose their colour fast, and become granular at the edges, it will be found that the mortar is most decomposed, and has an efflorescence of salts of lime on it; and it will be found that the buds of the trees are black, and full of cankers, and rusty, and in places breeding *fungi*, unless they are natural inhabitants of moist atmospheres. The flags in the pavement, and even the granite in the streets, bear marks of this humid and corrosive nature; and an atmosphere which produces those effects cannot be the most salubrious for human beings. So much for the earth fogs.

INDULGENCE OF CHILDREN.

[Abdy's 'United States.']

There are two features in the (American) national character that few strangers fail to observe; and, as I often heard the justice of the imputation acknowledged—particularly by those who are most exempt from both failings, (it would be indelicate to bring my friends into public court as witnesses,) I have reason to think the remark is correct. The Americans are too anxious to make money, and too apt to spoil their children. Parental affection may, perhaps, be the cause of the one, as it is of the other, though it is hardly consistent with any rational object it may have in view, to 'heap up riches,' and to make those who are to 'gather them' unfit to employ them properly;—to increase both the quantity of temptation and the chances of yielding. It was truly painful to see how fretful and restless the children were made by this inconsiderate indulgence. I have known them to lose all the pleasures of a little excursion, because they could not get what was in fact unattainable, and what they never would have asked for, if their unreasonable wishes had not been habitually complied with. I shall not readily forget an interesting child I saw at an hotel, crying on the stair-case, as if her little heart would break; on inquiring of her elder sister, who was below, what was the matter, she said—'It is only because she will not go up stairs alone.' I told her she ought not to indulge her, as she was old enough to find her way by herself:—'So I think,' was her reply, 'but if papa was here, he would make me go up with her.' The boys are much more spoiled than the girls, and that is the case pretty much all the world over. As if a 'male child' were really and truly of more value than a female, more notice is taken of it. When one of these spoiled children cries, it is usually quieted with a sugar-plum. The consumption of confectionary is thus in a state of progressive increase. Sweetmeats, like tobacco, are first used as a remedy, and then as a luxury; the one is just as good a styptic for tears, as the other is in curing the toothache. Both, at last, become necessaries, and are continued when there are neither tears to be shed, nor teeth to ache. Whenever these pitiable little beings make their appearance at the dinner-table in the hotels, there is sure to be pouting or squalling, because they have got something to eat they do not want, or want something they cannot get. I had, unfortunately, an opportunity of watching for three weeks the way in which a little girl of two years old was managed by her parents. When with her father, who was kind and assiduous in supplying all her wants and whims, she was constantly whining out, 'Ma! Ma!' when with her mother, her cry was, 'Pa! Pa!' with equal pertinacity; her preference for the absent parent being meted out with the nicest impartiality. Both pursued the same method to quiet her;—not by taking her at once to the other, or telling her she must not be indulged; but by striving to coax her attention to some other object, and keeping up in her mind a continued alternation of excitement and disappointment. The poor thing was thus systematically taught evasion and deception, and her request was met by the same want of rational consideration, whether it were proper or capricious. The answer to any observation upon the effects of indulgence is—'poor creatures! they will soon have hardships enough; a little indulgence now can do them no harm:' a singular sort of preparation for a world that is acknowledged to require self-control or resignation in all who are to pass through it. They manage their horses differently—they accustom them, at the earliest age, to the saddle and the bit; and teach them, when young, to bear and obey. The result in both cases is what might be expected. Their children are plagues, and their horses admirable. It might really be thought that common sense had nothing to do with the treatment of youth; and that there were no years of discretion but what have been fixed by legislative enactment. Men are governed by names; and because, by a perversion of language, 'childish' and 'foolish' mean the same thing, 'child' and 'fool' are taken to be convertible terms; and language which is fitted for nothing but to amuse the one, is too often employed to instruct the other.

Animalcula.—It is shown by the microscope, that every part of the bodies of warm-blooded animals, (comprising man, and all other animals of the higher orders,) is the habitation of innumerable living beings. This is equally the case in health, as in disease. Some physicians suppose, that, though these minute beings may be innocuous to the animals whose bodies form their natural habitation, yet the intrusion of strange species may cause sickness or death.

Lemon Juice, when bought at the shops, is not always pure. The most pernicious adulteration of which it is susceptible, is by means of mineral acids, the irritating properties of which render it extremely hurtful in cases of inflammation of the digestive organs, for which the pure juice is very beneficial. It is more commonly mixed with vinegar or tartaric acid.

Peruvian Bark is sometimes sold, after the quinine, which is the only valuable part of it, has been extracted by means of acids. After this process, the yellow and gray varieties of the bark assume a brown colour, like tobacco, become less bitter, and acquire a saline taste. The reddish bark grows more intensely red, and becomes more saline than either of the other varieties.

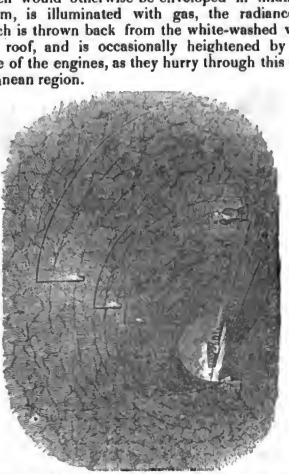
ROADS, TUNNELS, AQUEDUCTS, AND EXCAVATIONS.

Some of the most striking results of human energy, acting upon the physical world, are displayed in the conquest of the obstacles which Nature has opposed to the locomotive propensities of man. Chasms yawn beneath his feet. Mountains, towering to the skies, forbid his passage, and appear to form a barrier almost as insuperable, as the difficulties which impede his flight to distant planets. But the chasm is overpassed, as if with the wings of an eagle; the mountain crumbles before the traveller's footsteps, or opens an avenue for him, through its inmost heart. Perhaps there is no surer test of the real prosperity of a country, and of its progress in most matters comprehended under the term, civilisation, than the degree of industry, science, and expense, which is bestowed on its roads, and other methods of internal or foreign communication.

In Switzerland, the great road across the Alps is one continued miracle, the credit of which, however, is not due to the inhabitants of the country, but to a Magician who wrought far more wondrous miracles than this. It was constructed by order of Napoleon, and completed in 1805, previous to which period, the mountains had been impassable, except for foot-passengers and horsemen. The road is twenty-four feet wide, and is fenced in some places by wooden rails, and in others by a parapet of granite. In its whole extent between the valley of the Rhone and Piedmont, there are six tunnels, hewn through the solid rock, and twenty-two bridges, thrown across chasms, cascades, and mountain-streams. Often, the road clings to the side of a tremendous precipice, the upright wall of which rises thousands of feet above the traveller's head, and sinks to an equally terrific depth below. A faint idea of this Alpine route, and its awfully majestic scenery, may be obtained from the following cut.

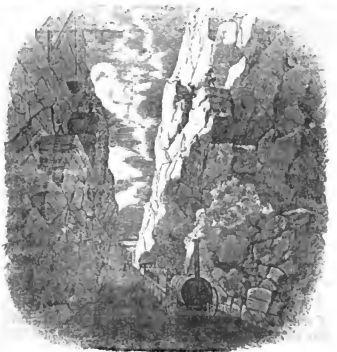
[An Alpine Pass.]

In England—although the face of the country would seem to require no such gigantic efforts of skill and industry, as alone could have constructed a road across the Alps—there have been achievements not less remarkable. The great Tunnel, near the commencement of the Liverpool and Manchester Rail-Road, is a work unrivalled in its kind. Its width, at the base, is twenty-two feet; the arched roof is sixteen feet high; and, with these dimensions, the tunnel holds its course under ground, through the various strata of rock and clay, for more than a mile and a quarter. The passage, which would otherwise be enveloped in midnight gloom, is illuminated with gas, the radiance of which is thrown back from the white-washed walls and roof, and is occasionally heightened by the glare of the engines, as they hurry through this subterranean region.



[Tunnel near Liverpool.]

After emerging from the Tunnel, the same Rail-Road passes through an excavation of rock, which may justly be considered another wonder, although it is open to the sky. The height of the wall, on each side, is seventy feet; and, at this depth, the cars glide along the resounding chasm, with barely room enough to pass, on their separate tracks.

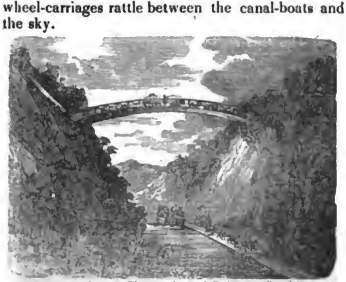


[Excavation of Olive Mount.]

America, young as she is, and vast as are the woods and wildernesses which yet diversify her surface, need not shrink from a comparison with any country in the world, as regards the facilities of internal communication. The Erie canal is as wonderful a work, in its way, as Napoleon's road across the Alps, in Switzerland. The aqueducts, by means of which this canal is conducted over ravines and rivers, are eighteen in number. A representation is here given of one which crosses the Mohawk, presenting the singular spectacle of a navigable stream, and a vessel gliding along its course, at the rate of four miles an hour, many feet above the broken and turbulent current of a river.

[Aqueduct on the Erie Canal.]

Another remarkable object is the Deep Cut of the Chesapeake and Delaware Canal. This passage extends four miles through a hill ninety feet high, being the greatest depth at which an avenue has been opened for any canal in the world. A bridge, with a single arch of two hundred and fifty-five feet, is thrown across the excavation; and wheel-carriages rattle between the canal-boats and the sky.



[Deep Cut on Chesapeake and Delaware Canal.]

It is probable that the art and industry of man will continue to be applied to these and similar purposes, and will finally open paths to regions hitherto the most inaccessible; unless some great convulsion of the earth shall overwhelm the roads and choke up the canals, leaving to another race the task of constructing all anew.

Cod-fish, when drawn up from a great depth in the sea, are often burst asunder by the expansion of their air-bladders.

[Fire Hunting.]

In the western and south-western states, the hunters have a singular method of shooting deer. Two of them go forth into the forest at night, one with his rifle, and the other with a flaming torch, a firebrand, or a pan of coals, on the top of which, he kindles a blaze. The light gleams around, and being discerned by the deer through the darksome avenues of the woods, it either attracts them towards it, like an insect to a candle, or bewilders them, so that they are unable to take flight. The glistening of their eyes betrays them to the hunter, who takes aim directly between the two brilliant orbs, and seldom fails to stretch the antlered victim on the ground. Where this custom prevails, it would appear dangerous for a benighted wanderer in the forest to draw near a light lest the glistening of his eyes should expose him to the fate which was intended for the deer.

Captain Molly.—We find the following anecdote in Durivage's Historical Cyclopedia;—'In the beginning of the battle of Monmouth, one Molly Pitcher was occupied in carrying water from a spring to a battery, where her husband was employed in loading and firing a cannon. He was shot dead at last, and she saw him fall. An officer rode up, and ordered off the cannon. 'It can be of no use now,' said he. But Molly stepped up, offered her services, and took her husband's place, to the astonishment of the army. She fought well, and half-pay for life was granted her by Congress. She wore an epaulette, and was called Captain Molly, ever after.'

Historical Anecdote.—At the commencement of the Revolution, the British officers had a small theatre in Boston. One night, when the performance was a farce called the 'Blockade of Boston,' an orderly sergeant rushed upon the stage, and called out, 'The Yankees are attacking our works on Bunker's Hill!' The audience mistook him for a personage of the farce; but General Howe saw that the man's trepidation was not feigned, and immediately ordered the officers to their alarmposts.

DOMESTIC LIFE OF WASHINGTON.

[Paulding's 'Life of Washington.']

From the period of his marriage, Washington resided constantly at Mount Vernon, and put in practice that system of regularity and of temperance in every species of indulgence and labour, which he persevered in, as far as was consistent with his circumstances and his situation, during the remainder of his life. His moments were numbered, and divided, and devoted to his various objects and pursuits. His hours of rising and going to bed were the same throughout every season of the year. He always shaved, dressed himself, and answered his letters by candle-light in Summer and Winter; and his time for retiring to rest was nine o'clock, whether he had company or not. He breakfasted at seven o'clock in summer, and eight in winter; dined at two, and drank his tea, of which he was very fond, early in the evening, never taking any supper. His breakfast always consisted of four small corn-cakes, split, buttered, and divided into quarters, with two small-sized cups of tea. At dinner he ate with a good appetite, but was not choice of his food; drank small beer at his meals, and two glasses of old Madeira after the cloth was removed. He scarcely ever exceeded that quantity. The kernels of two or three black walnuts completed the repast. He was very kind, affectionate, and attentive to his family, scrupulously observant of every thing relating to the comfort, as well as the deportment and manners, of the younger members.

His habits of military command produced a similar system with regard to his servants, of whom he exacted prompt obedience. This condition complied with, they were sure of never being subjected to caprice or passion. Neglect or ill conduct was promptly noticed, for the eye of the master was every where, and nothing connected with the economy of his estate escaped him. He knew the value of independence, and the mode by which it is obtained and preserved. With him idleness was an object of contempt, and prodigality of aversion. He never murdered an hour in wilful indolence, or wasted a dollar in worthless enjoyment. He was as free from extravagance as from meanness or parsimony, and never in the whole course of his life did he turn his back on a friend, or trifle with a creditor.

Thus, in the dignified simplicity of usefulness, did this great and good man employ himself until the commencement of the troubles which preceded the Revolution. His occupation was husbandry; his principal amusement was hunting the deer, which then abounded in the forests of the Potomac. Here his skill in horsemanship rendered him conspicuous above all his competitors. He also read much, and his hour was early in the morning.

His custom was to retire to a private room, where no one was permitted to interrupt him. Much curiosity prevailed among the servants to know what he was about, and old Jeremy, (his black servant) relates, that, in order to gratify it, he one morning entered the room under pretence of bringing a pair of boots. Washington, who was reading, raised his eyes from the book, and getting quietly up,—'I tell you,' said Jeremy, 'I go out of de room faster dan I come in!'

After his retirement from the Presidency, the few remaining years of his life were passed in peaceful occupations, and in the bosom of repose. Mount Vernon was of course thronged with visitors; it was the shrine where his countrymen came to pay their devotions, and where distinguished foreigners hastened from all parts of Europe, to behold and converse with the man who, after delivering a nation from foreign oppression, had left it in possession of the freedom he had won; who twice abdicated a power for which thousands and tens of thousands had sacrificed themselves and their country.

He exhibited the same wise economy of time, the same attention to his domestic affairs and rural pursuits, the same cheerfulness in hours of relaxation, and the same solicitude for the happiness of those around him. He always rose at, or before the dawn of day, lighted his candle and entered his study, where he remained a considerable time, as was supposed, at his devotions. But no one ever knew, for none ever intruded on his sacred privacy. When his occupation was finished, he rung for his boots, and walked or rode out for his morning exercise or avocations. Visitors did not interfere in the least with his course of life; they were made welcome, by permission to do as they pleased, and by being convinced by all they saw that their presence caused no restraint, nor diminished the pleasures of others. Like all truly great men, the manners of Washington, though eminently dignified, were adorned by the most unaffected simplicity. He relished the innocent gayety of youth, and the gambols of children, and enjoyed a decorous jest or humorous anecdote. If, while perusing a book or a newspaper in the domestic circle, he met with any thing amusing or remarkable, he would read it aloud for their entertainment; and never failed to participate in every harmless frolic that was going on around him. His dignity was not that of pride, but of intellect and virtue; and among those he loved, he laughed and joked like others. He was accustomed sometimes to tell the following story:—

On one occasion, during a visit he paid to Mount Vernon while President, he had invited the company of two distinguished lawyers, each of whom afterwards attained to the highest judicial situations in this country. They came on horseback, and for convenience, had bestowed their wardrobe in the same pair of saddle-bags, each one occupying his side. On their arrival, wet to the skin by a shower, they were shown into a chamber to change their garments. One unlocked his side of the bag, and the first thing he drew forth was a black bottle of whisky. He insisted that this was his companion's repository; but on unlocking the other, there was found a huge twist of tobacco, a few pieces of corn-bread, and the complete equipment of a waggoner's pack-saddle. They had exchanged saddle-bags with some travellers by the way, and finally made their appearance in borrowed garments that fitted them most ludicrously. The general was highly diverted, and amused himself with anticipating the dismay of the waggoner when he dis-

covered the mistake of the men of law. It was during this visit that Washington prevailed upon one of his guests to enter into public life, and thus secured to his country the services of one of the most distinguished magistrates of this or any other age.

Another and more touching anecdote is derived from a source, which, if I were permitted to mention, would not only vouch for its truth, but give it additional interest. When Washington retired from public life, his name and fame excited in the hearts of the people at large, and especially of the more youthful portion, a degree of reverence which, by checking their vivacity or awing them into silence, often gave him great pain. Being once on a visit to Colonel Blackburn, ancestor to the exemplary matron who now possesses Mount Vernon, a large company of young people were assembled to welcome his arrival, or on some other festive occasion. The general was unusually cheerful and animated, but he observed that whenever he made his appearance the dance lost its vivacity, the little gossippings in corners ceased, and a solemn silence prevailed, as at the presence of one they either feared or reverenced too much to permit them to enjoy themselves. He strove to remove this restraint by mixing familiarly among them, and chatting with unaffected hilarity. But it was all in vain; there was a spell on the little circle, and he retired among the elders in an adjoining room, appearing to be much pained at the restraint his presence inspired. When, however, the young people had again become animated, he arose cautiously from his seat, walked on tiptoe to the door, which was ajar, and stood contemplating the scene for nearly a quarter of an hour with a look of genuine and benevolent pleasure, that went to the very hearts of the parents who were observing him.

As illustrating his character, and affording an example of his great self-command, the following anecdote is appropriate to my purpose. It was related by Judge Breckenridge himself. The judge was an inimitable humourist, and, on a particular occasion, fell in with Washington at a public house, where a large company had gathered together to discuss the subject of improving the navigation of the Potomac. They supped at the same table, and Mr. Breckenridge essayed all his powers of humour to divert the general; but in vain. He seemed aware of his purpose, and listened without a smile. However, it so happened that the chambers of Washington and Breckenridge adjoined, and were only separated from each other by a thin partition of pine boards. The general had retired first, and when the judge entered his own room, he was delighted to hear Washington, who was already in bed, laughing to himself with infinite glee, no doubt at the recollection of his stories.

The industry of Washington was one of his great characteristics; his time was regularly divided; his recreations and his labours never interfered with each other. When his work was done, and not till then, did he come forth among his guests or his family, in the serene majesty of his virtue, cheerful and kind, indulgent and conciliatory. His voice was attuned to kindness, and those accustomed to be the object of his smiles, say that there was something in them peculiarly touching. They were full of benignity and chastened cheerfulness. They were more apt to draw tears of gratitude, than to awaken gaiety. One of his kinsmen, now no more, who was, when a child, much at Mount Vernon, has told me that when the general patted him on the head, and gave him one of his affectionate smiles, he always felt the tears swelling under his eyelids.

One of his favourite nephews, in describing his last parting with Washington, says;—'When I took leave of him, he stood on the steps of the front door, where he took leave of myself and another, and wished us a pleasant journey, as I was going to Westmoreland on business. It was a bright frosty morning, he had taken his usual ride, and the clear healthy flush on his cheek, and his sprightly manner, brought the remark from both of us that we had never seen the general look so well. I have sometimes thought him decidedly the handsomest man I ever saw; and when in a lively mood, so full of pleasantry, so agreeable to all with whom he associated, that I could hardly realize that he was the same Washington whose dignity awed all who approached him.'

THE MOTHER OF WASHINGTON.

[Paulding's 'Life of Washington.']

The mother of Washington, on whom the care of bringing him up devolved on the death of his father, is described to me, by those who know her well, as a woman of ordinary stature, once a great belle and beauty in that part of Virginia called the Northern Neck. High-spirited, yet of great simplicity of manners, uncommon strength of mind, and decision of character, she exacted great deference from her sons, of whom George was the favourite. The only weakness of her character was an excessive fear of thunder, which originated in the melancholy death of a young female friend, who was struck dead at her side by lightning, when Mrs. Washington was about fifteen years old.

The same inflexible regard to the performance of those ordinary duties of life, on which so much of our own happiness and that of others depends; the same strict punctuality in keeping her word, and discharging all the obligations of justice, by which Washington was distinguished, characterized his mother. There was a plain honesty and truth about her, peculiar to that age, and which has been ill-exchanged for empty professions and outward polish. As a native of Virginia, she was hospitable by birth-right, and always received her visitors with a smiling welcome. But they were never asked to stay but once, and she always speeded the parting guest, by affording every facility in her power. She possessed all those domestic habits and qualities that confer value on women, but had no desire to be distinguished by any other titles than those of a good wife and mother. She was once present, and occupied the seat of honour, at a ball given to Washington at Fredericksburg, while in the full measure of his well-earned glory; and when nine o'clock came, said to him with perfect simplicity, 'Come, George, it is time to go home.'

[View of Cincinnati, Ohio.]

CINCINNATI.

The city of Cincinnati stands on the north bank of the Ohio, at a spot where the hills, on either side of the river, retire from the shores, leaving an intermediate space of about twelve miles in circumference. The river flows through the valley which is thus formed, dividing it into two unequal portions, the larger of which, comprehending two thirds of the whole area, and containing about four square miles, lies on the Ohio shore. The site of Cincinnati is on two parallel plains, usually termed the Hill and the Bottom, the former of which is elevated fifty or sixty feet above the latter. The extent of the valley, from Deer-creek on the east to Mill-creek on the west, is nearly three miles. Until the year 1788, the Indian or the hunter, standing on the circular line of hills, above the valley, of which we have described the outline, would have seen only the gigantic trees, and the river sundering the primeval forest with its tranquil breadth. Nearly twenty years later, from the same position, nothing was visible, save a rough backwoods settlement of five hundred people. But soon a marvellous change was to take place; in 1820, the once solitary vale had become populous with nearly ten thousand souls; and now, if the traveller take a view of Cincinnati from its wall of hills, he will behold busy streets, compact and massive edifices, the spires of churches, the smoke of manufactories, and all other characteristics of a city, containing thirty-five thousand inhabitants.

Seven of the streets of Cincinnati are sixty-six feet wide, and separated from each other by spaces of three hundred and ninety-six feet, and are intersected, at right angles, by streets of the same width, and at equal intervals. Among other public buildings are a Court House, a Jail, four Market Houses, a Bazaar, two Theatres, a Medical College, a Hospital and Lunatic Asylum, and between twenty and thirty Churches. A large amount of capital is employed in manufactures, with steam-machinery; and there is a dense population in the vicinity of the buildings for this purpose. An obscure portion of the city, Mrs. Trollope informs us, is inhabited by free negroes, and thence derives the local designation of Little Africa. The market of Cincinnati, according to the same lady, (whose favourable judgments, at least, are entitled to implicit confidence,) is hardly surpassed, for its excellence, cheapness, and abundance, by any in the world. She likewise speaks with admiration of the noble landing-place, more than a quarter of a mile in extent along the river, well-paved, and surrounded with neat buildings. Fifteen steamboats, she observes, have been counted here at once; and there was yet space for fifteen more to be ranged in the same line. The years that have elapsed since Mrs. Trollope resided there, are no small period in the history of so recent a city as Cincinnati, and have doubtless prodigiously improved it.

It is the great trade which is carried on with the East, the West, and the South, and even with foreign countries, in addition to its own internal industry, that has made Cincinnati the largest and wealthiest city, except New Orleans, in the Valley of the Mississippi. Its rapid, yet healthful growth

has rendered it famous throughout the world. It is one of those wonders, the result of favourable situation and energetic enterprise, to which the American so proudly points, as peculiar to his own land, when the European boasts the ruined magnificence of other times.

MIGRATIONS OF BIRDS.

The Rev. Mr. Batchman, of Charleston, South Carolina, has published an interesting essay on the Migration of Birds. This has long been a subject of discussion among naturalists and others; nor has it been found easy to account for the sudden appearance of large flocks of birds, in the first warm weather of Spring, and their no less sudden departure, on the first cold day of Autumn; while, perhaps, they were never seen during their migration, nor had been traced to any other region. The mystery of their movements has led most people, and even many scientific men, to suppose that the swallow, and other species, betake themselves to caves, hollow trees, lakes and ponds, or burrow under the mud, and thus remain in a torpid state, throughout the Winter. Mr. Batchman, however, is satisfied, from a view of the interiour system of the swallow, that it could not, like some quadrupeds, exist in a state of torpidity, beyond a day or two; and the same is true of all other birds. Swallows, by way of experiment, have been immersed under water, but were invariably drowned, in the course of a few moments, and were not to be revived by warmth, nor even by electricity. It is undeniable that birds have been found in caves, hollow trees, and similar situations, in a partly torpid state; but they had doubtless taken these lodgings merely for a single night, and were surprised by a sudden attack of cold, which rendered them incapable of motion.

The structure of migratory birds is suitable to rapid and long-continued flight. Their feathers are so light that they will float many hours in the atmosphere, requiring scarcely any support; their bones, which are of a lighter substance than those of quadrupeds, are hollow, and filled with air, instead of marrow. They have large lungs, which adhere to the ribs, and are provided with air-cells, extending into the abdomen. The length and strength of their wings is great, in proportion to the size of their bodies; and thus they are enabled to soar above the clouds, and pass from clime to clime, and from a wintry region to a warm one. Hawks, wild pigeons, and some species of wild duck, fly at the rate of forty miles an hour; and geese, ducks, and pigeons, have been taken in the Northern States, with undigested rice in their stomachs, which they must have eaten, within twenty-four hours previous, in Carolina or Georgia. It is a pity that a contract cannot be made with a flock of wild geese, for the transportation of the mails!

Mr. Batchman is of opinion, that there are few or no birds, which do not migrate to greater or less distances, either to enjoy a warmer climate, or for the convenience of food. Those which continue in the northern regions, are either carnivorous, as the owl, the hawk and the raven, and eat the few smaller birds that are then to be found, or else follow the hunters and the wolves, and pick the bones of their prey;—or they are of those kinds which feed on the buds of trees, or the seeds of pine and spruce, or of plants, protruding above the snow, or on grass seed, scattered in barn-yards and about hay-stacks. But all the species that feed on insects and worms, and all that gain their sustenance in moist, muddy places, are compelled to migrate, during the Winter, to a milder clime. Those birds which only partially migrate, removing southward, yet still remaining within the verge of Winter, such as the eagle, the hawk, and the owl, have warm, thick, downy plumage, which generally extends, like a pair of stockings, over the feet and toes. Ducks and petrels, in addition to this warm clothing, are provided with little reservoirs of oil, which they exude in sufficient quantity to lubricate their feathers, and thus prevent the water from penetrating to their skins. Often, while swimming, they draw up their feet within the down of their breasts, and thus float comfortably upon the wintry billows. Birds have a further protection against cold in their internal warmth; their temperature being eight or ten degrees higher than that of man.

Some species of birds migrate from one extremity of the Union to the other. Others migrate only partially and occasionally. Thus partridges, which, by their weight and shortness of wing, are unfit for continued flight, sometimes pass from New Jersey, across the Delaware river, into Pennsylvania, in quest of more abundant food; their flight is so heavy, that they become wearied and drop into the water, and continue the passage by swimming. In the same manner, wild turkies cross the Ohio, Missouri, and Mississippi rivers, and are taken in large numbers, wet and exhausted, while in the water, or immediately after landing. The rail, on the other hand, migrates to a vast distance. Mr. Batchman was informed, by an Indian trader, that he had found their nests among the reedy marshes of the northern lakes. In the Middle States, immense multitudes of these birds appear, in the middle of October, and fill the air with their clamorous cackle, where, but the day before, not an individual could have been found. At a later period, they appear among the reeds and marshes of South Carolina, whence they proceed still further south, and return in the Spring. The fact that rails, like several other species of migratory birds, perform their journeys during the night, has thrown a great mystery around their movements, and given rise to the idea that they lie torpid in the mud.

As the period of migration approaches, the birds become restless, and appear conscious that an important crisis is at hand. Two species of wild geese, which Mr. Batchman kept in a half-domesticated state, being prevented from flying, by having their wings severed at the joint, annually attempted to perform their migration by running. Some birds assemble in troops; and the young set forth on their untried way, without the guidance of the old. Some fly in long, straggling flocks, and others in dense masses. Some pursue their far journey, all alone. It is supposed that, in each migration, they revisit the very same spots where they had built their nests, the preceding year.

THE STREET POLICE OF PARIS.

['Paris and the Parisians.']

I will not tell you that this police is bad, for that, I doubt not, many others have done before me; but I will tell you that I consider it as something wonderful, mysterious, and perfectly incomprehensible. In a city where every thing intended to meet the eye is converted into graceful ornament; where the shops and coffee-houses have the air of fairy palaces; and the markets show fountains where the dainty naïads might delight to bathe;—in such a city as this, where the women look too delicate to belong wholly to earth, and the men too watchful and observant to suffer the winds of heaven to visit them too roughly;—in such a city as this, you are shocked and disgusted at every step you take, or at every gyration of the wheels of your chariot, by sights and smells that may not be described. Every day increases my astonishment at this; for every day brings with it a fresh conviction that much of the enjoyment of life is altogether destroyed in Paris by the neglect of such a degree of municipal interference as might secure the most elegant people in the world from the loathsome disgust occasioned by the perpetual outrage of common decency in their streets. On this branch of the subject it is impossible to say more; but there are other points on which the neglect of street-police is as plainly, though less disgustingly apparent; and some of these I will enumerate for your information, as they may be described without impropriety; but when they are looked at in conjunction with the passion for graceful decoration, so decidedly characteristic of the French people, they offer to our observation an incongruity so violent, as to puzzle in no ordinary degree whoever may wish to explain it. You cannot at this season (April) pass through any street in Paris, however pre-eminently fashionable from its situation, or however distinguished by the elegance of those who frequent it, without being frequently obliged to turn aside, that you may not run against two or more women covered with dust, and probably with vermin, who are busily employed in pulling their flock-mattresses to pieces in the street. There they stand or sit, caring for nobody, but combing, turning, and shaking the wool upon all comers and goers; and finally, occupying the space round which many thousand passengers are obliged to make what is always an inconvenient, and sometimes a very dirty *detour*, by poking the material, cleared from the filth, which has passed into the throats of the ladies and gentlemen of Paris, back again into its checked repository. I have within this half hour passed from the Italian Boulevard by the Opera House, in the front of which this obscene and loathsome operation was being performed by a solitary old crone, who will doubtless occupy the place she has chosen during the whole day, and carry away her bed just in time to permit the Duke of Orleans to step from his carriage into the Opera without tumbling over it, but certainly not in time to prevent his having a great chance of receiving as he passes some portion of the various animate and inanimate superfluities which for so many hours she has been scattering to the air.

A few days ago I saw a well-dressed gentleman receive a severe contusion on the head, and the most overwhelming destruction to the neatness of his attire, in consequence of a fall occasioned by his foot getting entangled in the apparatus of a street-working tinker, who had his charcoal fire, bellows, melting-pot, and all other things necessary for carrying on the tinning trade in a small way, spread forth on the pavement of the Rue de Provence. When the accident happened, many persons were passing, all of whom seemed to take a very obliging interest in the misfortune of the fallen gentleman, but not a syllable either of remonstrance or remark was uttered concerning the invasion of the highway by the tinker; nor did that wandering individual himself appear to think any apology called for, or any change in the arrangement of his various chattels necessary.

Whenever a house is to be built or repaired in London, the first thing done is to surround the premises with a high paling, that shall prevent any of the operations that are going on within from annoying in any way the public in the street. The next thing is to arrange a foot-path round this paling, carefully protected by posts and rails, so that this unavoidable invasion of the ordinary footpath may cause as little inconvenience as possible. But were you to pass a spot in Paris under similar circumstances, you would fancy that some tremendous accident,—a fire, perhaps, or the falling in of a roof—had occasioned a degree of difficulty and confusion to the passengers which it was impossible to suppose could be suffered to remain an hour unremedied; but it is, on the contrary, permitted to continue, to the torment and danger of daily thousands, for months together, without the slightest notice on the part of the municipal authorities. If a cart be loading or unloading in the street, it is permitted to take and keep a position the most inconvenient, in utter disregard of any danger or delay which it may and must occasion to the carriages and foot-passengers who have to travel round it.

Nuisances and abominations of all sorts are without scruple committed to the street at any hour of the day or night, to await the morning visit of the scavenger to remove them; and happy indeed is it for the humble pedestrian if his eye and nose alone suffer from these ejectments; happy, indeed, if he comes not in contact with them, as they make their unceremonious exit from window or door. '*Quel bonheur!*' (how fortunate!) is the exclamation if he escape; but a look, wholly in sorrow, and nowise in anger, is the only helpless resource should he be splashed from head to foot.

On the subject of that monstrous barbarism, a gutter in the middle of the streets expressly formed for the reception of filth, which is still permitted to deform the greater portion of this beautiful city, I can only say, that the patient endurance of it by men and women of the year one thousand eight hundred and thirty-five, is a mystery difficult to understand.

It really appears to me, that almost the only thing in the world which other men can do, but which Frenchmen cannot, is the making of sewers and drains After an hour or two of very violent

rain last week, that part of the Place Louis Quinze which is near the entrance to the Champs Elysées remained covered with water. The Board of Works having waited a day or two to see what would happen, and finding that the muddy lake did not disappear, commanded the assistance of twenty-six able-bodied labourers, who set about digging just such a channel as little boys amuse themselves by making beside a pond. By this well-imagined engineering exploit, the stagnant water was at length conducted to the nearest gutter, the pickaxes were shouldered, and an open muddy channel left to adorn this magnificent area, which, were a little finishing bestowed upon it, would probably be the finest point that any city in the world could boast.

Perhaps it will hardly be fair to set it among my complaints against the streets of Paris that they are not Macadamized—the last and most luxurious improvement. The exceeding noise of Paris, proceeding either from the uneven structure of the pavement, or from the defective construction of wheels and springs, is so violent and incessant as to appear like the effect of one great continuous cause—a sort of demon torment, which it must require great length of use to enable one to endure without suffering. Were a cure for this sought in the Macadamizing of the streets, an additional advantage, by-the-by, would be obtained, from the difficulties it would throw in the way of the future heroes of a barricade.

AFRICAN SNAKES.

There are many species of snakes among the Dutch settlements in South Africa, and though but two or three are poisonous, yet the snakes of these varieties are the most numerous. One of the venomous species is the puff-adder, so called because it puffs out its neck, when enraged. Another is the ring-hals, which has a white or yellow ring round the neck. Lieutenant Moodie, who resided ten years in South Africa, remarks that new-comers have a great dread of snakes, but that, in a year or two, they think as little of them as of lizards in England. They are never known to bite, unless trodden on, or otherwise molested, and then always warn the foe, whom they are about to attack, by hissing. It is remarkable that all snakes, whether poisonous or not, are conscious of the detestation in which they are held by man and the inferiour animals, and either glide from their path, or put themselves on their defence.

The Secretary-bird, which is held sacred in that part of the world, is a great enemy and destroyer of snakes. He may be seen stalking through the fields, at a slow and solemn pace, looking about him for his prey. On discovering a snake, he immediately strikes him with his long legs, which are guarded from the venom by scales. Then, if the snake be not killed outright, the bird seizes him in his claws, and bears him, twisting and twining, to a great altitude in the air, whence he lets him drop upon the ground, and devours him forthwith. A young Secretary-bird has been seen to swallow a puff-adder, three feet long, and thicker than a man's wrist.

Various remedies are used for snake-bites. The most common process is, to tie a handkerchief tight above the wound, which being done, the bitten person is advised to make haste to some spring of running water, and there to cut deep into the flesh around the affected part, suffering the blood to run freely. As any thing that promotes the circulation of the blood, tends to counteract the venom, medical men prescribe ammonia, on account of its stimulating properties. The Hottentots sometimes suck the poison out of the wound, either with the mouth, or by means of a horn. But the most efficacious remedy appears to be the *slagen-wortel*, the virtues of which have recently been discovered. Two Hottentot slave-girls, in the interiour of the colony, were herding sheep, when one of them was bitten by a venomous snake. Her companion remained with her awhile, endeavouring to support her to the habitation of their Dutch master; but the effects of the poison were so rapid and violent, that she was compelled to leave her, and run home for assistance. On returning with some of the farm-servants, she found the girl, whom she had left in so desperate a condition, sitting up, and in a very comfortable state. In the convulsions of her agony, she had gnawed a plant, which was growing by her side, and had thus unconsciously made use of the only medicine that could have cured her. The plant (the botanic name of which is *Clatula Capensis*, or *Anthemoides*,) was thence called *Slagen-wortel*, or snake-root.

SINGULAR EFFECT OF RHEUMATISM.

[Tickson's 'Philosophy of Living.']

A young military officer, after attending a grand military ball, and exhibiting his prowess by dancing half the night, exposed himself for a short time to a cool atmosphere; in a little while he complained of pain and stiffness of the joints, and next day had an attack of acute rheumatism, which rendered him helpless, and kept him confined to his bed three long months; and for a long time after he regained the power of walking, his arms were affected in a most peculiar manner. He could move neither hand from the table to his mouth; but with the right he could raise his food about half way; then, by changing his fork into the left hand, the food was made to perform the journey to his mouth. But the left hand could descend only halfway to the table, when the fork was again changed into the right; and this, for many weeks, was the only way in which he could feed himself. Instances almost innumerable, of all species and grades of inflammatory diseases, might be cited, resulting solely from neglect in not adding a covering to the shoulders at least, in going into the cool, moist air of evening; a shawl in mild seasons, or a cloak or cape for females in winter, would save many valuable lives.

Indian Agriculture.—The aborigines of New England were accustomed to plant their corn in hills, each of which was manured with one or more fishes. The early settlers adopted the same method.

Jews in New York.—About the year 1675, the Common Council of New York refused the petition of the Jews for liberty to exercise their religion.

SCHENECTADY LYCEUM.

We are occasionally indebted to contemporary journals for the original designs of some of the numerous embellishments, which are monthly presented in the American Magazine. The above cut of the Schenectady Lyceum is enlarged from an engraving in the New York Mirror; a publication of deservedly high repute, for excellence both in literature and art.

Schenectady, in the State of New York, is the seat of Union College, one of the most flourishing among the higher institutions of learning, in the United States. But, until the recent erection of the edifice here represented, the town was destitute of any proper accommodation for a school or academy. This deficiency has been fully supplied by the structure before us, which, as to its exterior, is a striking and beautiful piece of architecture, and in its interior, presents a novelty of arrangement, apparently well adapted to the purposes which its founder had in view. The form of the school-room is octagonal. The teacher's desk is so situated that he can overlook the whole school-room; while the scholars sit with their backs to him, and are separated from each other by partitions between the seats. Thus all the scholars have the consciousness of being continually under the eye of the superintendent, and, as he is himself unseen, they cannot, as in other schools, take advantage of any momentary withdrawal of his attention. The

present principal of the Academy is Mr. E. A. Huntington, who occupies the basement and first story. The second story contains the hall of the recently established Lyceum Society, and will be otherwise devoted to literary and scientific purposes.

The edifice is in the form of an octagon, with a belfry and steeple, and is built of brick, stuccoed in imitation of granite. The architecture is modern gothic, of which many specimens now exist in our country, in churches and other buildings, to which the peculiarities of its style are adapted. There is something more pleasant to the beholder, in its somewhat fantastic variety, than in the severe and simple beauty of the Grecian architecture. The two buildings in front of the Lyceum, on each side of the gateway, likewise belong to the establishment, and are constructed in a similar style with the principal edifice.

TEA AND COFFEE.

Ticknor's 'Philosophy of Living.']

No two rival candidates for political distinction have, within the last two years, been more severely abused than have these two articles of drink. By some their virtues are extolled and magnified, while by others they are vilified and depreciated. In fact, tea is closely connected with political revolutions in our beloved country; and since the time of its first overthrow in Boston harbour with the overthrow of the British dynasty in this country, the Chinese plant has experienced remarkable vicissitudes in character. Though vilified by man, it has always sustained a fair reputation with the ladies; and, while it continues in good repute with them, there is little fear of its banishment from society. Notwithstanding the extravagant praises and equally extravagant denunciations of tea, we cannot otherwise conclude than that neither is strictly just. The tea that is found in our markets, under all its various names, is the production of the same plant; the differences in the various kinds being caused, in part, by the time of plucking the leaves, the manner of curing, and by the quality of the soil, and locality, in which the plant is cultivated. Green tea is more astringent than black, and possesses, in a much greater degree, the peculiar properties of the plant; causing, in some, nervous irritability and an unpleasant watchfulness. The Chinese are all tea-drinkers, from the most elevated to the most abject; and black tea is their universal favourite. Black tea, being less exciting to the nervous system than the other kind, is generally more proper for those of delicate health or feeble constitution, or those whose habits are chiefly sedentary.

The use of Coffee is, in this country, every year becoming more general; heretofore its scarcity and extravagant price have put it beyond the reach of the poor. Quite recently, certain individuals among us have discovered that the effects of coffee are pernicious in a high degree; they have classed it with ardent spirit, and, thanks to their discernment and good intention, with rum, we may expect tea and coffee to disappear, and disease to become as rare as 'creeping things' in Ireland since the visit of good Saint Patrick. It is no new thing for this article to be slandered and abused; it, as well as tobacco, were preached against at the time of their introduction into Europe, as may be seen from the following passage in an old sermon: 'They cannot wait until the smoke of the infernal regions surround them, but encompass themselves with smoke of their own accord, and drink a poison which God made black, that it might bear the devil's colour.' Tea and coffee are called stimulants—yet they do not, like distilled or vinous liquors, increase the action of the heart, thereby quickening the circulation of the blood, any more than hot water itself would do. All that can be claimed for this '*par nobile fratrum*' as stimulants, is, that they possess the property of greatly exciting the nervous system, and causing an exhilaration of the animal spirits, without any intoxicating effect. Dr. Jackson says, tea and coffee, differ from alcoholic liquors, by 'never causing congestions, or deranging violently the functions of the organs, or producing confusion of ideas and suspension of the intellectual operations.' Coffee is a particular favourite of the literati, and to it we may be indebted, in part, for some of the boldest flights of genius, and some of the brightest scintillations of fancy. Those who are fond of these two articles err particularly in two respects—first, in taking them *too warm;* and secondly, in taking them in an undue proportion to their food. In respect to *hot tea*, I believe it is positively less injurious than simple *hot water;* the tea possessing astringent and moderately tonic properties which go far to counteract the relaxing, debilitating effects of the hot water. Inveterate coffee drinkers are quite apt to indulge too freely in their cups at breakfast; and herein consists the great mistake—taking it as *food* instead of *drink*. The addition of sugar and milk, or cream, I consider injurious to most weak, delicate stomachs. They are likely to become acid, and ferment, thereby causing distress and nausea.

There are some peculiarities of constitution that will not tolerate the use of either of these substances in the smallest quantity; and that any one in health is benefitted by them is a question which admits of no discussion. A person in health is well enough without them; but may he indulge in their use without risk of injury? After an attentive consideration of the subject, I am induced to answer this question in the affirmative, for the following brief reasons. First, I have never known them to be productive of evil, in ordinary cases, when used as they should be, of not too great strength, sufficiently cool, and in quantity proportioned to the food. Secondly, since mankind will indulge in luxuries of some sort, it is far better that they should be confined to those of a harmless nature, than that they should use those of positive evil tendency. Could every rum-rum-drinker be persuaded to use no more intoxicating drink than tea and coffee, we should no longer hear of ruined fortunes, families reduced to beggary, and whole nations deluged with crime; but by attempting too much, we gain nothing. Those, therefore, who class tea and coffee in their effects with ardent spirit, are hurried away by a mistaken, though well-meant zeal; and it becomes them to pause in their course, and consider whether or not their notions are incompatible with every day's observation, and the dictates of common sense.

ANECDOTES OF PARROTS.

[Natural History of Parrots.]

Some years since, a parrot in Boston, that had been taught to whistle, in the manner of calling a dog, was sitting in his cage, at the door of a shop. As he was exercising himself in this kind of whistle, a large dog happened to be passing the spot. The animal, imagining that he heard the call of his master, turned suddenly about, and ran towards the cage of the parrot. At this critical moment, the bird exclaimed, vehemently, 'Get out, you brute:' The astonished dog hastily retreated, leaving the parrot to enjoy the joke.

A gentleman who resided at Gosport, in Hampshire, (Eng.) and had frequent business across the water to Portsmouth, was astonished one day, on going to the beach to look for a boat, and finding none, to hear the words, distinctly repeated 'Over, master? Going over?' (which is the manner that watermen are in the habit of accosting people, when they are waiting for passengers.) The cry still assailing his ears, he looked earnestly around him, to discover from whence the voice came; when, to his great surprise, he beheld the parrot, in a cage, suspended from a public house window, on the beach, vociferating the boatman's expressions.

Willughby mentions a parrot, which, when a person said to it, 'Laugh, Poll, laugh,' it laughed, accordingly; and, immediately after, screamed out, 'What a fool! to make me laugh.'

A parrot which had grown old with its master, shared with him the infirmities of age. Being accustomed to hear scarcely any thing but the words, 'I am sick,' when a person asked it, 'How do you do?' 'I am sick,' it replied, with a doleful tone, stretching itself along, 'I am sick.'

That parrots are sufficiently alive to their own interest, is a fact well illustrated by the history of a large Red Macaw, which belonged to an honourable and gallant friend of ours, who was lately governour of Trinidad. This parrot was accustomed to fly about all over the capital of the island, and being known as the governour's bird, he met every where with that respect which is usually paid to those who are clothed in scarlet and gold, and who live in palaces. At first, his peregrinations were made with great care, to keep himself free from all chance of exposure to injury or insult from the canaille. But, as he gradually discovered that the inhabitants, of all kinds and colours, so far from offering him offence of any sort, were rather disposed to yield the wall or the 'crown of the causeway' to him, wherever he appeared, he grew proud, and bold, and conceited, and strutted through the streets with an air of insolent superiority, as if he regarded all birds, beasts, and human beings, as reptiles of the earth in comparison with himself. Now would he, like Peter Pindar's Jackdaw, stop to 'peep knowingly into a marrowbone;' at another moment, he would fly in at the window of some house or shop, where he would pry through all the apartments, and into every hole and corner, as if he were the master of it. Again, if he felt himself fatigued, or if, perchance, his fancy struck him to do so, he would whip upon the head or shoulder of any passenger man, woman, or child,—just as a Londoner would pop into a hackney coach or a cabriolet, as a means of transportation from one end of the town to the other. But, whilst thus following out the bent of his amusement, he never lost sight of his more solid interests; for, by a certain hour of the day, he was sure to find his way to that part of the town where the fruit market was held, and there, like the Bashaw of some Turkish province, he went about helping himself from all the baskets, the owners of which, by their reception of him, seemed to consider themselves highly honoured by his thus condescending to plunder them, and he generally returned to the government-house so gorged, that he required a siesta of some considerable duration before he was able to entertain the company with the utterance of his every day facetiæ.

Parrots are sometimes extremely quick in picking up certain words that happen to strike their ears, and this they often do very untowardly, so as afterwards to repeat them with an apparently mischievous intent; of which, however, they ought to be entirely acquitted, since the strange coincidences which they sometimes produce, are merely the result of accident, like those which are often set down as the accomplishment of modern dreams or prophecies. We remember a Parrot which belonged to a lady, which was the innocent means of getting his mistress into a very unfortunate scrape. A friend of hers having called one forenoon, the conversation of the two ladies took that turn towards petty scandal, to which we grieve to say, it is but too frequently bent. The friend mentioned the name of a lady of their acquaintance. 'Mrs. ——!' exclaimed the owner of the Parrot, 'Mrs. —— drinks like a fish.' These words were hardly uttered, when the footman, in a loud voice, announced 'Mrs. ——!' and as the new visitor, a portly, proud dame, came sailing into the room, 'Mrs. ——!' exclaimed the Parrot, 'Mrs. —— drinks like a fish.' Mrs. —— wheeled round, with the celerity of a troop of heavy dragoons, furiously to confront her base and unknown maligner. 'Mrs. ——!' cried the Parrot again, 'Mrs. —— drinks like a fish.' 'Madam,' exclaimed Mrs. —— to the lady of the house, 'this is a piece of wickedness towards me which must have taken you no short time to prepare. It shows the blackness of your heart towards one for whom you have long pretended a friendship; but I shall be revenged.' It was in vain that the mistress of the Parrot rose and protested her innocence; Mrs. —— flounced out of the room in a storm of rage, much too loud to admit of the voice of reason being heard. The Parrot, delighted with his new caught up words, did nothing for some days but shout out, at the top of his most unmusical voice, 'Mrs. ——! Mrs. —— drinks like a fish.' Meanwhile, Mrs. ——'s lawyers having once taken up the scent, succeeded in ferreting out some information, that ultimately produced written proofs, furnished by some secret enemy, that the lady's imprudence in the propagation of this scandal had not been confined to the instance we have mentioned. An action at law was raised for defamation. The Parrot was arrested and carried into court, to give oral testimony of the malignity of the plot which was supposed to have been laid

against Mrs. ——'s good fame; and he was by no means niggardly of his testimony, for, to the great amusement of the bench, the bar, and all present, he was no sooner produced, than he began, and continued loudly to vociferate, 'Mrs. ——! Mrs. —— drinks like a fish!' till judges and jury were alike satisfied of the merits of the case; and the result was, that the poor owner of the Parrot was cast with immense damages.

EFFECTS OF LIGHTNING.

[Translated from the Magasin Universel.]

We extract the following passage from an essay on electricity, published in the Memoirs of the Royal Society of London, by Mr. Scoresby, one of the most distinguished philosophers in England.

The packet-ship New York, on its passage from America to Liverpool, had arrived near the eastern limit of the Gulf-stream, when the sky became obscured by heavy clouds, and the captain was apprehensive that the vessel would be struck by an electric discharge. He therefore conceived the idea of affixing a conductor to the main-mast, consisting of an iron rod, about four feet long, terminating in a point, and connected with a chain of the same metal. The chain extended down along the mast, and, by its weight, kept the point of the conductor upright, elevated two or three feet above the main top. The lower extremity was strongly fastened to an oar, and formed the communication between the conductor and the sea. At one o'clock, the passengers and crew were terror-struck by a dreadful clap of thunder, breaking over their heads, simultaneously with a vivid flash of lightning. The ship, for the moment, appeared all in flames; the electric discharge descended along the iron chain, which it melted in its passage. A sheet of fire darted into the ladies' cabin; and every part of the vessel was filled with sulphureous vapours, of such density that it was impossible to distinguish objects at the distance of two paces. But although the conductor was destroyed, it had done its office—the ship was saved.

Some of the sailors, however, and one of the officers, had been thrown down on the deck, by the violence of the reaction, caused by the electric current, as it descended from the conductor into the sea. One remained stupified, during many hours; the hands of another, having received the electric shock, were completely paralysed, and continued in that state a considerable time. But the electric shock produced the most singular effect on one of the passengers, who was infirm, and advanced in age, and also remarkably corpulent. This man was in so helpless a condition, that, for three years, he had not walked the space of half a mile; nor had he made his appearance on deck, since the commencement of the voyage. When the lightning struck the vessel, he was in his birth. Immediately after the shock, he leaped out of bed, mounted on deck, and hurried to-and-fro with the most perfect facility, but in a state of mental alienation. Fortunately, the derangement of his intellectual faculties was but momentary, while the good effect of the electricity on his infirmities was permanent. Not only did he preserve the use of his limbs during the rest of his voyage, but, on the arrival of the vessel at Liverpool, found himself able to take a pretty long walk to the hotel.

LIME AS A MANURE.

A writer in the American Journal of Science remarks, that the German settlers in Pennsylvania brought with them the practice of using lime as a manure. To this cause he attributes it, that their farms have generally retained their original fertility, and, in some instances, produce larger crops than those which were reaped from the virgin soil. The descendants of the Dutch and English settlers have not, even yet, learned to imitate the Germans in this particular; and their farms, the soil of which appears to be precisely the same, produce only fifteen or twenty bushels of wheat to the acre, while those of the Germans yield thirty or forty. There is the same proportion in regard to other products.

On the other side of the Atlantic, the farmers use lime in immense quantities. In England, two hundred bushels per acre are applied to sandy soils, and three or four hundred to clay; and this dressing is repeated every twenty-one years. The quicklime is laid in small heaps, and is spread over the field as soon as it becomes slacked by the air. In the department of l'Ain, in France, where eighty bushels per acre are used, the lime is also laid in heaps, but is covered with earth until slacked; the earth and lime are then thoroughly mixed, and allowed to remain another fortnight, before being spread. In Flanders, the lime is generally mixed with the ashes of bituminous coal or of turf, or is made into a compost with other manures; and is applied once in ten or twelve years, in the proportion of forty or fifty bushels to an acre. In the department of Sarthe, twelve bushels of lime, in compost, are used once every three years. This, which is the least expensive method, is said likewise to be the best, and the most suitable to the agriculture of our own country.

Pine Barrens.—In lower Virginia, the poorest natural soils are equally remarkable for their incapacity to produce any valuable crop, and for their luxuriant growth of pine-trees, or broom-grass. Such tracts, after being cleared, are soon covered with grass, three or four feet in height, and, unless cultivated, are again overgrown with trees, which attain a giant size, in less than half the time that would be required in the best soils of England. Yet the same land would not, perhaps, yield three bushels of wheat per acre.

Tobacco.—The raising of a crop of tobacco is said to be an excellent method of preparing the land for a crop of wheat. But in Virginia, the cultivation of tobacco is so lucrative, that crop after crop is raised, until the land loses its fertility and, becomes merely a *caput mortuum*.

Mustard and cress-seeds will take root and grow in moist flannel. Thus a crop of these vegetables may be raised within doors, and be made to cover the whole surface of a flannel petticoat, hanging upon a nail.

STRENGTH AND PERSONAL APPEARANCE OF WASHINGTON.

[Paulding's 'Life of Washington.']

It may not be uninteresting to my young readers to describe him (Washington) as he is represented in a portrait painted at Mount Vernon in 1772, by the elder Mr. Peale, a copy of which is now before me. That worthy old gentleman used to relate that, while engaged in this work, he was one day amusing himself with the young men of the family in playing at quoits and other exercises, when Washington joined, and completely outdid them all.

As nothing relating to the Father of his Country can be uninteresting to his children, I will here give another little anecdote illustrating his strength, in the words of one of his nearest connexions, who is still living. 'We were sitting,' said he, 'in the little parlour fronting the river, to the right as you enter the portico. The general and several others were present—among them two young men remarkable for their strength, when a large back-log rolled from the chimney out upon the hearth. The general took the tongs and very deliberately, without apparent effort, put it back in its place. A quarter of an hour afterwards he went out, and the ease with which he handled it became the subject of remark. The log was taken down, and not a man of us could lift it, much less put it in place again. Finally, one with the tongs, another with the shovel, we all set to, and succeeded in replacing it. The general, though remarkably strong in all his limbs, was particularly so in his hands and fingers.'

The portrait to which I refer, and which was taken shortly before Washington entered on his last and great career, represents a man in the vigour of his prime, in the uniform of the provincial troops; a cocked hat of the fashion of the times; a blue coat, faced and lined with scarlet; waistcoat and breeches of the same colour. The coat and waistcoat, in the left-hand pocket of which is seen a paper endorsed 'Order of March,' are both edged with silver lace, and the buttons of white metal. A gorget, shaped like a crescent, and bearing the arms of England, is suspended from the neck by a blue riband, and an embroidered lilac-coloured sash thrown over the left shoulder. The right-hand is partly thrust into the waistcoat, and covered with a thick buff buckskin glove, and the left arm is passed behind the back so as to sustain a fusee, the barrel of which projects above the shoulder. This was the very dress he wore on the fatal field of Rock Hill, where Braddock fell.

The face is that of a fresh and somewhat florid man, with light-brown hair. The eye a deep clear blue, full of spirit and vivacity; the nose resembling that of his subsequent likenesses, but much more becoming, and the mouth indicating most emphatically that unconquerable firmness of purpose, that inspired perseverance, that cool yet ardent character, which the history of his whole life exhibits. I should judge from this picture that Washington was naturally of a vivacious temperament, for his eye is full of fire, and its expression rather gay than grave; and I shall, in the course of this work, lay before my young readers some proofs in support of my opinion. The incessant cares and labours he encountered soon after this period, and the weight of those momentous interests which so heavily lay on his mind, and would have weighed almost any other to the earth, were amply sufficient to repress this natural vivacity. Hence, from the date of his accepting the command in the great crusade for the establishment of the rights of his country, he was seldom known to be gay, scarcely ever laughed aloud, and his character was that of gravity, if not something more.

Washington was upwards of six feet in height; robust, but of perfect symmetry in his proportions; eminently calculated to sustain fatigue, yet without that heaviness which usually accompanies great muscular power, and abates active exertion. His movements were graceful; his manner displayed a grave self-possession, and was easy and affable. All who ever associated with him have remarked that indescribable dignity which, though it created an affectionate confidence, at the same time repressed all freedoms, and forbade the indulgence of the slightest indecorum in his presence. His most remarkable feature was his mouth, which was perfectly unique. The lips firm and compressed. The under jaw seemed to grasp the upper with force, as if the muscles were in full action, even while he sat perfectly still and composed. Yet an air of benignity and repose always pervaded his face, and his smile displayed an extraordinary attraction. No man ever possessed in a higher degree the art, or rather the moral and physical qualifications, to ensure the respect and affection of all that came within the circle of his influence.

TO SENECA LAKE.—By J. G. Percival.

On thy fair bosom, silver lake,
The wild swan spreads his snowy sail,
And round his breast the ripples break,
As down he bears before the gale.

On thy fair bosom, waveless stream,
The dipping paddle echoes far,
And flashes in the moonlight gleam,
And bright reflects the polar star.

The waves along thy pebbly shore,
As blows the north wind, heave their foam,
And curl around the dashing oar,
As late the boatman hies him home.

How sweet, at set of sun, to view
Thy golden mirror spreading wide,
And see the mist of mantling blue,
*Float round the distant mountain's side!

At midnight hour, as shines the moon,
A sheet of silver spreads below;
And swift she cuts, at highest noon,
Light clouds, like wreaths of purest snow.

On thy fair bosom, silver lake,
Oh! could I ever sweep the oar,
When early birds at morning wake,
Or evening tells us toil is o'er!

Phœnician Relic.—The Society of Antiquaries, in London, possess a cylindrical vessel of granite, decorated with a peculiar Grecian ornament on a hoop-like circle, which surrounds the exterior. It was brought, many years ago, from the Musquito shore of Central America, and is considered an additional proof that the shores of the western continent were peopled by the ancient Phœnicians.

THE DEVIL'S HILL.

In Don Juan de Ulloa's Travels in South America, (an excellent old book,) a legend is related of a poor man in Spain, who was about to commit suicide, when a courteous stranger accosted him, and inquired the cause of his trouble. Being informed that it proceeded from poverty, he offered to carry him to a country where he should have whatever quantity of gold he pleased. An hour was accordingly appointed for their departure. Meantime the Spaniard, thinking that he must make provision for a considerable journey, bought some loaves of bread, hot from the oven, with the baker's name and residence stamped upon them; he then lay down to sleep, in the open air, at the spot assigned for his meeting with the stranger. His nap began in the province of Estramadura, in Old Spain; but when he unclosed his eyes, he found himself on the summit of a hill in South America, with the plain of Chisquipata stretched at his feet. Descending the hill, he was invited to breakfast with an inhabitant of the country, and, at table, produced his loaves of bread, which had not wholly lost the warmth of the Spanish oven. His host, as it happened, had emigrated from Estramadura, and recognised the baker's stamp, and knew that these warm loaves could have been baked nowhere but in Spain. Of course, he looked with no little wonderment at his guest; nor was the latter less perplexed, on discovering that he had journeyed from one side of the globe to the other, while asleep, and without so much as dreaming of it. They could explain the mystery no otherwise, than as a trick of Satan, in the person of the courteous stranger; and the people of Quito have ever since called the height, where the Spaniard started from his sleep, the Devil's Hill. But considering that the poor man was relieved from hopeless poverty, and rescued from suicide, and conveyed, without the peril and wearisomeness of a sea-voyage, to a land where there was gold in every hill, it would rather appear to have been the deed of his patron-saint. Certainly, it has not come within our experience, that the Devil ever did so good-natured a thing.

Doll's Eyes.—It would scarcely be believed, that the manufacture of these little articles causes the circulation of several thousand pounds per annum. Children's toys, however trifling they may appear separately, are matters of great importance, when it is considered how many hands they set in motion, and how many mouths they are the means of feeding. Mr. Osle, when examined before a committee of the House of Commons, stated that he had seen a large room, filled with merely the legs and arms of dolls, which were piled in stacks from the floor to the ceiling, so as scarcely to leave space to pass between them. He received an order for five hundred pounds' worth (between two and three thousand dollars) of glass eyes, which were to be inserted into the heads of dolls. Whenever we see a company of these little figures, staring at us from the windows of a toyshop, we should give them credit for having bestowed bread on many a poor family, that must otherwise have gone without it.

The Pyramids.—It has been computed that the steam-engines of England, worked by thirty-six thousand men, would require only eighteen hours to raise from the quarries, and elevate to its present height, the same quantity of stone that was used in building the pyramids. Yet, at the period of the construction of these huge piles, one hundred thousand men were employed for twenty years upon them—a number equal to two millions for one year. This fact strikingly shows the immense acquisition of power, that is derived from the use of machinery. The workmen were miserably fed; and yet, according to Herodotus, sixteen hundred talents, equal to many millions of dollars, were expended merely in supplying them with onions, garlic, and radishes.

Whaling.—The crew of the King George, an English whaler on the coast of Greenland, struck a fish during a severe gale, when the thermometer stood at zero, or below. The weather became thick, and the boats were unable to regain the ship for above two days and nights; throughout which time, the crews were exposed to the most intense cold and violent storm. One man died on the ice, and a second soon after reaching the ship. The frost deprived some of their fingers and toes, and others of their entire hands and feet; the surgeon was obliged to perform no less than thirty-five amputations of fingers and toes, in one day.

Weight in Water.—Water sustains so much of the weight of any substance, as is equal to the weight of the water which is displaced by that substance. Brick is said to be exactly twice the weight of water. A person will therefore be able to lift exactly twice the weight of brick, when sunk under water, that he could lift on dry land. A mass of brick, weighing one hundred pounds in the water, will weigh one hundred and fifty, when half-way out of the water, and two hundred pounds, when lifted entirely into the air.

South American Carriers.—When a road was to be constructed across the Andes, in South America, a petition against the project was presented by numbers of persons, who had long gained a livelihood by carrying travellers in baskets, over those difficult passes of the mountains, where none but themselves could tread. This is a striking instance of the unreasonableness of those who demand, that public improvements, which would be vastly for the benefit of the many, should be rejected for the advantage of a few.

Relicts of Witchcraft.—The pins, which the New England witches were said to have thrust into the bodies of those whom they afflicted, in 1692, are still preserved among the records of the court, in Salem.

Jews in China.—There are Jews in China, who still retain their religion and practice their peculiar ceremonies; although they and their ancestors are said to have been resident there ever since the second century before Christ. Their numbers, however, have long been decreasing, and they have now only one synagogue.

SOUND OF THUNDER.

[Westminster Review.]

There is a simple explanation of the peculiar sounds of thunder. It is proved from the evidence of the eye, that the electric spark in thunder storms passes through very considerable distances; and, from the same evidence and that of other experiments, it is known that its passage is what may be denominated instantaneous. Hence, as the progress of sound is only at the rate of 1142 feet per second, the ear must receive the sound which proceeds from different points in the tract of the spark, successively and not all at once. If a line of soldiers a mile long, should all discharge their muskets together on a visual signal, as for instance the dropping of a flag, an ear near one of the flanks must hear a prolonged roll for nearly five seconds, diminishing in strength; if near the middle, it must hear the roll for about two seconds and a half, but doubled in strength, though on the whole *diminuendo* as before; if at a fifth of the way from one flank to the other, it must hear one second of double strength, followed by three seconds of inferiour force, each severally *diminuendo*.* But if in the middle of the line there should be formed a zig-zag, it is clear that it might be so situated as instead of the reports of one or two muskets, to bring to the ear at once the reports of four or five; this therefore is competent to cause a *crescendo*, and by increasing the number and extent of the zig-zags, it may be varied in an indefinite number of ways. Now if the course of lightning may be judged of by the eye, it assumes precisely this form of zig-zags. Again, if the ear should be placed in the perpendicular to the middle of the line of soldiers and at a considerable distance, the effect of the discharge would approach to that of a single report; an effect sometimes heard at sea, where thunder has been taken for the guns of a distant action. When the sound of thunder is very loud and brief, like the explosion of a near cannon, it is probable the discharge has taken place into some neighbouring body on the earth's surface, and from a cloud at a short distance; for happily it seems to require a nearer approach to produce the electric discharge into the earth, than from cloud to cloud. And in cases of accident by lightning, the near witnesses seldom fail to describe this species of sound. In this manner all the phenomena of the sound of thunder may be considered as accounted for.

* This phenomenon of successive sound may be observed in a single battalion by a bearer placed near a flank, on the pieces being struck on the ground together in the last motion of 'Order Arms,' by signal from the fugelman.

VIOLINS.

[Gardiner's 'Music of Nature.']

The Violin had its origin in Italy, about the year 1600; but those which are esteemed of the greatest value were made at a later period, about 1650, at Cremona, by the family of A. and J. Amati, and their contemporary Stradvarius, of the same place. These instruments are found to be very much superiour to any that have been made since that time, which acknowledged excellence is chiefly to be attributed to their age. The Amati is rather smaller in size from the Violins of the present day, and is easily recognised by its peculiar sweetness of tone. The Stradivari is larger and louder; and is so highly esteemed, that many have been sold for the sum of two hundred guineas. Age seems to dispossess these Cremona Violins of their noisy qualities, nothing being left but the pure tone. If a modern Violin is played by the side of one of these instruments, it will appear much the loudest of the two, but on receding a hundred paces, when compared with the Amati, it will be scarcely heard. Connoisseurs frequently go into the gallery of the Opera House, to hear the effect of the Cremona Violin, which at this distance predominates greatly above all the other instruments, though in the orchestra it is not perceptibly louder than any of the rest.

A FOUNDERED VESSEL.

We now got out our boats; after pulling about all day, under a sun so hot that our brains seemed undergoing the process of frying, we happily, before night set in, hit on the very spot which had been marked out; but, the day closing, we were compelled to desist till morning. We ran the boats on shore on a pretty island, supped and slept; then, with the earliest dawn, we pushed on our discovery, till we came on the identical foundered wreck. The water was transparent as glass. By sounding on the hull of the wreck, we found that there was not more than twenty feet of water from her deck; and that, lying on rocks, but little sand had collected near her. We laid down a buoy to indicate the spot, and returned to the vessels, which were drawing near to take us on board, impelled by sweeps; for, so still was the wind, that the feathered vanes above the lofty truck dropped motionless.

With lines, halsers, grapnels, and the other necessary materials, not forgetting the divers, we again went towards the submerged vessel. As I gazed below, long and steadily, so perfectly was every portion of her visible, that she forcibly reminded me of those models of ships enclosed in glass cases—the rough and jagged bed on which she lay resembling the mimic waves which sometimes surround them. Even the heaps of shell-fish that now incrusted and peopled her deck with marine life, and the living sea-verdure of weeds and mosses, might have been as distinctly noted and classed as if exhibited on a table. When the dark divers descended on her decks, the glass-like element, as in a broken mirror, multiplied their forms, till they seemed to be the demons, hidden in her hold, rushing up in multitudes to defend their vessel, assaulted even under the sanctuary of the mighty ocean.

After many fruitless efforts and long continued toil, we succeeded in getting a purchase on her. Then, by sinking butts of water, carefully securing them to the tackle affixed to the wreck, and restoring their buoyancy by pumping out the water from them, at length we moved her, and passed strong halsers under her. On the second day the grab and schooner were placed on each side of her, the number of casks was increased, and we hove on many and complicated purchases, till she was fairly suspended, and, at length, her almost shapeless hull, reluctantly arose to the surface. It looked like a

huge coffin, in which some antediluvian sea-colossus had been entombed. The light of day shone strangely on her incrusted, hoary, and slimy hull. Sea-stars, crabs, cray-fish, and all sorts of shell-fish crawled and clung in and about her, amazed at the transition from the bottom of the cool element, in which they had dwelt, to a fiery death from the sun, whose rays, darting on their scaled armour, transfixed them as with a spear. We turned to, and, by bailing, partially cleared her of water; so that it was evident, although she leaked considerably, she was not bilged. The deck and main-hold had been cleared, either by the water or by the people of Sumatra, whose fishing-boats might possibly have come athwart her; but the after-hold, which was battened securely down, protected by a double deck, and bulkheaded off, was untouched. I forgot to mention, that, as we were baling, we disturbed a huge water-snake at the bottom of the hold, which the men had mistaken for the bite of a cable, and that he speedily cleared the decks. Either he had a taste for shell-fish, or preferred a wooden kennel to a coral cave. We made a simultaneous and vigorous attack on him with pikes and fire-arms; yet it was not till he was gashed like a crimped cod, that he struck his flag, and permitted us to continue our work. The divers said he might have eaten them when they were under water;—I know not that, but can aver that the men, more ferocious and greedy than the snake, did incontinently, now that he was out of water, eat him. *Trelawney.*

THE KREUTZBERG.

The Kreutzberg, or Mount Calvary, is a lofty hill near Bona, in Germany. Upon its summit is a Convent, with a Chapel in which, among other curiosities of the like nature, is a flight of stairs never profaned by the pressure of the human foot. They are ascended only on the knees, and to the performance of this act of faith, plenary indulgence for a year is promised by a papal bull suspended at the foot of the staircase. But the chief object of interest in the Convent is the comparatively undecayed state of the bodies interred, ages ago, in its vault. A late traveller thus narrates a visit to this cemetery:—

'I hardly know what we had expected from this sepulchral examination, but it certainly must have been something very different from the reality, for we were jesting and laughing when the sacristan arrived, and even when we saw the two lads, who accompanied him, raise the massy door, I believe not one of us felt any portion of the awe which the scene it opened to us was calculated to inspire. The sacristan, with a lighted candle in his hand, descended a dark and narrow flight of steps, desiring us to follow him. I was the first that did so, and I shall not soon forget the spectacle that met my eyes. On each side of us, as we entered the vault, was arranged a row of open coffins, each containing the dry and shrivelled body of a monk, in his robe and cowl. They are so placed as to be exposed to the closest examination, both of touch and sight; and the remembrance of my walk through them still makes me shudder. The wonderful state of preservation in which these bodies remain, though constantly exposed to the atmosphere by being thus exhibited, is attributed, by good Catholics, to the peculiar sanctity of the place; but to those who do not receive this solution of the mystery, it is one of great difficulty. The dates of their interment vary from 1400 to 1713; and the oldest is quite as fresh as the most recent. There are twenty-six fully exposed to view, and apparently many more beneath them. From the older ones, the coffins have either crumbled away, or the bodies were buried without them.

'In some of these ghastly objects the flesh is still full, and almost shapely upon the legs; in others it appears to be drying gradually away, and the bones are here and there becoming visible. The condition of the face also varies very greatly, though by no means in proportion to the antiquity of each. In many, the nose, lips, and beard remain; and in one, the features were so little disturbed, that,

> 'All unruffled was his face;
> We trusted his soul had gotten grace.'

Round others, the dust lies where it had fallen, as dropped, grain by grain, from the mouldering cheeks; and the head grins from beneath the cowl nearly in the state of a skeleton. The garments are almost in the same unequal degree of preservation; for in many the white material is still firm, though discoloured; while in others it is dropping away in fragments. The shoes of all are wonderfully perfect.

'The last person buried in this vault, (in 1713) was one who acted as gardener to the community. His head is crowned with a wreath of flowers, which still preserves its general form; nay, the larger blossoms may yet be distinguished from the smaller ones, but with withered leaves lie mixed with his fallen hair on either side.

'Altogether the scene is well calculated to produce a cold shiver in the beholder, and yet we all lingered over it. There is certainly some nerve within us, that thrills with strange pleasure at the touch of horrour.'

Irish Potatoes.—Ireland has been famed for the excellence of its potatoes; but, a variety called the '*lumper*,' has recently been introduced, which is of a soft, watery quality, and is both unwholesome and unpalatable. Pigs will not thrive upon it. Yet this potato will probably supplant all the other and better varieties, because it requires less manure, and yields a more abundant produce; and after all, it is computed that not a fifth part of the Irish population can obtain a sufficiency even of this unwholesome food.

Sulphur.—When sulphur is thrown upon the hearth of a blazing chimney, the sulphurous vapour penetrates all the crevices and ramifications of the flue, and completely extinguishes the fire. A small quantity of sulphur will have this effect almost instantaneously, though the flames may be shooting two or three yards above the top of the chimney.

APPARENT DISTANCE OF OBJECTS.

[Arnott's 'Elements of Physics.']

It has already been explained that light, like every other influence radiating from a centre, becomes rapidly weaker as the distance from the centre increases, being, for instance, only one fourth part as intense at double distance, and in a corresponding proportion for other distances; while it is still further weakened by the obstacle of any transparent medium through which it passes. Now the eye soon becomes sufficiently familiar with these truths to judge from them with considerable accuracy, of the comparative distances of objects.

The fine gothic pile of Westminster Abbey may break upon the view in some situation where nearer edifices, and perhaps some minor imitations of its beauties, already fill and dazzle the eye with their brightness; but the misty or less distinct outline of the former warn the approaching stranger of its true magnitude, and prepare him for the enjoyment which a nearer inspection of its grandeur and perfection is to afford.

A small yacht or pleasure-boat may be built from the same model or of the same comparative dimensions as a first rate vessel of war, and may be in view from the shore at the same time; only so much nearer than the ship, that both shall form images of the same magnitude on the retina of a spectator. In such a case, to an unpractised eye, it might be difficult to detect the difference; but to another, the bright lights of the little vessel, contrasted with the softer or more misty appearance of the larger, would leave no room for doubt. A haziness occurring in the atmosphere between the little vessel and the eye, might considerably disturb the judgment.

In a fleet of ships, if the sun's direct rays fall upon one here and there through openings among the clouds, while the others remain in shade, the former immediately start, in appearance, towards the spectator. Similarly the mountains of an unknown coast, if the sunshine fall upon them, appear comparatively near; but if clouds again intervene, they recede and mock the awakened hope of the approaching mariner.

A conflagration at night, however distant, appears to spectators generally as if very near, and inexperienced persons often run towards it with the hope of arriving immediately; but find, after miles travelled, that they have made but little part of their way.

A person ignorant of astronomy deems the heavenly bodies vastly nearer to the earth than they are, merely because they are so bright and luminous. The evening star, for instance, seen in a clear sky over some distant hill-top, appears as if a dweller on the hill might almost reach it—for the most intense artificial light that could be placed on the height would be dim in comparison with this beauteous star; yet to a dweller on the hill it appears just as distant as to one on the plain; and wherever the spectator is placed, the appearance will be nearly the same.

The concave of the starry heavens appears flattened above, or nearer to the earth in its zenith than towards its horizon, because the light from above having to pass through only the depth or thickness of the atmosphere, is little obstructed; while of that which darts towards any place horizontally, through hundreds of miles of dense vapour-loaded air, only a small part arrives.

The sun and moon appear larger at rising and setting than when midway in the heavens, partly, as already explained, because while below they can easily be compared with other objects, of which the size is known, but partly, also, because of their less light in the former situation, while their diameters are always the same.

A fog or mist is said to magnify objects seen through it. The truth is, that by reason of the diminished intensity of light, it makes them appear further distant without lessening the visual angles subtended by them; and because an object at two miles, subtending the same angle as an object at one mile, must be twice as large, the conclusion is drawn that the dim object is large. Thus a person in a fog may believe that he is approaching a great tree, fifty yards distant, when the next step throws him into the bush which had deceived him. Two friends meeting in a fog have often mutually mistaken each other for persons of much greater stature. A row of fox-glove flowers on a neighbouring bank, has been mistaken for a company of scarlet-clad soldiers on the more distant face of the hill. There are, for similar reasons, frequent misjudgings in late twilight and early dawn. The purpose and effect of a thin gauze screen interposed between the spectators in a theatre and some person or object meant to appear distant, are intelligible on the same principle: a boy near, so screened, will appear to be a man at a distance. The art of the painter uses sombre colours when his object is to produce in his picture the effect of distance. On the alarming occasion of a very dense fog coming on at sea, where the ships of a fleet are near each other, without wind, and where there is considerable swell or rolling of the sea, much damage is often done; but it is to be remarked in such a case that the size of ships approaching to the shock is always in idea exaggerated.

EUROPEAN NOTIONS OF THE AMERICANS.

[Allen's 'Practical Tourist.']

In public stage coaches and inns, (in England,) inquiries have frequently been addressed to me relative to the present state of society and improvements in the useful arts in the United States, concerning which much ignorance seemed to prevail. I was several times asked if there are roads in the United States sufficiently good for stage-coaches; and if the houses of America are built or furnished, in any respect, like those of England. Persons having friends or relations who have emigrated to America, have also inquired about their welfare, with the apparent expectation that I must have seen or known them, when in the same country, on the other side of the Atlantic.

In Holland, one of the passengers in the Diligence to the Hague, was a Flemish artist, who informed me that he was on his way to Haerlem to exhibit some new machines at the great national exhibition

of the manufactures of the Netherlands. He was eloquent in his eulogium upon the advantages of steam navigation, having for the first time in his life made the passage from Antwerp to Rotterdam in the steam packet. In a few years, he observed, steam boats would be very generally used, and even in the United States of America, we might not long be without them. His surprise was great, when he was informed that steam-boats were already in general use on most of the large rivers of the United States, where they were first successfully put into operation, nearly twenty years ago. The subject of mechanical inventions having been thus introduced, I described to him several of the curiously constructed machines invented by Americans. He continued to listen to an account of the nail machine, which cuts and heads nails from a flat bar of iron, as fast as one can count them; and of the machine for making weaver's reeds or slaies, invented by Wilkinson. He had never before heard of these machines. Although he was an intelligent man, yet the complicated operation of the mechanism for accomplishing processes which he supposed could only be performed by manual dexterity, appeared to him almost incredible. But when I described Blanchard's lathe, in which gun-stocks and shoe lasts, with all their irregularity of outlines, are turned exactly to a pattern, his confidence in my veracity evidently wavered; and at my description of Whittemore's celebrated card machine, which draws off the card wire from the reel; cuts it into pieces of the proper length for the teeth; bends it into the form of a staple; punctures the holes in the leather with a needle; inserts the staples of wire into these punctured holes in the leather; and finally crooks the teeth to the desired form;—completing of itself all these operations with regularity, without the assistance of the human hand, the credulity of my travelling companion could go no farther. He manifested doubts of all I had been describing to him, and even irritation at what he appeared to consider an attempt to impose upon him marvellous traveller's stories. Giving vent to an emphatic humph, he petulantly threw himself back into a corner of the Diligence, and would hold no further conversation, during the remainder of our ride, on the mechanical improvements made in Flemish manufactures.

A SOUTHERN FOREST.

['The South West.']

There is a grandeur in the vast forests of the South, of which a northener can form no adequate conception. The trees spring from the ground into the air, noble columns, from fifty to a hundred feet in height, and, expanding like the cocoa, fling abroad their limbs, which, interlocking, present a canopy almost impervious to the sun, and beneath which wind arcades of the most magnificent dimensions. The nakedness of the tall shafts is relieved by the luxuriant tendrils of the muscadine and woodbine twining about them, in spiral wreaths, quite to their summit, or hanging in immense festoons from tree to tree. In these woods horsemen can advance without obstruction, so spacious are the intervals between the trees, so high the branches above them, and so free from underwood is the sward. Of such forest-riding the northerner knows nothing, unless his lore in tales of Italian banditti may have enabled him to form some idea of scenes with which his own country refuses to gratify him. So much do the northern and southern forests differ, that a fleet rider will traverse the latter with more ease than the woodman can the former.

Cut from the shaft of a southern forest-tree, a section forty or fifty feet in length, and plant the mutilated summit in the earth, and its stunted appearance would convey to a Mississippian a tolerably correct idea of a forest tree in New-England; or add to the low trunk of a wide-spreading northern oak, the column abstracted from its southern rival, and northerners would form from its towering altitude, a tolerable idea of a forest tree in Mississippi. Hang from its heavy branches huge tassels of black Carolina moss, from two to six feet in length—suspend from limb to limb gigantic festoons of vines, themselves but lesser trees in size, and clothe its trunk with a spiral vestment of leaves, as though a green serpent were coiled about it, and you will have created a southern tree in its native majesty. Imagine a forest of them lifting their tops to heaven and yourself bounding away upon a fleet horse beneath its sublime domes, with a noble stag, flying down its glades like a winged creature, while the shouts of hunters, the tramp of horses, and the baying of hounds echo through its solemn corridors, and then you will have some faint idea of the glory of a southern forest and the noble character of its enjoyments.

THE MAGELLAN CLOUDS.

[Temple's 'Travels in Peru.']

These clouds are called after Magellan, the celebrated circumnavigator, who, upwards of three hundred years ago, gave his name to the intricate channel at the southern extremity of America, and who, it is pretended, first noticed the clouds in question. Since we have been in the southern hemisphere, we have found great pleasure, every night, in admiring the splendid beautics above, so different from those in the northern heavens; but I do not think I should have observed the Magellan clouds, if they had not been pointed out to me. They exist, however, and are always to be seen at night, each about the size of a table-cloth, one the colour of a clean one, and the other something of the colour of our own cloth at the end of a week's wear on ship-board. When once pointed out, it is very easy to distinguish them from other clouds. There they have been for three hundred years certainly, perhaps they are coeval with the world; and they may remain when, peradventure, no human eye shall exist to look upon them.

Yankee Tea.—This epithet is conferred on a decoction of hemlock sprigs, prepared in the same manner as tea. An English lady, who drank of it, found it little to her taste; although she recognised it as an herb that is often sold at five shillings per pound in London, as genuine tea. Its properties are said to be medicinal.

INFLUENCE OF MUSIC ON ANIMALS

Dogs, says a French writer, are affected in a very lively manner by music; but it is difficult to determine the nature of the impressions which they receive from it. Many naturalists believe that its effect is disagreeable; an opinion which is strongly supported by the fact, that dogs, if left at liberty, take to flight, with howls, as soon as the music reaches their ears. It has even been noticed, that those dogs who are insensible to ordinary noises, and whom the explosion of a cannon would not startle, will nevertheless shudder, and give utterance to involuntary groans, on hearing an instrument of music. Doctor Mead affirms that a dog died of the painful sensations excited by music, which he had been compelled to hear for a considerable time, and which caused him to utter piercing cries. Examples are given of many other animals, and likewise of owls, killed in a similar manner. Cats, also, mew loudly on hearing the sound of musical instruments; but they appear to be more seldom and less painfully affected than dogs.

It is well known, on the other hand, that birds, and especially the canary-bird, testify the liveliest pleasure when airs are played to them. They sometimes approach the instrument, and remain immovable so long as the sounds continue, and then clap their wings, as we should our hands, in testimony of their approbation of the performance.

The horse, also, is extremely sensible to music. The trumpet, and all kinds of copper or brazen instruments, appear most to his liking. Martial airs animate and excite his ardour; his mane bristles; his eyes sparkle; he snuffs and snorts with his nostrils, pricks up his ears, and beats time, as it were, with his feet. In equestrian performances, horses dance, with perfect accuracy, in cadence to the sound of instruments. Some wild animals are likewise susceptible to the influence of musical tones. The hunters in the Tyrol, and in certain parts of Germany, affirm that they are acquainted with a method of enticing stags by singing, and female deer by playing on the flute. Beavers and rats are also said to possess a musical taste; and eight of the latter animals have been seen to dance the rope, at a fair in France.

Neither are reptiles, nor insects, destitute of a musical ear. The lizard displays tokens of being singularly fond of harmony. The instant that he hears vocal or instrumental music, his movements betray the most agreeable emotions. He turns over, lying now on his back, now on his belly, now on his side, as if to expose all parts of his body to the action of the sonorous fluid, which he finds so delightful. He does not, however, bestow his approbation on all sorts of music, but is very refined in his taste. Soft voices, and tender and plaintive airs, are his favourites; but hoarse singing and noisy instruments disgust him.

An account is given, in a book of travels, of the taming of rattle-snakes in Guiana, by playing tunes on a flageolet, or whistling so as to resemble that instrument. M. dé Chateaubriand, in his travels in Upper Canada, positively affirms, that he saw a furious rattle-snake, which had penetrated into his encampment, lay aside his rage on hearing the music of a flute, and that the serpent followed the musician to a considerable distance.

Among insects, the spider shows the greatest sensibility to music. Immediately on hearing the sound of instruments, she descends rapidly along her thread, and approaches the quarter whence it proceeds; there she remains immovable for whole hours, if the music continue so long. Prisoners, during long confinements, have tamed spiders in this manner, and converted them into companions.

One of the most remarkable instances of the effect of music on animals occurred at the Royal Menagerie in Paris, where a concert was given, about thirty years ago, and two elephants were among the number of the auditors. The orchestra being placed out of their sight, they could not discover the source of the harmony. The first sensation was surprise; at one moment they gazed earnestly at the spectators; the next, they ran to caress their keeper, and appeared to inquire of him what these strange noises meant. But perceiving that nothing was amiss, they finally gave themselves up to the lively impressions which the music communicated. Each new tune seemed to produce a change of feeling, and caused their gestures and their cries to assume an expression in accordance with it. But it was still more remarkable, that when a piece of music, the correct performance of which had vividly excited their emotions, was incorrectly played, they remained cold and unmoved. They must necessarily have possessed, therefore, if not a discernment, at least a perception of combined sounds, and a distinct sensation resulting from them.

THE RIVER OF VINEGAR.

The water of the river of Pusambio, which rises among the Andes of New Granada, South America, has a sour taste; and the inhabitants, who are acquainted with no other acid than vinegar, call the stream *Rio Vinagre*, or Vinegar river. The sourness, however, arises from the water's being impregnated with sulphuric acid, which it receives from the interiour of a volcano, where sulphur is abundant, and where the river has its source. Within the crater of the volcano, it is said, there is an immense basin of boiling water, the vapours from which escape with much violence, and have a suffocating smell, being composed of sulphurous acid. The water of this basin is covered with a coat of sulphur; and a crust of the same substance is formed on the rocks above it, rising like a dome over the crevice, which forms the communication with the open air. The natives of the vicinity affirm, that the crust has sometimes acquired a thickness of as much as four feet, in less than two years. Acidulated by its impregnation with this powerful mineral, the Rio Vinegre, of course, becomes unfit for the support of animal life; and even the Rio Cauca, into which the Vinegar river empties, is destitute of fish during a course of twelve miles, on account of the mixture of these sour waters with its own. The fish are again found in the Cauca, at the point where it receives the tribute of two other streams. The Vinagre throws itself into the Cauca over three beautiful cascades, the minute spray from which causes a pricking sensation in the eyes.

AGRICULTURAL LABOURS IN FRANCE.

[Allen's 'Practical Tourist.']

The labour of haymaking now occupied the attention of the portion of the country through which we travelled. The mowers used scythes with straight wooden shafts or poles for handles, without being nicely balanced by projecting pins, and bent to the convenient form commonly used in the United States. The labourers, in mowing, are consequently compelled to bend forward in a low, stooping, uncomfortable attitude. The rakes and other farming implements are even more rudely made than the scythe handles, and exhibit none of that attention to lightness and finish, observable in similar instruments in New England. The hoe, instead of the light and thin cast steel blade with its trenchant edge, is a heavy implement with a clumsy handle; and the rake is quite as rudely made, resembling the harrow which precedes it in the fields. The modes of husbandry, as well as many of the mechanical arts of working in wood and iron, seem to be above half a century behind the same branches of business in England at the present time. But the French always contrive to arrive at the same result at last, although by more tedious and laborious processes, after manifesting nearly as much ingenuity in accomplishing their object with such insufficient implements, as the English themselves display in the invention of their more perfect tools and machinery. Like the journeys performed in a French diligence and an English stage coach, the same end is attained, although with a great waste of time and labour.

One of the most singular features of French agriculture, is the subdivision of the land into small lots, cultivated under dissimilar crops, without intervening fences or hedges.* As far as the eye can reach over hill and dale, the parti-coloured hues of light and deep green herbage, the brown soil of the furrowed land, and the russet fallows, appear all intermingled like the squares of a checkered-board, without apparent landmarks to designate the boundaries of each proprietary parcel. Near the road, the fields are laid out in long narrow parallel strips, bordering on the high way, often only one or two hundred feet in front, and extending back many hundred feet. Each of those narrow ranges is planted by its proprietor with the sort of grain, or subjected to the culture, he may consider most profitable. Consequently, every different strip of land has commonly a different crop waving over it. In a distance of one hundred rods of the road, I counted nineteen different kinds of crops growing side by side. First, was a parcel of ground covered with rye; then succeeded bristling asparagus, and adjoining it was a range of pasture, with no fence to restrain the grazing herd from depredating on the grain. Next a field of luxuriant clover, where the mowers were at work, and then a vineyard, a field of wheat, lucerne and a strawberry bed. A cluster of fruit trees, and culinary vegetables, &c. continued to diversify the strangely jumbled system of culture. Even the fruit trees are exposed to the free access of pilferers from the public roads. The French peasants were busily engaged in tying to the stakes the rambling branches of the vines. Cherries and strawberries of delicious flavour and fine size are produced in great abundance. The vineyards appear bristled with stakes four or five feet high, driven into the ground near each plant, to support the branches. At a distance, the vines resemble raspberry, or currant bushes. Although vineyards have been extolled by the poets, they certainly do not rival the beautiful luxuriant vegetation of the deep green, broad leaves, and tall stalks of a field of Indian corn. The rambling branches of the vine, spreading from one stake to another, form at the time of the vintage an unbroken mantle of foliage over the whole field.

Upon each side of the road, apple trees, and the ash and the elm are commonly planted, in double rows. The middle of the road is paved with square blocks of stone, like the streets of a town, wherever the soil is so clayey as to render this expedient necessary, in order to make a solid pathway.

For farming purposes, as well as for the transportation of heavy articles of merchandise over the principal roads, carts are every where used. I have not seen a four-wheeled waggon in France; but enormous loads are poised upon two wheels, and drawn by six, or even eight horses, arranged in long procession, one before another.

The very cartman displays his passion for ornaments, by decorating his horses with fiery scarlet and blue tufts of woollen yarns, affixed to various parts of the harness; and a sheepskin, with the wool dyed of some bright colour, surmounts the collar. Instead of the narrow, strongly ironed and riveted wooden harness, made so small as to be scarcely discernible when imbedded in the padding of the collar on an English or American cart-horse, the harness of the French cart-horses are made of broad boards extended out over the shoulders of the quadruped like the expanded wings of a butterfly, and decorated with gaudy colours and painted pictures of blue roses and red lillies. The form of these collars seems to have been borrowed from that of the wings of Cupid, as usually depicted by painters; or perhaps from a more humble model—the flat sides of a pair of smith's bellows. Thus trussed up about the neck with superfluous appendages, a horse's garniture resembles the triple rows of puffs on a belle of the sixteenth century. In truth, so widely are these boards spread abroad, that they are sometimes really annoying to the foot passengers in the streets of Paris, when the animal brushes by and gives the shoulder not a gentle shock, by way of rousing the inattentive pedestrian from his revery.

* The American farmer would realize what a labour-saving contrivance his fences are, were he to witness all the expedients resorted to in a country which affords no materials for them. Hedges do not thrive so well in the dry climate of France, nor in the United States, as in England, where the abundant moisture favours their growth. In many parts of France the soil is chalky, with but few stones. Trees, suitable for rails or wooden fences, are too scarce and valuable to be used for enclosing fields. Shepherds and Shepherdesses are therefore the constant attendants upon sheep, and women and boys are employed to prevent the depredations of cattle.

A GOOD RULE.—A man and his wife should never both be angry at once.

DIFFUSION OF SCIENTIFIC KNOWLEDGE.

['Dick, on the Improvement of Society.']

It may be safely affirmed, that scientific knowledge would render mechanics and manufacturers of all descriptions more skilful in the prosecution of their respective employments.

Some, however, may be disposed to insinuate, that it is quite enough for philosophers to ascertain principles, and to lay down rules founded upon them, for the direction of the mechanic or artisan; or, that it is only requisite that the directors and superintendents of chymical processes and mechanical operations should be acquainted with that portion of science which is necessary for their peculiar departments. But it is easy to perceive that a mechanic who works merely by rules, without knowing the foundation or reasons of them, is only like a child who repeats his catechism by rote, without attaching a single idea to the words he utters; or like a horse driving a thrashing machine, without deviating from the narrow circle to which he is necessarily confined. When any accident occurs, when the circumstances of the case are somewhat changed, or the principle on which he generally proceeds requires to be applied to a new object or mode of operation, he either blunders in his work or is utterly at a loss how to proceed. The least deviation from his accustomed trammels puts him out, because he has no clear view of the principles on which his practice depends. Hence we uniformly find that a man of scientific acquirements will easily comprehend the plan of any new machine or architectural operation, and be able to execute it, while he who only works by square and rule will hesitate at every step, and perceive innumerable difficulties in his way. To confine artists to mere rules, without a knowledge of the principles on which they are founded, is to degrade their intellectual nature, to reduce them to something like mere machines, to render them less useful, and to prevent the improvement of the liberal and mechanical arts.

It has frequently been asserted, that many useful inventions have been owing to chance, and that persons ignorant of science have stumbled upon them without any previous investigation. It is true that several inventions have originated in this way, but they are much fewer than is generally imagined; and in almost every instance where chance suggested the first hint, future improvements were directed by the hand of genius and the aids of science. But for this, they would in all probability have lain for ages in obscurity, without any real utility to mankind. Had the telescope, the steam engine, and the mariner's compass, in their embryo state, remained solely in the hands of ignorant empirics, they might have served merely as playthings, for vulgar amusement, or have been exhibited by cunning impostors to aid their deceptions, or to produce a belief of their supernatural powers. But science snatched them from the hands of the ignorant and the designing, and having added the requisite improvements, bequeathed them to mankind as the means of future advancement in the paths of knowledge, and in the practice of the arts.

It may, indeed, be laid down as a kind of axiom, to which few exceptions will occur, that great discoveries in science and improvements in art are never to be expected but as the result of knowledge combined with unwearied investigation. This axiom might be illustrated, were it necessary, from what we know of the past history of our most useful inventions. We may further remark, that the mechanic whose mind is enlightened with scientific knowledge *has a much greater chance of being instrumental in improving the arts than the mere chymist or philosopher*. While the mere philosopher is demonstrating principles and forming theories in his closet, and sometimes performing experiments, only on a *small* scale,—the workman, in certain manufactories, has a daily opportunity of contemplating chymical processes and mechanical operations on an *extensive* scale, and of perceiving numberless modifications and contrivances, which require to be attended to, of which the mere scientific speculator can form but a very faint and inadequate conception. Being familiar with the most minute details of every process and operation, he can perceive redundancies and defects imperceptible to other observers; and, if he has an accurate knowledge of the general principles on which his operations depend, he must be best qualified for suggesting and contriving the requisite improvements. As the mechanic is constantly handling the tools and materials with which new experiments may be made,—observing the effects of certain contrivances, and of deviations from established practice,—and witnessing the chymical and mechanical action of bodies on each other,—he has more opportunities of observation in these respects, and consequently is more likely than a person in any other class of society to strike out a new path which may lead to some useful invention in the arts, or discovery in the sciences. But if his mind is not imbued with science, he trudges on, like a mill-horse, in the same beaten track, and may overlook a thousand opportunities of performing experiments, and a thousand circumstances which might suggest improvements.

In short, so far as chance is concerned in new discoveries and inventions, the scientific mechanic has a hundred chances to one, compared with the ignorant artificers, that, in the course of his operations, he shall hit upon a new principle: his chances are even superior to those of the most profound philosophers who never engage in practical operations, as he is constantly in the way of perceiving whatever is useless, defective, or in any way amiss in the common modes of procedure. To use a common expression, 'he is in the way of good luck,' and if he possesses the requisite information, he can take advantage of it when it comes to him. And should he be so fortunate as to hit on a new invention, he will enjoy not only the honour, but also the pecuniary profits which generally result from it.

We have therefore, every reason to hope, that were scientific knowledge universally diffused among the working classes, every department of the useful arts would proceed with a rapid progress to perfection, and arts and inventions, hitherto unknown, be introduced, to increase the enjoyments of society, and to embellish the face of nature. No possible

limits can be assigned to the powers of genius, to the resources of science, to the improvements of machinery, to the aids to be derived from chymistry, and to the skill and industry of mechanics and labourers when guided by the light diffused by scientific discoveries. Almost every discovery in nature lays the foundation of a new art; and since the recent chymical investigations lead to the conviction *that the properties and powers of material substances are only beginning to be ascertained*, the resources of art must in some measure, keep pace with our knowledge of the powers of nature. It is by seizing on these powers, and employing them in subservieney to his designs, that man has been enabled to perform operations which the whole united force of mere animal strength could never have accomplished. Steam, galvanism, the atmospheric pressure, oxygen, hydrogen, and other natural agents, formerly unnoticed or unknown, have been called into action; and, in the form of steamboats and carriages, voltaic batteries, gasometers, and air-balloons, have generated forces, effected decompositions, diffused the most brilliant illuminations, and produced a celerity of motion both on sea and land which have astonished even the philosophical world, and which former generations would have been disposed to ascribe to the agencies of infernal demons. And who shall dare to set boundaries to the range of discovery,—or to say that still more wonderful and energetic powers shall not be called into light, calculated to perform achievements still more striking and magnificent? Much has, of late years, been performed by the application and combination of chymical and mechanical powers, but much more may be confidently looked for in generations yet to come, when the physical universe shall be more extensively explored, and the gates of the temple of knowledge thrown open to all. Future Watts, Davys, and Arkwrights will doubtless arise, with minds still more brilliantly illuminated with the lights of science; and the splendid inventions of the present age be far surpassed in the 'future miracles of mechanic power,' which will distinguish coming ages. But, in order to this 'wished for consummation,' it is indispensable that the mass of mankind be aroused from their slumbers, that knowledge be universally diffused, and that the light of science shine on men of every nation, profession, and rank. And if, through apathy or avarice, or indulgence in sensual propensities, we refuse to lend our helping hand to this object, now that a spirit of inquiry is abroad in the world,—society may again relapse into the darkness of the middle ages, and the noble inventions of past and present time, like the stately monuments of Grecian and Roman art, be lost amid the mists of ignorance, or blended with the ruins of empires.

DISEASES IN FORMER TIMES.

In the British Almanac, published by the Society for the Diffusion of Useful Knowledge, we find some statements respecting the health of the city of London, two or three centuries back, as compared with its present condition in that particular. The facts are drawn from the Bills of Mortality, which had their origin during the great plague of 1593, but were not regularly kept, until ten years later The plague, it appears, was as frequent and terrible a disease in London, at that period, as it now is in any of the cities of the Mediterranean. In the year 1603, thirty-six thousand persons died of it, and during the eight subsequent years, the annual number of victims varied from six hundred to four thousand. In 1625, there was another great plague, which destroyed thirty-five thousand; and still another in 1636. But that which is now exclusively styled the Great Plague, and which will always be pre-eminently famous in the annals of disease, occurred in the year 1665, when the whole number of burials was more than ninety-seven thousand, of which above sixty-eight thousand were victims of the plague. The christenings, in the same year, were less than ten thousand. After that period, the plague never again committed any considerable ravages in London, although a few deaths by it occurred in the succeeding years, until 1679, and the name of the disease, with a cypher annexed, headed the Bills of Mortality, down as late as the year 1703. It then ceased to be considered a national disease.

In those times, the number of deaths in London exceeded the births, even in the healthiest years; but the influx from other sources kept the population of the city continually on the increase. The mortality of infants by convulsions was vastly greater than at present. Many deaths were inserted in the Bills, of persons 'blasted,' or 'planet-struck;'—such are supposed to have wasted away and died, without any apparent disease. The Dysentery was very destructive; it was not, however, known by its present name, but was called the Bloody Flux, and sometimes, very appropriately, the Plague in the Guts. The rising of the Lights was another fatal disorder, the nature of which cannot now be satisfactorily ascertained. Leprosy, which was formerly common among the lower classes in London, and nearly or quite as dreadful a disease as that described in the Old Testament, has now totally disappeared. What is now called leprosy, or Lepra, is generally a slight chronic eruption, which seldom gives much trouble to the patient. The scurvy, which likewise may now be considered extinct, was anciently very prevalent and malignant, owing to the general use of salted meats, and the small proportion of vegetable food. The superiour cleanliness of modern habits of life, rather than any advance in the medical art, (though this undoubtedly, has been great,) must be considered the principal cause of the improved health of London.

Hawks and Swallows.—The author of a recent interesting work, called the 'Backwoods of Canada,' observes that there is a rooted antipathy between the hawk-tribe and swallows. The latter is so terrible to the former, that hawks will not remain in the neighbourhood of swallows, by whom they are pursued for miles, and pestered in all possible manners. A French Canadian assured the author, that, for this reason, a great value was placed upon the swallow, and that high prices were often paid for them, in order to be carried to distant parts of the country, where hawks were abundant.

DRESS OF THE TURKISH LADIES.

[Commodore Porter's 'Constantinople.']

It is difficult to reconcile oneself to the Turkish female dress. That of the men is loose, flowing, and rich; and from the quantity of materials of which it is composed, gives to the man an air of magnificence, from the apparent increase of all his dimensions. The idea is meant, apparently, to be kept up as regards the female figure, but they lose that airy neatness, and sprightliness of action, which distinguishes a Christian woman, or one dressed in the Christian style. An Armenian woman in the Turkish dress, is altogether a different being from an Armenian divested of her load of cloth, boots and slippers, coming off at every moment as she walks.

The Turkish female dress consists of first, a piece of fine muslin which covers the head down to the eye-brows; another in some cases as transparent as air, which covers the face from the nose down, and conceals the neck and bosom; one or two fine and rich vests open at the breast, which is hid by the aforesaid transparent veil; loose trousers gathered above the hips, and below the knee; a rich sash passing several times around the waist; thin yellow morocco boots, which reach to the calf of the leg, and yellow slippers; a long silk garment with sleeves, falling to the ancles, and over all a full cloak of the finest broadcloth, trailing on the ground, with a square cape of equal length and long sleeves. This, with a multitude of massive gold bracelets, rings, chains, and a profusion of jewels, and you have a tolerably fair picture of a Turkish lady of rank, such as I saw, and of the family of the Reis Effendi, corresponding with our Secretary of State, whose wife and family I had the honour to salute, and to receive from them a salute in return: that is to say, the right hand laid on the breast, the head gently reclined; then the right hand shifted to the top of the head; the salutation is grace itself, the way they do it.

Speaking of the dress, it is a great encumbrance to them in walking. The cloak is eternally dropping off one shoulder or the other; then it has to be hitched up; by the time it is fixed, off comes a slipper; in stooping to see where it is, (for they cannot look down without stooping, from the quantity of clothing which interposes between their eyes and the ground:) off drops the cloak from their shoulders; now both arms and hands are required to draw it on, which they do by catching hold of the sides of the cloak, and throwing their arms open in an elevated direction, thus exposing all their under garments and finery. When you see a Turkish woman walking, it appears as if she had as much as she could do to keep herself together.

COOKERY.

[London Quarterly.]

In France, most substances are exposed, through the medium of oil or butter, to a temperature of at least 600 deg. Fahrenheit, by the operation of frying, or some analogous process. They are then introduced into a moderating vessel with a little water, and kept for several hours at a temperature far below the boiling point (212 deg.) not perhaps higher than 180 deg.; and by these united processes properly conducted, the most refractory articles, whether of animal or vegetable origin, are reduced more or less to the state of pulp, and admirably adapted for the further action of the stomach. In the common cookery of this country, on the contrary, articles are usually put at once into a large quantity of water, and submitted, without care or attention, to the boiling temperature: the consequence is, that most animal substances, when taken out, are harder and more indigestible than in the natural state; for it is well known that albuminous substances (as, for example, the white of an egg,) become the harder the longer they are boiled. These observations are often of the utmost importance in a medical point of view. When the powers of the stomach are weak, a hard and crude English diet (such, for example, as half-raw beef-steaks, &c. so frequently recommended) is sure to produce much discomfort by promoting acidity; while the very same articles, well cooked upon French principles, or rather the principles of common sense, can be taken with impunity, and easily assimilated, by the same individual.

EFFECT OF COLOUR ON ODOURS.

In the May number of the American Magazine, we gave an account of the experiments of Dr. Stark, an English physician, in regard to the effect of colour on heat. The same gentleman has instituted a series of experiments, the result of which proves, that varieties of colour greatly modify the capability of substances for imbibing and giving out odours. Dr. Stark's attention was drawn to this subject, by observing that a black dress, which he happened to wear while performing dissections at the anatomical rooms, contracted a most intolerable smell from the dead bodies; whereas, the light olive coloured garments, which he had usually worn, were almost entirely free from the like inconvenience. His first experiment was made by inclosing equal quantities of black and white wool, with a small piece of camphor; the black wool was found to have become much the most odorous of the two. The result was the same, when wool of each colour was shut up in a drawer with assafoetida. He afterwards inclosed black, blue, red, green, yellow, and white wool, with assafoetida, and with camphor; the black imbibed the strongest odour; then the blue, then the red, and next the green; the yellow wool was but very faintly scented, and the white scarcely at all. The wool of sheep attracted a stronger odour than cotton-wool; and all animal substances become scented in a greater degree than those of a vegetable nature, and appear to have a particular attraction for fetid odours.

These facts suggest many important hints, as to the regulations which it may be proper to adopt, in cases of contagious disease, and during the prevalence of epidemics. It is usual to purify infected places by raising a high temperature within them, and by the use of chlorine, fumigation with sulphur, washing with quick-lime, and freely ventilating them. Dr. Stark is of opinion, that, in many cases, mere white-washing may be more efficacious than these, or any other measures. When the cholera visited Scotland, most of the narrow lanes, alleys,

and staircases of Edinburgh were white-washed; and to this is attributed the mildness of the disease, in that metropolis. The deleterious emanations, meeting with no dark surfaces to absorb them, were swept away by the currents of air. The walls of hospitals, prisons, and of all apartments where a number of occupants are congregated together, should be white-washed; the bedsteads, chairs, tables, and other furniture, should be white, and likewise the garments of the attendants. The black suits, almost invariably worn by physicians, unquestionably render them more liable to communicate disease, in going their daily rounds among the sick and well. Instead of black broadcloth, (which, besides its colour, attracts bad smells the more powerfully, as being an animal substance,) the dress of the medical profession ought to be white cotton—a garb little suited, it must be owned, to the gravity of an M. D.

Most persons have heard of the Black Assize, as it was called, where the Judges, while holding at a court of Oxford, together with a great number of people, were suddenly taken sick and died. This occurred in July, 1577; and Lord Bacon observes, that similar instances of sickness and mortality happened two or three times, within his memory. There was another instance in 1750, at the Old Bailey in London, where four Judges, several Counsellors, an under Sheriff, with Jurymen and others, to the number of above forty, lost their lives by a sudden attack of some mysterious disorder. In all these cases, the mortality was attributed to a putrid effluvium, which either came from the neighbouring gaol, or was exhaled from the persons of the prisoners, when brought into court. This doubtless was its true origin; and Dr. Stark conceives that the infectious odour was attracted to the judges, counsellors, sheriffs, and other official persons, by the black garments which they wore in the discharge of their duties.

It seems not to have occurred to Dr. Stark to make inquiries as to the respective degrees, in which the black and white varieties of the human race are liable to contagion. It appears, we think, a necessary consequence of his theory, that negroes should suffer more, in proportion to their numbers, than whites, by all sorts of pestilence, and unwholesome smells. Whether such be the fact, we have no means of ascertaining.

THE PURITANS.

[Hinton's 'United States.']

The world presents no parallel to the history on which we now enter. The love of glory or of gold has been the impelling cause of the commencement of other colonies, and the foundation of other empires; but, in this instance, Religion, and that of no ordinary kind, either as to its purity or its intensity, was the grand principle of colonization. It was a Church rather than a kingdom that these master-spirits of the age sought to establish on the transatlantic shores; and the selection of their location seems to have well accorded with their object. 'Arrived at this outside of the world, as they termed it, they seemed to themselves to have found a place where the Governour of all things yet reigned alone. The solitude of their adopted land, so remote from the communities of kindred men that it appeared like another world,—a wide ocean before them, and an unexplored wilderness behind,—nourished the solemn deeptoned feeling. Man was of little account in a place where the rude grandeur of nature bore as yet no trophies of his power. God, in the midst of its stern magnificence, seemed all in all; and with a warmer and devouter fancy than that which of old peopled the groves, the mountains, and the streams, each with its tutelary tribes, they mused in the awful loneliness of the forests on the present Deity, saw him directing the bolt of the lightning, and pouring out refreshment in the flood; throned on the cloud-girt hill, and smiling in the pomp of harvest. If ever the character of men has been seen more than any where else in powerful action or developement, and operated on by the force of peculiar and strongly moving causes, it was here. Nor, wrought on as all were by similar influences of place, fortune, and opinion, was ever any thing produced like a lifeless unpoetical monotony of character. Nothing could be more opposed to this than was the spirit of puritanism. Wrong or right, every thing about these men was at least prominent and high-toned. Excitement was their daily bread, as it is other men's occasional luxury; and the diversities of character in this community, where, for the most part, people thought so much alike, were more strongly marked than they have often been in other places in the most violent conflicts of opinion. To a religious model, by force or accord, every thing, even relating to the most private and secular concerns, was made as far as might be to conform; for 'noe man,' saith Mr. Cotton, 'fashioneth his house to his hangings, but his hangings to his house.' Religion, politics, fashion, and war, never came elsewhere into so close companionship. The meeting-house and the armory were built side by side as yet, by the force of old habit, they stand the country through. A desperate courage and dexterity in arms were enjoined as religious duties. The old considered questions of polity at the meeting. The demure youth went from testifying with his mouth in the assembly, to testify with his firelock in the field; and the muffled maiden lisped in biblical phrase her soft words of encouragement or welcome.' This is a powerful description, but the reality will be found much to exceed it.

Irish Poverty.—'I do not go to the country gentlemen's houses,' said a poor woman; 'they do not like to see people like me coming about their houses at all. I would not be let inside the gate.' The burden of supporting the poor falls upon the lower and middling classes, the farmers and shopkeepers, but chiefly on the very poor themselves. The farmer does not 'feel the *hunger sticking to him*, as the poor man does.' The poor have a strong sympathy for each other, and feel the need of practising charity, mindful of the time when they themselves may be driven to 'take the bag.'

'In your language, be plain, honest, natural, comely, clean, short, and sententious.'

FEMALES IN EUROPE.

[Allen's 'Practical Tourist.']

To many of the cottages near Sheffield a small forge forms an appendage. During the intervals of household labour, the females may sometimes be seen participating in the labours of the anvil, shaping dexterously the red-hot metal, and completing many of the manufactured articles of iron, which are sold at such moderate prices in the United States. A gentleman, long resident in Sheffield, assured me that he had seen a grandmother and her two grand-daughters busily engaged around the same forge; and in these districts I have had opportunities of observing young girls wielding the file and hammer amid wreaths of smoke, with their ruddy cheeks rivalling the glow of the red-hot iron, and the snows of their necks tinged by the soot of the smithy. They flourish files and rasps with such effective strokes, that they might even excite the emulation of the journeymen blacksmiths in the United States. Nearly all the screws, and it may be added, the small wrought nails, exported to America, are made by the hands of the fair ones of Sheffield. Some of the amazons, I was informed, even make spikes in considerable quantities. You may imagine, on beholding one of these female artists, that you have before you a descendant of the fabled race, Venus and Vulcan, when a mild blue eye occasionally beams upon you, and ruby lips, and teeth like rows of pearls, form a brilliant contrast with the veil of soot, that imperfectly conceals these charms. Whilst you are admiring the artist, rather than her skill, you may feel some surprise on remarking her muscular arms enured to powerful action;—as if the attributes of the Divinities of Love, and of blacksmiths—of internal and external fires, were combined in the person of the fair one before you.

* * * * * * * * * * * In passing through the various market-places in England, you frequently view women in the butchers' stalls, with their sleeves rolled up, performing all the operations of cutting up meat. To one unaccustomed to behold females managing this work of blood it is not an agreeable spectacle. In those who perform the duties of the butcher, we cannot expect to find much of that delicacy, which forms one of the most lovely attributes of the female sex. * * * *

Around the mouth of several of the iron mines (in Staffordshire) there were two or three stout women, who emptied the buckets of fossils as fast as they were hoisted up by the steam-engines from the bottom of each of the shafts to the surface of the ground. Each bucket or tub frequently contains several hundred pounds weight of minerals or rubbish, and the labour is consequently almost too severe for female strength to perform. They seemed, however, diligent and cheerful in accomplishing their hard work, for which they told me they received two shillings per day,—about forty-eight cents.

* * * * * * * * * * In France, the women in the manufactories spin upon the mules, and perform other hard labour, which females are rarely seen to do in the United States. They sometimes appear as brown as the sun-burnt peasant, and nearly as muscular. * * Women in the country may be seen loading the carts from the manure heaps, and holding the ploughs, which are drawn by cows as well as by horses and oxen. They appear to be the principal cultivators, to perform the hard labours of agriculture. At the rising of the sun, we saw them beating the dusty clods with their hoes, which they wield with dexterity, and without diminution of vigour during the sultry heats of noonday. Their sun-burnt long arms, are tawney and weather beaten, from constant exposure. In one single field, I counted sixty-five persons at work in a long range or line extending nearly from side to side of the tract, all engaged with their hoes. Sixty-two of these were women, and only three men. The view of so many females, toiling on the ploughed ground with the dust rising about them, reminded me of the appearance of the extensive fields of Virginia, and of the female slaves employed in tilling them. Where are all the peasants, that the women are here left to perform their duties? Does not this spectacle silently exhibit the effects of war, that are felt with a withering blight to human hopes and human happiness, after the storm has passed? And may it not be the result of Napoleon's wars, that many of these women were in youth bereft of their lovers and friends, some buried beneath the vine-clad hills of France and Italy, and some beneath the distant snow-wreaths of Russia?—These women are now left to till the land, and in several instances they were actually holding the ploughs and turning the furrows, and loading the carts. Several of the farms are so large as to require, according to the statement of a fellow-passenger, from twelve to sixteen ploughs each. Particular care is here taken to destroy the weeds that spring up in the wheat fields and are now ready to form seeds for another year. A little labour thus seasonably bestowed in pulling up and burning these weeds, probably proves in the result, a saving of much time. Even the crops of oats and of other grain are diligently examined by the women, who hunt among the stalks that are as high as their heads, and gather the tares for burning.

* * * * * At Rotterdam, in Holland, a woman acted as porter to carry our luggage. Many females here appeared in the streets with their wheelbarrows, and performed the severe labour which elsewhere falls to the lot of porters. Some of these women stoop to carry on their backs burdens so heavy as to excite the compassion of a spectator unaccustomed to such sights.

* * * * The streets of Paris are always thronged with female traders, who walk out and encounter the fervid rays of the sun with no other covering for their heads than lace or white cotton caps. The men, in the mean while, are fulfilling the domestic duties, and are at work within doors, perhaps engaged in making beds or soups, and performing other culinary operations in the kitchen. Our bed is made and our room is dusted by a man, and the public bath is attended by a female. As it has often been remarked, indeed, the women and the men appear to have changed stations and labours. In the affrays which commenced the Revolution, the market women of Paris were among the

leaders and prime instigators of the mobs. In public amusements, also, the women participate apparently with more zeal than the men, strolling in multitudes through the walks of the Boulevards and gardens, or seated beneath the trees in the Elysian Fields, or sipping sugared water, red wine, or coffee, at the restaurateurs. When the female sex are so much occupied and amused abroad, domestic enjoyments are not generally much prized. In one instance, I observed a whole family enter a restaurateur to dine. Even the striplings followed in the rear, and formed a part of the family group, lagging behind with their hoops and playthings in their hands. The ostensible object of this custom is stated to be economy. The heavy expenses of a kitchen are saved to a small family when the necessary provisions are received from the restaurateur ready prepared for the table, or when the whole family resorts to the public table of a Café.

WASHINGTON'S SPRING.

[Paulding's 'Life of Washington.']

The remains of the huts in which the American army passed the winter of 1788—9, are still to be seen in the Highlands; and a spring, from which Washington used to drink, is consecrated to his name. It bubbles forth from the roots of a tree in a little grove of oaks, growing just at the brink of a beautiful cascade, which falls into a crystal basin below, a descent of sixty or seventy feet. Its waters are much cooler than the surrounding springs; and so beautifully clear as to afford no unapt emblem of the character of him who preferred them to all other.

AN OLD ALMANAC.

[Paulding's 'Life of Washington.']

In an old Virginia Almanac of the year 1762, belonging to Washington, and now before me, interleaved with blank sheets, are various memoranda relating to rural affairs, all in his own hand-writing, a few of which I shall extract, for the purpose of showing my youthful readers, that an attention to his private affairs was not considered beneath the dignity of the man destined to wield the fortunes of his country.

April 5th,—Sowed timothy-seed in the old apple-orchard below the hill.

" 7th,—Sowed, or rather sprinkled, a little of ditto on the oats.

" 26th,—Began to plant corn at all my plantations.

May 4th,—Finished planting corn at all my plantations.

HUMMING BIRDS, &c

On the volcanic mountain of Orizaba, in Mexico, at a height of ten thousand feet above the sea, the Humming Bird was observed flying round the orange coloured flowers of the Castilligen. At a height of fourteen or fifteen thousand feet, above the region of grasses, &c. on the same mountain, there were found, under a block of porphyry, many moths, some dead, others alive, which appear to have been carried upwards by an ascending current of air. In the same dreary region, a live beetle was found, which, from its nature, must be considered a native of this lofty situation. The potato was also found, in a wild state, on the same mountain, ten thousand feet above the sea. It was about three inches and a half high, with large blue flowers, and tubers or potatoes, the size of a hazle nut.—*Tour in Mexico.*

A SUPERSTITION.

['Dick, on the Improvement of Society.']

The practice of informing bees of any death that takes place in a family is well known, and still prevails among the lower orders in England. The disastrous consequences to be apprehended from non-compliance with this strange custom is, that the bees will dwindle and die. The manner of communicating the intelligence to the little community, with due form and ceremony, is this—to take the key of the house, and knock with it three times against the hive, telling the inmates, at the same time, that their master or mistress, &c. (as the case may be) is dead. Mr. Loudon says, 'when in Bedfordshire lately, we were informed of an old man who sung a psalm last year in front of some hives which were not doing well, but which, he said, would thrive in consequence of that ceremony.

WITCH OINTMENT.

Lord Bacon, in his philosophical works, gives the following recipe for the manufacture of an ointment, by the use of which the 'midnight hags' were supposed to acquire the faculty of flying through the air. We trust that none of our readers will make the experiment.

'The ointment which witches use is made of the fat of children, digged out of their graves, and of the juices of smallage, cinque-foil and wolf's-bane, mingled with the meal of fine wheat.'

After greasing themselves with this preparation, the witches flew up chimney, and repaired to the spot, in some church-yard or dismal forest, where they were to hold their meetings with the Evil One. Cervantes, in one of his tales, seems to be of opinion that the ointment cast them into a trance, during which they merely dreamt of holding intercourse with Satan. If so, witchcraft differs but little from a nightmare.

New York a Walled City.—In 1653, New York was fortified against the assaults of the Indians by 'a great wall of earth and stones, running between Wall and Pine Streets, from the North to the East river.' There were two gates; one near the present corner of Wall and Pearl Streets, called the Water Gate; and a Land Gate, in Broadway. In 1675, these gates were ordered to be locked regularly at nine o'clock in the evening, and opened again at daylight.

Staten Island.—The price paid by the Dutch to the Indians, for the whole of Staten Island, was ten shirts, thirty pair of stockings, ten guns, thirty bars of lead, thirty pounds of powder, some hoes, kettles, knives, and awls.

Convulsions.—It is an acknowledged truth, that, in convulsive fits, the more violent the paroxysm the less is the pain.

[The Puma.]

PUMA; OR AMERICAN LION.

Animals of the Feline genus, or Cat family, are thus classified, because their characteristics are familiarly exemplified in the person of the domestic cat. They are all, by nature, entirely carnivorous, although some of them may become habituated to partake of vegetable food. They possess great muscular strength and agility, sharp teeth, and powerful claws, which latter, throughout the whole tribe, may be drawn upward into the paw, or thrust forth, at the animal's pleasure. The upper surface of their tongues is covered with sharp points, or prickles; their eyes, when viewed in an imperfect light, shine and sparkle in such a manner, that they were formerly supposed to emit a radiance from within the pupils; their mouths are surrounded with long and stiff hairs, or whiskers, which serve as most exquisite organs of touch, and enable them to distinguish objects with perfect accuracy, during their nightly wanderings. Feline animals are beautifully shaped and finely proportioned, and their bones, owing to the compactness and closeness of the grain, are so much harder and firmer than those of other animals, that some naturalists have believed the materials to be different. Their muscular fibres, in consequence of a purely carnivorous diet, have likewise a condensed firmness, without any superfluous fat or juices. Their structure fits them to make sudden springs and leaps; and when pursued, it is their nature to conceal themselves, rather than to seek safety in long continued speed, as is the fashion of the Dog tribe and of herbivorous animals. As respects their moral character, they are stealthy, cautious, and cruel, appearing to delight in bloodshed, not merely as their mode of getting a livelihood, but with a disinterested partiality for the infliction of torture and death. Such are the principal attributes of the Feline race, possessed as well by the Cat in the chimney-corner, as by the Lion in the deserts of Africa, and the Tiger in the jungles of Bengal.

The Puma, which chiefly inhabits South America, but has likewise been found within the limits of the United States, is an animal of this class. He is sometimes styled the American Lion, and has the yellowish or fawn colour, without spots, of that mighty beast, but lacks his mane and tufted tail, and is also less large and powerful. In the wild state, the Puma is extremely ferocious, destroying calves, sheep, and other quadrupeds of a similar size, by whole flocks and herds, when opportunity offers, although perhaps only a single carcass will be partly devoured. It is his custom, however, to bury that portion of the prey which may not be wanted for immediate use. The Puma prefers the plains to the forests, but is also at home in the latter, and can climb up trees with facility. In spite of his fierceness, he is a cowardly animal, and will generally, though not invariably, retreat before the face of man. Yet he is very easily tamed, and, in a domestic state, loses most of his ferocious qualities, and becomes as gentle, playful, and fond of caresses, as a favourite kitten. Lord Napier, who had a Puma in his possession, described him as resembling a Cat in every thing but treachery. 'It played with Dogs and Monkeys,' observes his lordship, 'without attempting to hurt them, or even returning an insult; but if an unfortunate Goat or Fowl came within its reach, it was snapped up immediately. It got adrift one night in London, and afterwards allowed a watchman to catch it in the streets without the slightest resistance.' With the nature of all savage beasts, it may be remarked, there are mingled some soft and amiable traits, which appear to render them capable of being adapted to that blessed condition of futurity, when the 'Lion shall lie down with the Lamb.'

FUNERAL CEREMONIES.

[Translated from the Magasin Universel.]

Among the different methods of disposing of the mortal remains of men, burial beneath the earth appears the most ancient. It was the most prompt and obvious mode of withdrawing a painful object from the sight of the living. The custom of interring members of the same family in one burial-place

together was, doubtless, inspired by a wish to preserve that union in death, which had been unbroken throughout life, and by certain vague and indefinite notions as to the nature of the soul and of the future state. We learn from Scripture, that family tombs existed in the time of Abraham.

The custom of burning the bodies of the dead, although not so ancient as that of burial, was nevertheless common at a very remote period. The earliest ceremony of this kind, which is mentioned in Jewish history, occurred at the funeral of Saul, whose body was first burned, and afterwards buried. The ancients placed so much weight on the due performance of funeral rites, whether by burial or burning, that the Athenians, at their highest pitch of prosperity, condemned six victorious generals to death, merely for having neglected to pay the last honours to the soldiers slain in the battle of Arginuse. It was the belief of the Greeks and Romans, that the soul could not be happy or in peace, so long as the corpse was defrauded of the proper ceremonies. The usage of burning the dead still subsists in Hindostan, Japan, Tartary, and other parts of the East; it was formerly common in the countries of the north of Europe. Some savage nations expose dead bodies in the open air; the ancient Scythians suspended them from the branches of trees; and in our own times, the South-Sea islanders place them in little huts, without a roof, and there leave them to the action of the atmosphere.

The ancients placed their tombs, indifferently, either in the cities, the fields, or even on the highways. The garden of the royal palace, at Jerusalem, enclosed the sepulchres of the kings of Judea. The new sepulchre, where Joseph of Arimathea laid the corpse of our Saviour, was in his garden. The tomb of Rachel was on the high road from Jerusalem to Bethlehem. The kings of Israel were buried at Samaria. The graves of Samuel and Joab were in the houses where they had lived. Moses, Aaron, Eleazar, and Joshua, reposed on the mountains, and Deborah under a tree.. There was the same diversity among the Greeks and Romans; and they had no preference for the vicinity of a temple, as a burial-place. The custom of having cemeteries round churches was not established, in England, until about the year 800; after which period, persons of distinguished rank obtained the privilege of being deposited within the walls of the sacred edifice. Pope St. Gregory assigned as a reason for tolerating this fashion, that the sight of the tombs would remind the living to pray for the souls of the dead. The usage of burial in vaults, and under the altars, was not introduced till two centuries later. The Egyptians deposited their dead in caverns, or catacombs, after embalming them. The Hindoos have no places set apart for burial; and, in general, they throw the ashes into the Ganges. The Guebres, who are descendants of the ancient Persians, expose the bodies in situations where they will be devoured by birds of prey —a custom which they inherited from their forefathers.

The testimonials of respect and affection, displayed at funerals, likewise vary among different nations. Among the Jews, it is still the custom for all, who surround the death-bed, to rend their garments. The corpse is then laid on a cloth, spread out on the floor, with the thumb turned towards the inner part of the hand, and a lighted taper either at the head or the foot. Formerly, performers of instrumental music, and female mourners, were hired to accompany the dead to his last home; but the family of the deceased are now the only attendants.

At Rome, a small piece of money used to be placed in the dead person's mouth, that he might have the wherewithal to pay Charon for ferrying him across the Styx. Private funerals generally took place at night; but, in later times, public ceremonies were solemnized with the utmost pomp. Lictors, clad in black, conducted a numerous procession, which marched to the sound of music, and was composed of women, simultaneously weeping and singing, and of buffoons, one of whom was called the Archimimus, or chief of the mimics. The office of this personage was to imitate the appearance and gestures of the deceased, and present a living image of the lifeless corpse. The images of the dead person's ancestors were carried in the procession, and likewise the badges of the public offices which he had sustained. After an oration, which was sometimes pronounced in the forum, the kinsmen set fire to the funeral pile. The bones were carefully collected, and deposited in an urn, together with a small vial, called a lachrymatory, which was supposed to contain the tears of the mourners.

In China, the funeral rites are celebrated with such prodigality, that the property of the deceased is often sold to defray the expense. Considerable sums are devoted by people, while alive, to the purchase of a coffin; it is adorned with paintings and sculptures, and covered with inscriptions; and the owner shows it to his family, as one of his most valuable possessions. When he expires, his body is laid in it, with apparel suited to every change of season, and provisions for the other world. The kinsmen and friends come to visit the dead person, and meats are offered to him at every repast; and a long period is sometimes permitted to elapse before the corpse is consigned to the tomb. So much importance is attached to the selection of a proper spot for the grave, that a consultation is held with the priests respecting it.

Hottentot Doctors.—The Hottentots have an extensive knowledge of the medicinal properties of their native plants. They are continually trying experiments with one thing or another, and sometimes stumble upon discoveries of great scientific importance. An old Hottentot she-doctor will often, by her vegetable remedies, cure virulent diseases, which have baffled the skill of physicians educated in Europe.

Diseases of Parrots.—These birds have two disorders which are generally considered peculiar to man;—Gout, or something very similar—and a species of Apoplexy. The latter appears to be an affection of the brain, which is uncommonly large in Parrots.

TRAVELLING IN SOUTH AMERICA.

[Temple's 'Travels in Peru.']

The *requisites* for travelling mean, in this country, every thing that convenience and necessity demand; for, except in the towns, which are hundreds of miles apart, nothing of the kind can be had. Not only a canteen with plates, knives, forks, &c. but also tables, chairs, cooking-utensils, beds and bedsteads, must be carried by those who know not how to *rough it*, and who cannot dispense with the comforts of civilized life. Beef or mutton may be always obtained in the journey across the pampas, but nothing else must be expected; the want of even pure water is occasionally a severe privation, for in some places, where there is no river in the neighbourhood, and where the people have not taken the pains to sink a well, they have only a large reservoir, close to the habitation, in which the rain is *caught*—I cannot say *preserved*, for no care is taken of it. I have frequently drunk from those holes, which have become receptacles of frogs, toads, and reptiles of various kinds, known and unknown; this, however, is not the case at houses of tolerable respectability. In Buenos Ayres, rain-water is considered a great luxury, and in some houses tanks are formed for preserving it in the under-ground stories. A gentleman of my acquaintance informed me that the tank under his house held upwards of six hundred pipes of water, and I never heard that this under-ground ocean occasioned dampness in the apartments above.

The excessive heat made one of the preparations for our journey across the pampas very laborious,—that of stowing our baggage carts, two of which we have purchased. These are capacious, rude, uncouth-looking vehicles, with cane sides, and roofs covered with hides, the body balanced upon two prodigiously high wheels, for the convenience of passing through rivers. We have also purchased for our own convenience a long coach called here a *galera*, the seats running sideways and the door at the end; being perfectly new, it cost one thousand and forty-five dollars, which at the present rate of exchange is not quite two hundred pounds sterling. Our English carriage was found totally unfit for the roads of this country, the axletree being much too narrow and the wheels much too low; besides, on the score of capacity, it was altogether inadequate to the accumulation of goods which all and each of us had provided, as well for general convenience as for individual comfort. Guns, pistols, hams and sabres; rum, brandy, powder and shot; chronometers, sausages, thermometers, barometers, and biscuits; telescopes, books, pens, ink, and sugar; a change of linen, razors, soap, lemons and oranges; after the most ingenious packing, and to say nothing of the contents of our own pockets, left but very scanty room for ourselves, and when each had settled into his place, there was just room, and no more, to afford my dog a berth on a Cheshire cheese.

According to the custom here of posting, each horse is ridden by a postilion; and as each of our vehicles required four horses, we were under the necessity of hiring nine *peones** for the journey: one horse in each carriage is always ridden by a postilion from the post houses, for the purpose of conducting the animals home. We also hired a *capataz* who superintends the *peones*, manages the concerns of the journey, and is supposed to possess ingenuity sufficient to repair the frequent damages that occur; for which purpose the requisite tools are provided, and amongst them, spades, shovels, and pickaxes must not be forgotten, as there are many opportunities of converting the *peones* into pioneers. It must here be observed, that not a particle of iron, not even a nail, is used in the construction of the baggage-carts; they are every where secured with wooden pins, and bound with strips of hide, which very reasonably prevents it being a matter of surprise that in a galloping journey they should occasionally require repair; and in the course of our journey we were detained several whole days for this purpose.

In the cool of the evening, after the moon had risen, we left Buenos Ayres, a formidable cavalcade; the *galera* taking the lead, the two baggage carts following, and the *capataz* bringing up the rear; our twelve horses, nearly as wild as the twelve postilions who mounted them, making fruitless efforts to free themselves from their dexterous riders.

We stopped at La Figura, the first post from Buenos Ayres, and where we were to pass the night, and have a specimen of the accommodation we were to expect upon a journey of seventeen hundred English miles. When we arrived, the inhabitants, I suppose, were all in bed, for not a soul appeared, and all doors were shut, except one of a detached out-house, consisting of four bare walls, a thatched roof, and mud floor, which was the post-house, that is to say, the travellers' hotel. Those who chose to enter it did so, and spread their mattresses upon the floor; I preferred the open air, and selected a berth under the galera, the inside being occupied by our chief commissioner, who, of course, had first choice in these matters.

After travelling about seventy miles from Buenos Ayres, we found the country for leagues around to be covered with thistles, growing to the prodigious height of eight, and, in some places, ten feet; cattle which go in amongst them to seek a shade from the sun, and to feed upon the grass beneath, are completely concealed. These thistles form almost the only fuel for the few inhabitants who are scattered over this vast wilderness: not a tree is to be seen, with the exception of a few peach trees, planted in the immediate neighbourhood of the huts.

At the post house at Chacarilla, the host and hostess, perceiving that we were 'decent people,' obligingly warned us against sleeping within their house, in consequence of the danger to be apprehended from *Vinchucas*, a species of Brobdignag bug, which infests most houses in this country during hot weather; its bite is extremely severe, and if rubbed or scratched, from which it is difficult to forbear, occasions very serious inflammation. In size and appearance, these insects resemble the common beetle, but are much more active and evidently more sagacious, for they seem to watch and reconnoitre at the entrance of their retreats before

* Workmen of all kinds are called *peones*.

they venture out. They are dreaded by all travellers, and, in the present case at least, by the natives; for, when I inquired how the owners of the house managed to protect themselves from these reptiles, it was replied, that they never slept in their house when the weather admitted of sleeping out of it; and when the rains kept them within, they never slept at night, which is the time the vinchucas leave their holes and corners in search of blood. The family at this post are respectable and extremely civil.

After leaving the region of thistles before mentioned, we travelled for about one hundred and twenty miles through a country of more agreeable aspect, though not a tree as yet appeared to our view, the whole being one vast field of rich pasture. This is the true pampa of South America, of which we have of late years read and heard so much in Europe. Innumerable herds of cattle, the progeny, it is said, of six cows and a bull, imported rather more than two centuries ago from Spain, range at large over this ever verdant surface of inexhaustible luxuriance. I have been credibly informed, that their numbers at the present day bear no proportion to what they were before the devastating havoc of the late civil war; still they appear to an European eye in countless multitudes, and leave the traveller no longer cause to wonder that such fine animals should, at one time, have been slaughtered in thousands, merely for their hides. It is imagined by many persons in Europe, that the cattle here are, for the most part, perfectly *wild*, without any particular owner, and that, like the deer or the ostriches which roam amongst them, they may be hunted and killed by whomsoever pleases to do so. This I have been given to understand was actually the case some fifty years ago; but of late, the value of hides and tallow as articles of exportation, has induced a very jealous care on the part of the cattle-breeders of the pampas, who have each a private mark branded upon every animal, and which is registered to families, with all the form and legality attending arms and crests in the herald's office.

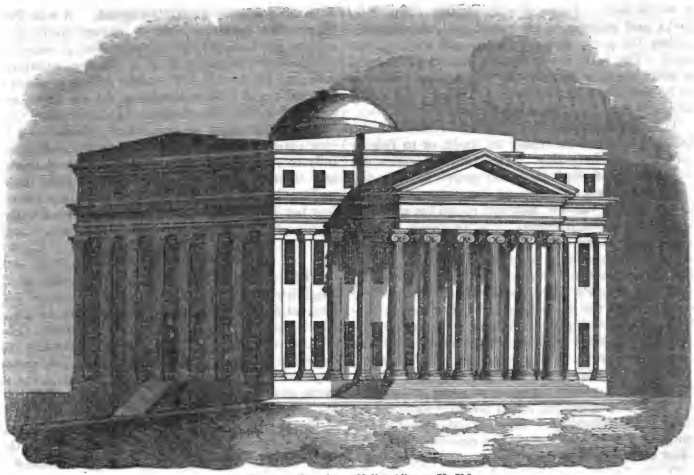
This noble plain, entirely covered with pasture, extends many hundred miles into the regions of Patagonia, where it is yet unexplored. Humboldt calculates its area at 70,000 square leagues. 'This area,' he observes, 'of the pampas of Tucuman, Buenos Ayres, and Patagonia (they are all united) is consequently four times as large as the area of all France.' No lawn was ever laid down with greater precision by the hand of man, than this vast interminable plain has been by that of nature. Not a stone is to be seen on its surface. I can scarcely give a better proof of the flatness and unvarying smoothness of this pampa, than by stating, that this day, (4th of January,) we travelled with ease and facility from the post of Desmochados to that of Fraylemuerto, a distance called thirty-seven leagues, but which cannot be less than one hundred and twenty English miles; and this, considering our laden baggage carts, and delays at post-houses in catching horses, is assuredly rapid travelling; nor must it be forgotten that the *same* postilions, (our *peones*) performed the whole task without any symptom of fatigue.

ALLIGATORS.

Mr. Audubon remarks, that all the lagoons, bayous, creeks, ponds, lakes, and rivers, in Louisiana, are well stocked with alligators. 'They are found,' says he, 'wherever there is a sufficient quantity of water to hide them, or to furnish them with food; and they continue thus in great numbers, as high as the mouth of the Arkansas river, extending east to North Carolina, and as far west as I have penetrated. On the Red River, before it was navigated by steam-vessels, they were so extremely abundant, that to see hundreds at a sight along the shores, or on the immense rafts of floating or stranded timber, was quite a common occurrence; the smaller on the backs of the larger, groaning and uttering their bellowing noise, like thousands of irritated bulls about to meet in fight.' On land, the alligator is sluggish and unwieldy, and appears conscious that he is there at the mercy of an enemy. 'Should a man then approach them,' observes Mr. Audubon, 'they do not attempt either to make away or attack, but merely raise their body from the ground for an instant, swelling themselves, and issuing a dull blowing sound, not unlike that of a blacksmith's bellows. Not the least danger need be apprehended; then you either kill them with ease, or leave them.' Nor, except in Spring, are they considered dangerous, even in their own element; although nothing can be more terrible than the blow of an alligator's tail. 'Wo be to him,' cries Mr. Audubon, 'who goes within the reach of this tremendous thrashing instrument; for, no matter how strong or muscular, if human, he must suffer greatly, if he escapes with life. The monster, as he strikes with this, forces all objects within the circle towards his jaws, which as the tail makes a motion, are open to their full stretch, thrown a little sideways, to receive the object, and, like battering-rams, to bruise it shockingly in a moment.' Alligators are produced from eggs, which, like the eggs of snakes and tortoises, are covered with a thin transparent, parchment-like substance, instead of a shell. They are sometimes killed for their oil, which serves to grease the machinery of steam-engines and cotton-mills. Some years ago, it was the fashion to make shoes, boots, and saddle-seats of their hides, the leather of which exhibited all the regular lozenges of the animal's scales, and was capable of being finished in the most perfect manner. The manufacture has now ceased; it being found that the texture of their skins is not sufficiently firm and close to resist water or dampness.

Shadowless Objects.—The ancients had an idea, that, by the peculiar construction of the Pyramids, they would never cast any shadow—that neither the rising nor the setting sun would cause the shadow of their summits to fall beyond their bases.

Remedy against Venom.—A French physician, long resident in America, discovered a mode of curing the bites of venomous reptiles. It consists merely in pouring a few drops of the tincture of cantharides on the wound. A blister is thus raised, and when the skin is removed, the sting of the reptile is drawn out, along with it.



[View of the New State Hall,* Albany, N. Y.]

NEW STATE HALL.

An engraving of the Capitol at Albany has appeared in a former number of the Magazine. The edifice, a representation of which we now offer to our readers, is destined to contain the apartments for the public offices, connected with the state government of New York. In 1833, the Legislature authorized the sale of the building and lands which have hitherto been used for this purpose; and the proceeds, with previous and subsequent appropriations, compose the funds for the erection of the new State Hall. The structure, as we are informed, is not yet completed. Its site, covering an area of one hundred and thirty-eight by eighty-eight feet, fronts west towards the Academy park, from which it is separated by Eagle street. The building is to be constructed of brick and stone, with an exteriour facing of cut stone from Mount Pleasant, and will be rendered fire-proof throughout. The style of architecture is Grecian, with such variations from the temple form, usually adopted in public buildings, as have been thought advisable, from the nature of the ground. The principal entrance, on the west front, is beneath a stately portico of six Ionic columns, surmounted by an entablature and pediment. The edifice is to be about sixty-five feet in height, on the west side, and nine feet higher, owing to the declivity of the ground, on the east; and will be crowned by a hemispherical dome, forty feet in diameter, admitting the light through a sash into the rotunda. The interiour arrangements are to be made in a style of simplicity, yet of liberality and elegance, such as should ever characterize the public buildings of a great republican community.

* For the original engraving of this building, as well as for the substance of the article which accompanies our copy of it, we are indebted to the *Zodiac*, a well-conducted paper, published monthly at Albany.

CANADIAN INDIANS.

The Indians in Upper Canada are described as very expert in fishing, particularly through the ice. They cut a hole through the surface of a frozen lake, cover themselves with a blanket, in order to darken the water, and remain many hours on their hands and knees, waiting for their prey, which is lured within their reach by a decoy-fish, made of wood. On perceiving a fish near the hole, they aim the spear at him with admirable precision. A fish called the *masquinongé*, taken by the Indians in this manner, and weighing eighteen or twenty pounds, may be bought by the English settlers for a small loaf of bread. They are equally successful in duck-shooting, which is practised by means of a canoe, filled with green boughs, so as to resemble a floating island. The young Indians are excellent marksmen, with a long bow, and short, heavy arrows.

Their birch-bark baskets are sometimes very pretty, being stained with an art peculiar to themselves; and wrought in various patterns with dyed porcupine's quills. They are used by the Canadian ladies as bread-baskets, knife-trays, and sugar-baskets, and likewise as work-baskets, note and letter-cases, and flower-stands. These baskets are sewed with the tough roots of the tamarack or larch, or with strips of cedar-bark, and are often so compactly made as to hold water, milk, broth, or any other liquid. A coarser kind is used to contain potatoes, Indian corn, and turnips; they are sometimes manufactured of the inner rind of bass-wood,

or white ash. These articles, together with fish, ducks, and venison, are bartered with the English settlers for pork, flour, potatoes, and wearing apparel. The Indians are shrewd, close, and cautious in their bargains, particularly the women, who, as we believe is the case all over the world, are much harder to deal with, than the men.

They are scrupulous in their observance of the Sabbath, and are unwilling to trade, or to fish or hunt, on that holy day. The Indian females are good-humoured, and extremely gentle in their dispositions. In long journeys, the children are carried in upright baskets, fastened round the mother's neck by a deer-skin thong. The papooses, or very young infants, are placed in a sort of flat cradle, and secured in such a manner with flexible hoops, that they cannot stir hand or foot; they are slung round the squaw's neck, with the back of the child to the back of the mother, and the face turned outward. On entering the residence of a settler, the squaw immediately unslings her papoose, and places it upright against a wall, chair, chest, or other article of furniture, where it remains perfectly quiet, looking not unlike a little Egyptian mummy in its case. The Indian mothers are noted for their fondness towards their offspring. Many of the young girls sew very neatly, and are glad to receive bits of silk, velvet or braid, from their European neighbours.

The author from whom we have abstracted these particulars, seems to consider the Canadian Indians as a mild and amiable race, with many good qualities, and few or none of the fierce and mischievous ones that distinguished the Chippewas, from whom they are descended.

WIVES OF EMIGRANTS.

Male emigrants to Canada enjoy excellent spirits, are perfectly content with their situation, and become attached to the country. But the women, it is said, are full of regrets and repinings, and disturb the peace of their husbands and brothers by vain yearnings for their native land, and hopeless desires to rejoin the friends and relatives whom they have quitted forever. Their discontent does not seem to be lessened by the thought, that they have exchanged hunger and poverty in England, for comfort and the prospect of comparative wealth in America; they appear willing to give up all the advantages which they have gained on this side of the Atlantic, for the privilege of again enjoying the gossip and social intercourse of their former neighbourhood. This difference of feeling between the two sexes may be partly accounted for by the dissimilarity of their modes of life, in the backwoods; —the man goes forth to hunt and fish, to hew down the forest, and till the virgin soil, and keeps his soul active and energetic by adventurous sports and healthful labour; while the woman stays by the lonesome fireside, and feels the gloom of the wilderness gathering around her, unenlivened by any of its peculiar pleasures. But, no doubt, the unhappiness of female emigrants may be largely attributed to the innate character of the sex. Women were not meant to be wanderers, as men are; their local attachments are too strong; their hearts cling too fervently to their early homes, to be torn away without the most exquisite anguish. A wise Providence has given woman a nature unfitted for change of place, that she may be like a warm, domestic light, beaming from a cottage window, to lure man homeward, who would otherwise roam far and wide, nor ever settle down, till his limbs were too stiff to bear him further. It is the duty of all who are meditating an emigration, whether to a foreign country or to our own far western settlements, fully to consider this point in the female character; and if the lot of woman be linked with their's, nothing but urgent necessity should induce them to tear her from the spot, which she has been taught to consider the home of her whole lifetime.

INDIAN SUPERSTITIONS.

The Indians of Virginia, at the period of the English settlement, believed that the place of punishment for the wicked was a deep hole, or pit, to which they gave the name of Popogusso. They affirmed that the grave of a certain Indian, the next day after his burial, had been seen to move; in consequence of which phenomenon, they removed the earth, and found the dead man restored to life. He informed them that his soul had almost arrived at Popogusso, when it was rescued by a god, and sent back to warn his friends of the danger of their evil courses. Another grave being observed to move in a similar manner, it was likewise opened, and the resuscitated corpse came forth. He told those who stood around the grave, that he had travelled far in a broad and pleasant path, overshadowed by delightful trees, which were luxuriantly enriched with the most delicious fruit. At length he reached a village, composed of beautiful habitations, and, at the door of one of them, was met by his father, whose body had long been in the grave. The old man bade him go back to earth, and exhort his kindred and friends to lead upright lives, that they also might find their way to the mansions of the blest—whither, when he should have delivered this message, the Indian was to return.

In those early days, the Indians supposed that the English were men of a former generation, who had died and been buried long ago, and had now found their way back to the world, with new bodies. They also supposed that other beings of the same nature, but without bodies, were hovering in the air, and would take vengeance for any injury that might be offered to the English. These, and other similar stories, may be found in Purchas's Pilgrimage.

Naval Captains.—The following anecdote conveys a strong idea of the rigid supremacy maintained by the commanders of vessels in the American navy. Captain Cook, a British officer, inquired of an American midshipman, what sort of a captain he had? 'Sir, are you not aware,' replied the midshipman, 'that a captain of a man-of-war is a king?—well, then, my captain is king of kings.'

Nondescripts.—There are quadrupeds in New-Holland, which unite the beak of a bird with the shoulders of a reptile.

No man is an upright judge in his own cause.

PEKING, IN CHINA.

['Travels of the Russian Mission in China.']

I am able to give some general information respecting the Chinese houses, because the hotel of the Legation, as well as the Russian Convent in Peking, is built in the manner of the country. All the dwellings, from the hut of the artisan, to the palace of the rich man, are of one story, and built of brick, and stand in a court yard which is always surrounded with a high stone wall, so that from the street nothing is to be seen but the roof. Shops joining to the houses are an exception. Large windows, with paper instead of glass, occupy almost the whole of the front, which is always turned towards the south, as far as the situation will allow. The windows of the convent have Muscovy glass, which is a kind of mica; the rooms are tolerably high, and hung with white or coloured paper. In most houses, in all the shops, and even in the palace of the Emperour, remarkable sentences of celebrated philosophers and poets, are written on these hangings, as well as on white, red, or other coloured papers; these inscriptions are called *towitsu*. In the houses of the rich, the doors and partitions are of costly woods, such as camphor and cypress, adorned with carved work. Besides being agreeable to the eye, they diffuse a pleasing perfume through the apartment. The tables and chairs, made of the finest wood, are highly varnished and polished. Large houses have a whole range of rooms not communicating with each other, but all opening into a covered gallery supported on pillars, which runs in front of them. There are no stoves in the rooms, which are heated by coals placed in copper vessels, made for the purpose; or in hollows contrived under large stone benches. These benches are placed under the windows or along the opposite wall, and serve as seats during the day, and as beds by night. The roofs of the Chinese houses are not flat, as in the hot countries of the East; but high and concave, from the top to the edges, which project beyond the walls of the houses, and are curved a little upwards, something like the summer-houses in our European gardens. The form of these roofs seems to be taken from the tents of the Nomade tribes who were the primitive inhabitants of China. All the buildings are covered with tiles, which are sometimes glazed with a green, red, or yellow varnish; but according to the rules of this country, where there are rules for every thing, only the imperial buildings and the temples may be covered with yellow tiles; those of princes and great men, with green; for other houses gray tiles are used. In other respects the style of the houses differs only in such particulars as the locality and the circumstances of the proprietors, naturally cause. Thus the houses in the southern provinces differ from those of Peking.

Every thing in Peking betokens a city of great trade, crowded population, and a civilisation ancient and matured, though of a peculiar character. European diligence and Asiatic servility seem to be here united. The population is probably upwards of two millions, fifty thousand of whom have no employment, and no ostensible means of subsistence, and are therefore supposed to live by their depredations upon the property of others. Yet robberies of importance are far from frequent; the wants of a Chinese are few, and the police is rigid. The power of the government, contemptible as it appears in the eyes of foreigners, is yet sufficient for the preservation of order. The Chinese army is computed at seven hundred and forty thousand men, distributed over the whole extent of the empire, but badly armed and equipped, and totally unskilled even in the use of the miserable weapons provided for them. The naval force is said to be still less formidable. But in the cities, it is the fear of the bamboo, rather than of the musket or the bayonet, which restrains the disorderly. Blows are freely administered, and passively received. A few police officers, armed with these slender canes, are as much feared as a file of soldiers in Paris.

The internal commerce for the supply of this capital is extremely active. The southern provinces may be considered as the centre of the inland trade. They produce tea, rice, cotton, and silk. There are manufactories of silk, and also of porcelain, ink, furniture, and lackered goods.

Provisions are sold in all quarters of the city; almost at every step there are shops where they sell rice, flour, small loaves baked, or rather boiled in steam, meat, &c. The inhabitants of Peking, and the Chinese in general, eat much pork, which is here well flavoured and easy of digestion. Mutton and beef are not very good in China, because the cattle coming from Mongolia are too much exhausted, and are not properly attended to after they reach the capital. Butter, especially made of sheep's milk, comes from Mongolia. The Chinese prefer hog's lard, and cannot bear even the smell of butter made of cow's milk. The most common domestic fowls are geese, ducks and chickens. The first are indispensable at grand entertainments. The physicians forbid patients to eat poultry, as indigestible and unwholesome. A species of duck, called ya-tsu, is a very favourite dish on grand occasions, and is dressed in more than thirty different ways. The ducks of Peking are very large, fat and juicy. In the Winter there are partridges, pheasants, and game of all kinds. But it is necessary to be very careful in purchasing provisions, for the Chinese dealers mix plaster or sand in the flour to increase the weight. Often they sell the flesh of animals that have died of some disorder, or of such as are not generally used for food; for instance, asses, mules, camels, &c. They improve the appearance of ducks and chickens by blowing air between the skin and flesh, which makes them look very white and plump. Peking is supplied with fresh fish, especially carp, from the neighbouring rivers, and the sea-coast. Smoked fish and lobsters are very common. In the Winter, the court receives large frozen fish, such as sturgeons, sea eagles, (*Raia aquila*) carp, of a particular species, &c.; these are brought on camels, from the river Amour. The Emperour distributes them among the princes of the first order, and by this means a certain quantity finds its way into the markets. As for fruits and vegetables, they have them of all kinds as in Europe, such as very excellent cabbages, cucumbers, carrots, turnips, radishes, &c. All these

vegetables, except the cabbage, are salted to such a degree that they are used at table instead of salt. Grapes, peaches, apples, and delicious pears, are extremely abundant; there are also oranges, and lemons, but they are not well flavoured.

The general and constant beverage is tea; but it is prepared very differently from that which comes to Europe. The Chinese gather for their own use the young leaves of the tea-shrub, which are dried in the sun. This kind of tea has a very delicious fragrance and taste, and is very good for the stomach. They distil a very strong brandy from rice, which they drink warm in small cups. At table, they have a kind of sour brandy, called *chao-tsieou*, (burnt wine) extracted by distillation from fermented rice.

A visit to the shops of the merchants afforded us much amusement. In one street, very narrow and dirty, we entered several booksellers' shops. They sell Chinese and Mautchoo books, which they keep ready bound, and in good order; but on examination, we discover that many of them are imperfect. The booksellers, besides asking five times the value of a book, try to put off copies which want some leaves, or are composed of the sheets of three or four different works. You must be very much on your guard to avoid being imposed upon; the same mistrust, indeed, is necessary in all purchases. The best books, and chiefly historical ones, are printed at the imperial press, where the booksellers of Peking and other towns buy them at prices fixed by the government. This press likewise, publishes every two days, a gazette containing the extraordinary events which occur in the empire, the ordinances, and especially a list of the promotions and favours granted by the Emperour, such as yellow robes and peacock's feathers, which are equivalent to orders of knighthood in Europe; it also announces the punishment inflicted on Mandarins who have been guilty of misconduct, &c.

Printers and even booksellers have copper and wooden plates engraved for works of minor interest; as many copies are printed off as are required, and sold at arbitrary prices. Very neat and legible characters, printed on fine paper, enhance the price of the work. Movable types cannot be used for the Chinese language. Their best paper is made of cotton.

Further on, in the same street, are the jewellers' shops, where they sell pictures, articles sculptured in jasper, ivory, and fine wood, for the ornaments of apartments; the workmanship of these things is very good. We also see glass wares, varnished porcelain, &c.: every thing of the best quality. There are even things which come from the imperial palace, and which the eunuchs contrive to carry off, and sell at a low price to the shopkeepers; likewise English goods imported into Canton.

Near each gate of the town, between the southern wall and the canal, we meet with saddled asses for the use of the public. The Chinese mount these animals to go from one gate to another, for which they pay about four coppecks in copper; they are likewise employed to carry light burdens. We were told that people often travel from Peking to the southern provinces in little carts drawn by men, —a melancholy consequence of the too numerous population, which is destitute of means to obtain a better livelihood. The extent of China is disproportioned to the number of inhabitants, and the ground is exhausted by incessant cultivation. Near the wall of the town are caverns, which serve as dwellings for the poor. It is impossible to form an idea of the misery of these unhappy people. Almost destitute of clothing, and covered with fragments of mats, they haunt the shops of the mercantile quarters, and when they have received a few tchokhi, return and hide themselves in their caves.

The Chinese love numerous assemblages. The public walks are not frequented every day, but at certain seasons they are crowded by immense multitudes. Besides the festivals at the new year, and a few others, the Chinese have no weekly holydays; the people labour continually.

In Spring, the people frequent the promenades in the environs of Peking, which are for the most part very pleasant. The common people go on foot. The company drink tea, and amuse themselves with the feats of jugglers, rope-dancers, &c. Persons of rank and fortune show themselves on the promenades in splendid carriages, drawn by fine mules, or riding on spirited horses. The spirit of vanity and luxury, common in all great cities, manifests itself in the same forms at Peking.

ON THE ENTRANCE OF THE AMERICAN WOODS.

By Mr. Galt.

What solemn spirit deth inhabit here?
  What sacred oracle hath here a home?
What dread unknown thrills through the heart in fear,
  And moves to worship in this forest dome?
Ye storied fanes in whose recesses dim,
  The mitred priesthood have their altars built,
Aisles old and awful where the choral hymn
  Bears the rapt soul beyond the sphere of guilt,
Stoop your proud arches, and your columns bend,
  Your tombs and monumental trophies hide,—
The high, umbrageous walks that here extend,
  Mock the brief limits of your sculptured pride,—
Stranger forlorn, by fortune hither cast,
Darest thou the genius brave, the ancient and the vast!

Revolutionary Navy.—In the Revolution, the American navy appears to have attained its greatest strength, not long after the commencement of the contest. In October, 1776, there were twenty-four captains, commanding vessels of from ten to thirty-two guns. After that period, the few additions were insufficient to compensate for its losses. But in 1778, and thenceforward through the war, the naval power of France was on the side of the United States, and partly supplied the want of a maritime force of our own.

Philadelphia.—The early growth of Philadelphia was rapid, though not to be compared to that of some of our western cities, or of Lowell in the East. In the first year after its foundation, by William Penn, eighty houses were erected; in ten years, the private estates were valued at upwards of seventy-five thousand pounds.

THE MILITIA.

[American Quarterly Review.]

It has been the opinion of officers who have seen service in all parts of the globe, that the mass of the people of the United States furnishes the finest material for a military force, which exists in any part of the world. Yet, as our militia is at present constituted, it has been reasonably doubted whether its employment upon emergencies has been productive of most good or evil to the military character of our country. The same description of force which fled at North Point without seeing an enemy; which broke at Bladensburgh upon the first fire; which refused to cross at Queenstown to complete a victory already gained; manned the weak lines at New Orleans, from which a superior regular force retired completely beaten; and foiled at Plattsburgh, the veterans of the Peninsular wars. It is therefore certain that no reliance can be placed upon the effects a militia force, as at present organized, will produce; for, by circumstances not to be predicted, it may either achieve victory, or ensure defeat. This must always be the case, so long as citizens are called on sudden emergencies from their homes to act as soldiers, and are retained no longer in service than is sufficient to give them a distaste for the profession of arms, without instilling either habits of discipline, or a knowledge of military evolutions. In addition, the demoralizing influence of a succession of calls, which may reach a whole population, is not to be disregarded; for if the moral character of the debased may be raised by the influence of military honour, and curbed by the regularity of military discipline, it is no less true, that a partial acquaintance with the profession of arms, incapacitates for steady civil industry.

The calls for the militia, then, should be of such a nature, that the subject of them must know, that his civil occupations are to be at an end, at any rate, for a term of years, and that his own comforts will be promoted by his acquiring a knowledge of his new business, and at the same time abstaining from the vices which have sometimes been considered the reproach of the life of a camp, but which have never failed to influence a draughted militia.

It is to a militia force alone, drawn from all classes of citizens indiscriminately, and officered by the authority of the States, although acting under the call of the general government, that the defence of the country can be safely intrusted. Two wars have witnessed at their close, regular armies dismissed, in the one case without pay, and in the other almost with disgrace, and it is not in the nature of things that such events can be repeated without danger. It is calculating too much upon human virtue, to hope that on any future occasion, a large, and perhaps successful regular army, shall not be at the beck of its commander, to do whatever he may dictate; nor can it be hoped that if in preponderating force, they will assent to be disbanded, when the purpose for which they were raised is fulfilled. It is far otherwise with a militia force. However powerfully they may be attached to their standards by patriotism or discipline, a return to their firesides will be a reward instead of a punishment, and the news of a peace will be hailed by such a force with joy, when to regulars it will convey the unwelcome intelligence of their occupation being gone.

That the patriotism of the people of the United States will induce them to bear the fatigues and dangers of military service without a murmur, was fully proved during the late war, in which no small portion of the population was actually called into service. But it is no more than just to such a population, that such a service should be rendered as little onerous as possible, by confining it to the least number of individuals. This can only be done by deciding upon an organization in time of peace, by which the persons to be called upon in case of war shall be pointed out, and the manner of designating them, and fixing the order of rotation, rendered precise and definite.

The largest call yet made upon the militia was for 100,000 men, and this may be safely taken as the maximum that can ever be demanded in any future war. In fact, the means of concentration at any given point, by the improved modes of conveyance, are so much greater than they formerly were, that a much less force would be necessary than on former occasions. A force of this amount ought to be at once called for by law, although in a time of profound peace, by draughts from militia of all classes and ages, as at present organized; it might be formed into one hundred and two battalions of infantry, organized into seventeen brigades. Each battalion should be composed of eight companies or platoons of thirty-two files, and would make, with officers, eight hundred men. To the seventeen brigades should be attached thirty-four companies of artillery, and as many squadrons of cavalry. The force at first drawn, should be divided according to their ages, into six classes, one of which should be discharged annually. The place of this class, and of all vacancies by death or removal, should be supplied by annual draughts from all citizens between the ages of twenty and twenty-six. The draughts thus constituted, should be assembled in the largest bodies the nature of the population would admit of, as many times in the year as the militia of the several States is now usually called out, but separate from those not designated by lot, and under the command of the officers designated from the general body for the purpose. For non-attendance at such parades, no other penalty than a pecuniary fine should be imposed. An option should, however, be left to the several States to substitute in whole or in part for draughts from the militia, volunteer corps having a term of service of six years, provided they be officered and organized in conformity with the war establishment of the United States; say, in battalions of eight platoons, each of thirty-two files, but with the privilege that no more than two-thirds of the number, making a formation of two in depth, should be required to be present except when called into active service and put upon pay. The laws of the several States give privileges to volunteer corps enrolled for a term shorter than that of the usual military liability, and who equip and arm themselves, which would ensure the creation of an efficient force of this sort, if put under some one general regulation. But such general and uniform regulation

is necessary, if we wish to do away with the ridicule which is beginning to attach itself to our citizen soldiers. This ridicule, we are sorry to say, is not unmerited, and it cannot be denied that those who have seen service in our trained bands, are far less fitted to make good soldiers than if they had never donned an uniform. All this reproach may, however, be done away, by making the volunteer battalions permanent, discharging and receiving equal numbers annually, and conferring the privileges due to voluntary service, only upon those who perform it in a corps designated by the state government, in lieu of a draughted militia, as ready to be called at any moment into the general service. To the sense of pride which our volunteers have exhibited, however misdirected on most occasions, may be safely committed the care of providing instruction in manœuvres and tactics. It is otherwise with those called out by draught. To give these a chance of being speedily rendered efficient, when embodied for service, their non-commissioned officers, to the number of fifty-six to each battalion, should be kept in pay, and in constant service. These would form a company, which should be commanded by the adjutant of the battalion, who should also be in constant service, and by three other officers of the battalion serving in monthly rotation. In this way a school of military knowledge would be formed for each portion of the militia, by which a knowledge of the duties both of soldier and officer, would be communicated. The expense of such an arrangement would indeed nearly equal that of our present military force, but as it would ensure the action of a well appointed army of 100,000 men upon any emergency, it would be more than defrayed for whole years, by the saving which would ensue in a few weeks of war. It would, moreover, furnish a mode of distributing surplus revenues among the States, to which no pretended or actual constitutional objection could apply.

In case of any alarm of war, the whole or any required part of the battalions, might be at once embodied and called into service; first the men whose term of service had not extended to four years, and, in case of invasion, the whole. A call of this sort to the extent of twenty-four battalions, would at once set free the whole of the regular force from the duty of garrisons, and to this the militia ought of course to be devoted until time had been afforded to mature their discipline.

If, upon a call for the active service of the militia, substitutes were to be accepted, not, however, to enter into the militia, but to be embodied in the regular army, and to serve for the war, a large accession would at once be made to the regular force; and as the demand for substitutes in the militia, and for recruits, would no longer conflict with each other, the filling up of the regular army to the war establishment, might be almost ensured by calling the draughted militia into service. The pay, too, of the forced levies of the militia, ought not to equal that of the enlisted army, and thus there would be many who would prefer to pass from the militia ranks to those of the standing force.

For an illustration of this part of our subject, we may refer to the histories of the war of the Revolution, and of the more recent contest with England. In both of these, it became necessary to embody large draughts from the militia; the consequence was, that the demand for substitutes almost wholly impeded the regular recruiting service, or enhanced the bounties on enlistment to a burdensome extent; and, finally, the supply of the regular force depended almost wholly upon those persons who, draughted themselves into the embodied militia, could not be accepted as substitutes, but preferred to take the bounty for joining the regular army, to serving without it. It would be impolitic not to accept substitutes, as those who obtain exemption in this way are generally of habits of life which would make them but poor soldiers; and it is still more impolitic to admit such substitutes into the embodied militia itself, and thus cut off the source whence the regular army might be supplied.

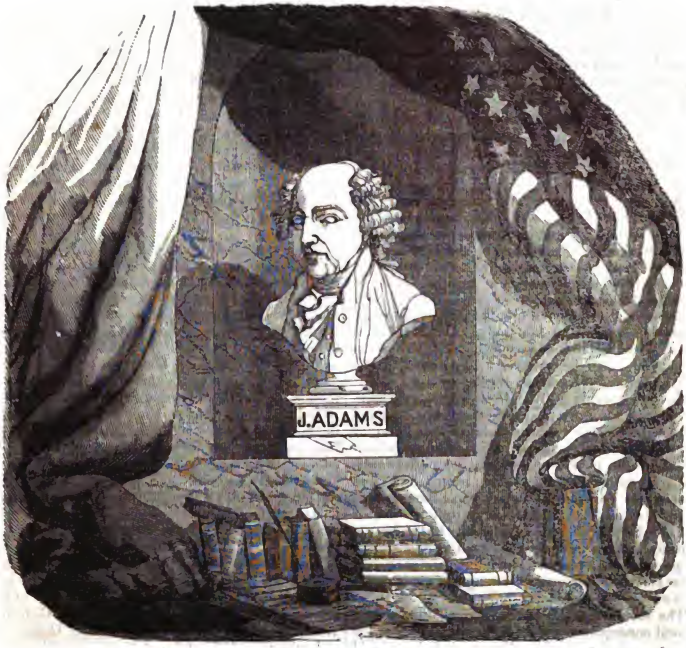
Disposal of the Dead.—In ancient times, the people of the East had several methods of disposing of their dead friends. They sometimes deposited the body in a subterranean sepulchre, built with brick, stones, and mortar, and having niches in the sides, wherein the kindred corpses had each a place; —or they inclosed the body in an urn or vase;—or they laid it in a coffin, and the coffin in a grave, as we do;—or they washed it in pure water, clothed it in a perfumed garment, and then burned it on a funeral pile, carefully collecting the ashes and whitened bones for burial:—or, after washing the lifeless form, and arraying it in a perfumed garment, as before, they immersed it in a vessel of aqua-fortis; and when it was entirely dissolved, they carried the liquid to some solitary spot, and poured it on the earth. This latter method of performing the sepulchral rites was deemed the best of all.

Sun-Fish.—One of these fish, (*Tetraodon mola,*) taken in the Persian Gulf, measured fourteen feet across the back, and was nine feet in length, exclusive of a tail four feet long. The mouth was two yards wide, and there was a large sucking-fish attached to the gills. Such was its strength, that, on being harpooned, it whirled the ship round, and could not be got on board in less than four hours. Its flesh was soft, and dotted all over with reddish spots, giving it an appearance which the sailors expressed by the descriptive name of 'Plumb-pudding Fish.'

Steam-Power.—In Cornwall, Eng., one bushel of coal now gives the same quantity of steam-power, that was obtained from two bushels, ten or twelve years ago—from four bushels, during the continuance of Bolton and Watt's patent—and from sixteen bushels at an earlier period. The whole power of the steam-engines, in Cornwall, is equal to the united strength of at least forty-four thousand horses.

The difficulty which blind people have, in finding things which are not exactly in their proper place, causes them to form habits of order and regularity. I have remarked that those, who associate much with the blind, form similar habits.—*Diderot*

AUGUST.



JOHN ADAMS.

John Adams was lineally descended from an old Puritan patriarch, who fled, as his tombstone expresses it, from the 'Dragon Persecution,' and came to New England with seven married children. He had also the blood of the Plymouth pilgrims in his veins, derived from the marriage of John Alden, one of the May-Flower's passengers, with a lady whom he had wooed as proxy for the valiant Captain Standish. From 1630, when the patriarch Adams crossed the Atlantic, down till 1735, when John Adams was born, the successive generations of the family continued on the same farm, which he himself has transmitted to his son. The descendant of so honorable a lineage was bound, by peculiar obligations, to uphold those civil and religious principles for which his ancestors had become exiles. Accordingly, he may be taken as an example of the primitive New-England character, modified by the change of time and circumstances, yet the same in its oaken substance as of old.

He was educated at Harvard College, and took his first degree in 1755. While pursuing the study of the law, he had charge of the grammar school in Worcester, and during his residence there, attracted the notice and favour of Mr. Gridley, the Attorney General of the Province. That his abilities were early developed is remarkably proved by the existence of a letter, written at the age of twenty, in which he infers the future greatness of America, from causes which had not yet even begun to operate. Such prophecies have sometimes flowed from the consummate wisdom of experienced statesmen, but never before from the natural sagacity of a stripling, inspired by youthful imagination. It is probable that the author himself had hardly a suspicion of the mighty

truths which he was uttering; he followed his own fancy, and wandered into prophecy. But, in regard to his own career, the farthest flight of fancy could not have reached that eminence, whither the rising fortunes of his country were to bear him up. There were many young Americans, at that day, who never dreamed of any thing so strange as their own destiny—to ascend, from the middle ranks of colonial life, into the sphere of rulers, legislators, generals, and ambassadors. Such promotion is now in the ordinary course of things. Then, it was impossible, save by the overturn of a government which seemed to stand on the same basis as the constitution and throne of England.

John Adams commenced the practice of the law in his native town of Quincy, which was then a part of ancient Braintree. In 1763, he was married to Abigail Smith, a country clergyman's daughter, and an excellent woman, with whom, though she died some years before him, he lived in wedlock more than half a century. He published, in 1765, a dissertation on the Canon and Feudal Law, in which he explained the Puritan principles of religion and government, and brought them to bear upon the disputes between Great Britain and the colonies. A year afterwards, he removed to Boston. His professional standing was now so high, that, in 1768, Governor Bernard offered him the post of Advocate General of the court of Admiralty. But Mr Adams had ranked himself decisively with the friends of the people; and had he accepted a lucrative office under the crown, although no conditions were annexed, his course could not have been the same as heretofore. In truth, the offer must have been intended quite as much to silence his political opposition, as to secure his legal services. He therefore declined it, but gave a noble evidence, not long afterwards, that no base subserviency to the people, any more than to the government, could make him swerve from his own ideas of right. This truth was shown in 1770, by his conduct in reference to the Boston Massacre. Few men have had such an opportunity of proving their rectitude and independence, and fewer still have possessed the strength of character to take advantage of it.

The scene of bloodshed in King Street was a natural consequence of the relative positions of the soldiery and the people. No good feeling could possibly exist between them. On the part of the troops, the haughty consciousness that Britain had made them the keepers of the province, together with a sense of the odium in which they were held, produced a contemptuous antipathy towards the colonists. The latter saw themselves treated like subjugated rebels, with a court-of-guard in the centre of their metropolis, and cannon pointed against the town-house. Their continual bickerings with the individual soldiers galled them, as the captive is galled by each separate link of his chain. They bestowed on these instruments of despotism the hatred which was rightfully due to those who sent them. In such cases, when the malevolence between the citizen and armed soldier has reached its height, the immediate provocation is generally given by the oppressed party, and bloodily resented by the oppressors. This was the almost inevitable result in Boston. At the sight of their own blood, the ferment of the people became terrible, and was shared for a time, by the calmest patriots in New England. A multitude, computed at ten or twelve thousand, assembled at Faneuil Hall, and adjourned thence to the Old South church. There went a rumour, that the tragedy in King Street had been premeditated, and was but the prelude to a general massacre. For defence against this exaggerated, yet not altogether shadowy danger, a military guard was enrolled, and the town put itself under martial law. No British officer or soldier could have walked the streets with safety to his life; a parade would have been the signal for a battle. Samuel Adams and other leading patriots were sent as a committee to the Lieutenant Governor and Council, to demand the removal of the troops, as the only method of preventing an appeal to arms. Hutchinson felt the necessity of the measure; the two British regiments were ordered to Castle William; and their commander, Colonel Dalrymple, was compelled to seek the protection of a popular leader, on his way to the waterside.

Such was the state of affairs, when John Adams, himself a leading patriot, and a member of the military guard, was solicited to undertake the defence of Captain Preston, and the soldiers who had fired the fatal volley. It was a singular compliment to his integrity, that the prisoners should have sought the aid of a man so situated. Not one man in a thousand could have so freed himself from party excitement, as to do justice to the cause; not one in a million, taking all circumstances into consideration, would have made the attempt. But Mr. Adams did it; he exerted his whole strength, for that single time, in a cause which the king and ministry approved—and won the blood-stained regulars their lives. Undoubtedly, he considered them guiltless of murder; yet, had they suffered the penalty of that crime, posterity, after the coolest reconsideration of the trial could not absolutely have called the sentence an unjust one.

It does not appear that the confidence of his countrymen was shaken; or if so, it was only for the moment. In 1773, he was chosen a member of the provincial Council, but was rejected by Governor Hutchinson, and afterwards by General Gage.

In the year 1775, John Adams, as a delegate in Congress, nominated George Washington to the post of Commander in Chief of the American armies. The glory of the choice appears to belong principally to Mr. Adams, and, did he need a secondary reputation, this would have been claim enough to his country's gratitude. The service cannot be too highly estimated. Washington's character was of such a nature, that, if some sagacious individual had not pointed him out, he probably would not have been the foremost figure in the public eye. And had another been raised, in the first instance, to the military supremacy, there is no reason to suppose that a second opportunity would have offered for the elevation of the only man who could have saved us from Britain, without consigning us to anarchy or native despotism. Setting him aside, inefficiency on the one hand, or talent combined with dangerous ambition on the other, must have been the sole alternative. It

is true, that, had there been no Washington, the country would still have wrought out its freedom in the end; but after a far longer term of blood and tumult.

Mr. Adams was one of the committee who drafted the Declaration of Independence; and the calm, yet high enthusiasm of the letter in which he announced that event to a friend, and prophesied that its anniversary would become a national festival, must be recollected by every American. He had a share in all the weightiest business of Congress, and bore the burden of much that was less important; being a member of no less than ninety committees, and chairman of twenty five. In 1777, he was appointed Commissioner to France, in the room of Silas Deane. Returning home in 1779, he was again sent out, in the Autumn of the same year, with powers to conclude a treaty of peace and commerce.

Mr. Adams in 1785, was appointed the first minister to the court of St. James. If in his early youth, the whole progress of his high destiny could have been foreshown to him, this event would probably have excited the most of wonder and anticipation. That he should approach the throne of his hereditary sovereign, as ambassador from an independent nation! In a letter to the American Secretary of State, Mr. Adams has fully narrated the circumstances of his interview with King George. Sir Clement Dormer, Master of Ceremonies, had hinted to him that a complimentary address was expected from foreign ministers, on their presentation; and the Dutch and Swedish envoys, probably at the instance of the English court, had advised him to the same effect. It may well be supposed that something of the kind was desirable, to sooth the mortified feelings of the King. But of all the duties that could have been imposed on Mr. Adams, that of paying a set compliment to any man, was the one least suited to his character and turn of mind; and of all complimentary addresses, one of which George the Third should be the object, and the relations of England with America the subject, was the most difficult to frame. It required, among other things, a tact, an adroitness, and a refinement of taste, which John Adams does not seem to have possessed. Accordingly, in our judgment, this was the scene of his public life, in which he made the least advantageous figure. The very tone, in which he describes the interview, is not quite such as we could have desired him to use. On arriving at the palace, Mr. Adams was ushered into the ante-chamber, which was then thronged with noble lords and right reverend bishops, generals, officers of state, and courtiers of every degree, among whose embroidered and magnificent array, the unpretending figure of the American minister attracted the eyes of all. He speaks gratefully of the Dutch and Swedish envoys, who relieved the awkwardness of his situation by giving him the favour of their countenance. After an interval of some length, the Master of the Ceremonies appeared, and ushered Mr. Adams into the presence-chamber.

We may pardon the minister of our proud Democracy, if he felt, at that moment, that he had not always been a Republican; if his thoughts went back, as they doubtless did, to the old times, when the people were wont to pray for their gracious monarch in the meeting-house of Braintree, and his own gray-headed sire had prayed for him at his hearth—if, in short, the impressions of infancy and youth were not utterly subdued by the settled principles of manhood. Mr. Adams advanced, making an obeisance at the threshold, a second in the centre of the chamber, and a third in the immediate presence of the King, who stood with the prime minister to receive him. He then proceeded to deliver his complimentary address. It was short and simple, presenting not many particular points that are tangible by criticism, and containing one or two sentences that could hardly have been better thought or better said. He hoped that the 'old good nature and the old good humour' would be revived between England and America. The chief specific fault that can be pointed out, was the recommendation of our country to his majesty's 'Royal Benevolence,' when she had already proved that the royal anger was not very terrible. But the general tone of the address need not have been greatly changed, had its purport been to thank the sovereign for his clemency in receiving the rebellious colonies to favour, on the terms of mutual concession which, in the latter part of the contest, Great Britain desired to substitute for independence. Mr. Adams took a decidedly lower stand than the position of the United States entitled him to take.

The King, on the other hand, if the report of Mr. Adams have not done him more than justice, appeared to greater advantage than in any previous or subsequent moment of his reign. The address appears to have been of a more agreeable tenor than he had anticipated. Of the many humiliations which befel that unhappy monarch, perhaps few were felt so bitterly as this almost compulsory interview with the representative of a people, once his subjects, afterwards rebels, and now free. To George the Third, however profound might be the ambassador's three obeisances, the mere entrance of an American into the presence chamber, unless to crave the honour of kissing his liege's royal hand, was the last token of a realm dismembered. Yet his deportment was dignified, though not unmarked by natural emotion; his reply to the address was apt, and full of good feeling and just sentiments; and with an air of easy condescension, he took the ascendency which Mr. Adams had yielded to him. There was a kingly spirit in what he said. Though he spoke of America as free, yet his speech conveys the impression that he still felt himself a sovereign by Divine-Right, as much on one side of the Atlantic as the other. Well might he think so, when he perceived that neither the war of tongue and pen, nor of the sword, nor triumph itself, had extinguished the sentiment of loyalty in the breast of this sturdy commonwealth's man. To the formal address and reply succeeded a brief and good humoured conversation; after which the King bowed, as a signal that the audience was at an end; and Mr. Adams retired, highly gratified with the gracious deportment of his Majesty.

If, as we have hinted our opinion, Mr. Adams did bend somewhat lower than befitted the representative of a victorious people, the sacrifice of dignity was recompensed by no solid profit. George the

Third, whatever good qualities he might possess, was as obstinate a man as ever lived.—Pig-headed is just the phrase to express his temper, which is, in some degree, the temper of John Bull himself. England was in the sulks, and would not shake hands cordially with America. In the course of the three years that Mr. Adams continued in London, he was not favoured, we believe, with another private audience; nor did Great Britain send an ambassador to our own government. Mr. Adams at length solicited his recall, and returned home in 1788. His life, for some years afterwards, was not such as to supply many events for our narrative. He assisted in forming the Constitution of his native state. During the presidency of Washington, he was Vice-President, and when the former retired from office, John Adams, after a hard contest with Jefferson, became President of the United States.

Mr. Adams was not the choice of the people. The House of Representatives made him President. The country was at that period infected with the contagion of French anarchy; and as Mr. Adams was supposed to give the preference to England, he had to contend with a strong and violent opposition, throughout his term of office. He was even accused of holding monarchical principles.

His administration, beginning under no favourable auspices, went on through a continual storm, and terminated in a cloud. At the end of the first four years, Mr. Jefferson came in by a triumphant majority, and President Adams retired to domestic life.

This was in 1801, when he had reached the age of sixty-six. His long course of public services was now closed. At the period of his retirement, he did not enjoy the unreserved, and cordial approbation of any party. Some of his measures had gone far towards alienating the Federalists, although, as the least evil in their choice, they gave him a general vote for the second term of office. Mr. Adams was a man of warm passions, and liable, it is said, to a certain wrong-headedness, which sometimes caused him to assume rather an unamiable attitude, in regard to men with whom it is a pity that he should have differed. He had bitter enemies, who have left proofs of their hostility in newspapers, pamphlets, and volumes, the virulence of which now makes us smile, when we light upon them in some obscure corner of a library. On his part, Mr. Adams was not slow to resent, nor cautious to hide his resentment. He once observed, pointing to his own portrait,—'That fellow could never keep his mouth shut!' Certainly, this was a great fault in a statesman, but a fault which oftenest marks integrity. Thomas Jefferson, his successful rival, but never his personal foe, has borne the strongest testimony that John Adams was an honest man. His whole life confirms the fact.

In his old age, the world acknowledged it. As the Ex-President went farther and farther down into the vale of years, his path became still greener and more peaceful. The young, to whom he was a man of History, did reverence to the hoary sage, now long emerged from the dust of contending parties, and drawing cheerfully towards his sepulchre. He loved to linger by the wayside, and tell of the great deeds of the past, and the great men of whom he was a brother. At length, when the full Jubilee was finished, since that band of mighty brethren signed the deed of freedom, the survivor mingled his expiring breath with the swell of consummated triumph. INDEPENDENCE FOREVER!—were the last words that John Adams uttered. Such a death, had there been no other evidence, was proof unanswerable of a patriotic life.

SONNET.—By RICHARD HOWITT.

Away, away, it is the Summer time;
To the dim twilight of the dell away;
Missing the glories of the season's prime,
In crowded haunts why do we thus delay?
There flows the brook, with its low lulling chime,
Through all the freshness of the breezy day;
And songs gush forth, to woodland quiet dear,
Whilst the world's crowds and cares oppress us here
There shouts the cuckoo from the distant heath,
And in the pure and beechen boughs above,
Whose shadows dance upon the sward beneath,
Loud are the dreamy cooings of the dove.
With natural sights and sounds beside that stream,
These crowds, these cares, will live but as a dream.

THE MOONBEAM.—By F. WALLER.

"That every soft and solemn spirit worships."—*Moturin*

How hushed and solemn is thy bright rise,
Thou spirit that rulest the midnight skies;
Shadowed and dim, as a dream may be,
Afar from the depths of eternity!

Thou art rising in beauty, and Ocean smiles,
And light is shed over her thousand isles,
And silence is spreading from shore to shore,
O'er the wild waves moan, and the billows roar

Where a fount is seen in a forest shade,
Through the heavy gloom by the pine boughs made;
Where a flash is sent from its silvery spray,
It is wakened to beauty by thy bright ray.

Where the flowers are sleeping in gentle dew,
Where the woods repose in the midnight blue,
Where the groves are spread—where their beauty lies,
Is a ray of thine from the sapphire skies!

Where the green turf is raised in burial heaps,
Where some churchyard love in the moonlight sleeps,
With a silvery gleam upon grave and flower,
Thou art there in thy silence at midnight's hour!

Thus over earth, and the solemn sea,
Through the beautiful night thou art shining free,
As a holy dream, as a visioned spell,
Or a midnight presence visible!

But unto man thou art more than these,
When slumber comes with its mysteries,
When a light is shed, when a dream is given,
Pictured with hues as are those of heaven.

CONSUMPTION OF OLIVE OIL.—It was stated, so long ago as 1769, that twenty thousand gallons of Olive Oil were annually consumed in New England. A person in South Carolina recommended a substitute, which was obtained by bruising the seeds of the ground-nut, or ground-peas—a plant which grew wild, very abundantly, in the southern colonies. A bushel of the seed yielded a gallon of oil, the quality of which was represented as equal to that of Florence oil, while it might be afforded at less than one-fourth the price. We do not find that the oil was ever very extensively manufactured, and the discovery is now probably forgotten. The oil of poppy-seeds is now the succedaneum for genuine Olive Oil.

ANECDOTE OF A WOLF.

The Wolf is one of those ferocious animals in which attachment may be carried to the greatest extent, and which presents us with one of the most singular examples of the developement to which the desire of affection may attain, a desire so extraordinary, that it has been known to prevail, in this animal, over every other necessity of his nature.

The individual, instanced by Cuvier, must undoubtedly have been naturally, of a very peculiar disposition. Brought up like a young dog, he became familiar with every person whom he was in the habit of seeing. He would follow his master everywhere, seemed to suffer much from his absence, was obedient to his voice, evinced, invariably, the most entire submission, and differed, in fact, in nothing from the tamest of domestic dogs. His master being obliged to travel, made a present of him to the Royal Menagerie at Paris. Here, shut up in his compartment, the animal remained for many weeks, without exhibiting the least gaiety, and almost without eating. He gradually, however, recovered; he attached himself to his keepers, and seemed to have forgotten his past affections, when his master returned, after an absence of eighteen months. At the very first word which he pronounced, the wolf, who did not see him in the crowd, instantly recognised him, and testified his joy by his motions and his cries. Being set at liberty, he overwhelmed his old friend with caresses, just as the most attached dog would have done after a separation of a few days. Unhappily, his master was obliged to quit him a second time, and this absence was again, to the poor wolf, the cause of most profound regret. But time allayed his grief, three years elapsed, and the wolf was living very comfortably with a young dog, which had been given to him as his companion. After this space of time, which would have been sufficient to make any dog, except that of Ulysses, forget his master, the gentleman again returned. It was evening, all was shut up, and the eyes of the animal could be of no use to him; but the voice of his beloved master was not effaced from his memory; the moment he heard it, he knew it; he answered, by cries, indicative of the most impatient desire; and when the obstacle which separated them was removed, his cries redoubled. The animal rushed forward, placed his two fore feet on the shoulders of his friend, licked every part of his face, and threatened, with his teeth, his very keepers, who approached, and to whom, an instant before, he had been testifying the warmest affection. Such an enjoyment, as was to be expected, was succeeded by the most cruel pain to the poor animal. Separation again was necessary; and from that instant the wolf became sad and immovable; he refused all sustenance; pined away; his hairs bristled up, as is usual with all sick animals; at the end of eight days, he was not to be known, and there was every reason to apprehend his death. His health, however, became re-established, he recovered his good condition of body, and brilliant coat; his keepers could again approach him, but he would not endure the caresses of any other person; and he answered strangers by nothing but menaces.

Such is the recital of a scientific naturalist, himself an eye-witness of the facts which he relates, and who, we may well believe, as he himself asserts, has exaggerated nothing in his account of them. It is the narrative, not of an ignorant exhibitor, or an ambitious traveller, but of a philosopher, not less distinguished for his patient habits of observation and comparison, than for the soundness and calmness of his general deductions. We dare not therefore, refuse it a particle of credit, however little it may agree with the popular notions concerning the dispositions of the wolf, and the reports of travellers concerning it. But this animal has hitherto been known only in its wild state, surrounded with enemies and dangers, among which no feelings could be developed but those of fear, hatred, and distrust. Certain it is, that dogs suffered to run wild in the woods, from birth, become just as savage and ferocious as wolves. So true is it, that to acquire a complete knowledge of the character of a species, of its essential intellectual qualities, it must be seen under every circumstance adapted for their manifestation.—*Selected.*

Asthma—This disease is proverbially capricious; its severity, in one case, will be lessened by the same circumstances that would greatly heighten it in another. Dr. Johnson, who was afflicted with asthma, was frequently obliged to retire from the residence of his friend Mr. Thrale, at Streatham, where the air was pure and fresh, to his own lodgings in the narrow precincts of Bolt-court; because he could breathe more freely in the smoke of London. An asthmatic gentleman, while building a house in an elevated and beautiful situation, lived in a cottage at the foot of the hill. When his mansion was finished, he removed into it, but was so afflicted with asthma, that he was compelled to return to the cottage. Another person, being advised to travel for the relief of an asthma, found a certain village, the air of which suited him so well, that in the course of a few weeks, he was able to ascend a hill at a brisk pace, without stopping to take breath.

Mischievousness of Monkeys.—Monkeys are famous for mischief, but seldom of so serious a kind as to endanger the life or limbs of those on whom they play their pranks. Sometimes, however, what is sport to them comes pretty near being death to man. Lieutenant Turner, an officer in the East India service, was lately shooting on a hillside, when he was alarmed by the descent of several great stones, which were rolled down upon him by a troop of monkeys, apparently with a settled design to crush him. One of the stones, in fact, hit him on the head, fracturing his skull in so terrible a manner that a portion of the brain protruded, and was removed by the knife of a surgeon.

Fire Weed.—In Upper Canada, after the timber of a new tract of land has been burnt, a tall thistle, of rank and unpleasant scent, makes its appearance. If the soil be suffered to lie untilled during the first Summer, it is covered with an immense crop of this troublesome plant, which, because it springs from the ashes, is called the *Fire Weed.*

TRANSPLANTATION OF FOREIGN PRODUCTS.

['Voyage of the Potomac.']

A proper estimation, in this country, has never been placed upon the benefits which might result to agriculture, and particularly to horticulture, from an expedition to the coast of China. That country has a climate very similar to our own, arising from its similar position on the eastern edge of a great continent. Both are dry, and subject to greater vicissitudes of heat and cold than countries in the interior, or on the other side of the great continent. This being the case, the vegetable productions suitable to the one, cannot but thrive well in the other.

China has been a long time civilized, and the whole extent of its coast been for ages under a government which has paid more attention to agriculture than any other government that ever existed. Under such circumstances, it is impossible to be otherwise, but that the vegetables and fruits of the various climates have been acclimated to a degree much beyond what they have with us, or in Europe, from whence we derive our fruits and vegetables.

The territories of China embracing both sides of the Tropic, we have every reason to believe that the productions of the south have been extended as far as possible to the north, and those of the north to the south. By getting, therefore, fruits and vegetables from a country thus situated, we get the advantage of a thousand or more years of acclimation. For instance, we procured our apples and pears originally from England and France. The apple we have not yet acclimated as far south as Georgia. There are, we believe, only one or two varieties, which, in the upper part of that state, prove fruitful in some years. Their flavour is very indifferent, so with the pear. Coming from the latitude of from forty-two to fifty, it is unproductive south of Baltimore; and so with other fruits.

Who can doubt that, in a country in which the extension and prosperity of agriculture have been the great object of government, their fruits and other vegetables have, in the course of fifteen hundred years, been extending gradually to the south, so as to become used to a climate which it will take us nearly the same period to reach with the varieties of fruits which we now have. It is the same with the fruits and vegetable productions of the south. The tropical fruits and vegetables must have been brought as far north as they can be profitably cultivated. From fifteen hundred to two thousand years have been passed in this process of acclimation. Why should we undergo this long process, when a few thousand dollars may introduce them among us?

It is well known, that among other plants, the sugar cane may be gradually introduced into a climate which was at one time uncongenial to it. The Otaheite has been introduced into Louisiana. What a gain it would be to our country if we could obtain a variety, which could be raised one degree farther north than the Otaheite! The advantages from this single plant alone would a thousand times compensate for all the expenses of such an experiment. For the introduction into this country of the various fruits and vegetables which such a country as China must produce, might be attended with advantages almost incalculable.

We have already received from China one animal, the benefits of which to our country surpass a thousand times the expenses which might accrue in setting on foot the proper inquiry in relation to this matter. The Chinese hog is the animal to which we allude. A long series of years devoted to the selection of animals having a propensity to fatten, could alone have produced the breed, which has added so much to the wealth of our farmers, and to the pleasure of our epicures who admire a nice ham. What would our gardeners think of the immense piles of headed lettuce, described by travellers in China as heaped up at the gates of the cities, preparatory to entering and being distributed among the morning markets? We have nothing of the kind in the United States or Europe. We cannot have, unless by hundreds of years of persevering industry and care.

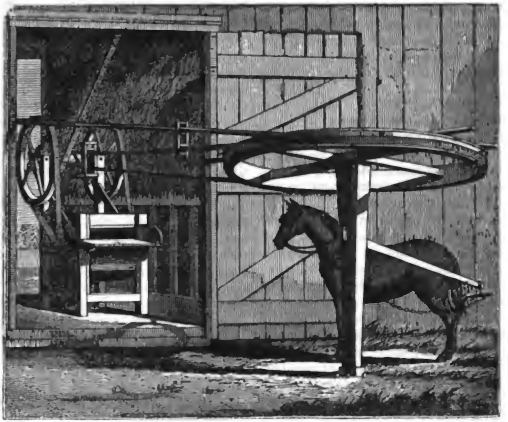
These things are more particularly of importance, because they are those in which the great mass of the community are directly and principally interested. They add to the comfort of the poorest as much as they do to that of the richest. All are benefited, and none could complain of any expenditure universally acknowledged to be for the benefit of all classes, and all sections of our country. If there be any section to which it would be peculiarly productive of good, it is from latitude 32 degrees south.

The introduction of one single vegetable, the turnip, into England, changed the whole face of a large district of country, and rendered it, from being almost barren, one of the most fertile in the kingdom.

As to the commercial advantages, independent of other articles of commerce, which might be brought into view, by means of such inquiries, we have no doubt that the iron of Formosa, if introduced into our country, would be found in ready demand, and that the highest advantages would arise from the use of it. That iron is of so superior a quality, that for some particular purposes, it would be invaluable. Such is the temper that can be given to it, it is stated, that swords made of it will sever with ease those made of ordinary steel. If we could obtain a sufficient quantity of this iron to make our finest edge-tools, and most delicately constructed instruments, it would not only produce immediate benefit to the mechanic arts, but to a degree that we can hardly over-estimate, accelerate their future progress.

South American Boots—The Guachos, in South America, manufacture a very singular kind of boot; they strip the skin from the ham and part of the leg of a young colt, and thrust their own leg into it. The widest part of the skin forms the calf of the boot, the hock is fitted to the heel, and the lower part covers the man's foot, leaving an aperture, through which he protrudes his great toe, for the purpose of placing it in the stirrup, when on horseback.

In 1799, forty thousand inhabitants of Quito perished by an earthquake. Since that period, the climate is much colder than formerly.



SHAW'S PATENT THRESHING MACHINE.

This Threshing Machine and Horse Power was invented by Mr. John Shaw, of Kennebec, in the State of Maine. It received a premium at the Annual Fair of the American Institute, in October last, and likewise at the Albany Fair. The Journal of the American Institute speaks of it in favourable terms, as compared with the numerous other patent Machines, which have been designed to facilitate the same department of rural labour. 'The Horse Power,' it is remarked, 'seems to present the greatest difficulty, and in this we think Mr. Shaw's as good, and perhaps better, than any others; as it will operate with as much certainty, with as little power, and at less expense, and being less complicated, is less liable to disorder; and we are not afraid therefore, to recommend it to any farmer.' We learn that competent judges, who have made a trial of the machine, prefer it to any other invention of the kind. Further information on the subject may be obtained of Messrs. T. L. Pollard & Co. Albany, New York.

ENGLISH COTTAGES.

['Allen's Practical Tourist.']

Many of the cottages are built of cut stone, and are tastefully ornamented with little garden plots, laid out in front of them. The fruit trees covered with blossoms, and the creeping vines forming curtains of verdure, sprinkled also with gay blossoms, nearly hide some of the walls from sight. These simple and economical decorations of the country house are more truly agreeable and attractive to the eye than the columns and stately portico fashioned by the chisel of the sculptor. The neglect of these natural and cheap modes of improving the appearance of farm-houses is lamentably common in the United States, where pride too often leads to the expense of erecting great houses, often three stories high, to lift up their exposed and naked fronts without a tree to throw a grateful shade about them. In frequent instances, these tall houses remain with unfinished rooms, and with several windows closed by boards instead of glass; or with broken panes stuffed with old hats, or other articles readily applicable to close the open chinks. Whilst surveying in the pride of their hearts these lofty, unfinished structures, the proprietors are not aware that such buildings appear to most persons of judgment as monuments at once of the vanity and folly of the builders; and excite pity rather than admiration. Thus has a misguided taste often been the cause of useless expense for the purpose of attempting pleasing architectural displays in the country, where a more agreeable result might have been attained in a simple and cheaper way. The dwelling, however low and humble, which is embosomed by trees, and the walls, however rough, that are screened by a curtain of the honey-suckle, trumpet-flower, or other creeping vines, with a small patch of ground in front of them containing a few common wild flowers, display a far more attractive appearance. A trifling cost bestowed on these cheap natural embellishments will allow the proprietor to adapt the size or plan of his edifice to his own convenience, in point of internal arrangements, while he may diminish the expense commonly sacrificed in architectural decorations for ornamenting the exterior, to please the eye of strangers.* The villages are frequently

* If it were not trespassing upon the domestic province of the fair of the United States, it might be suggested to their consideration, that although they are themselves the most attractive objects in the palace as well as the cottage, yet the home where they are destined to preside, and dwell with husbands, brothers or children, will lose none of its charms to lure the absent home, if associated in recollection with over-mantling vines and flowers; and the bright eyes and dimpling smile of the loveliest maiden, will not be seen to disadvantage at the window overhung with honey-suckles and roses.

rendered so neat in appearance from the taste thus bestowed, that they might serve as a model of a poet's description of rural residences. Some of the pretty cottages, as a friend informed me, are hired by gentlemen as summer residences for their families.

WOOD ENGRAVING.

['Dunlap's History of the Arts of Design.']

As engraving and printing unquestionably had their origin in China, it will be proper to give a sketch of the peculiar modes practised in that empire. The design is made on a thin, transparent paper, and pasted with the face downwards on the block; it is then engraved by cutting through the paper into the wood, leaving standing only those portions of the surface which appear black in the drawing. Their tools are similar in many respects to those of other block cutters, ancient and modern, consisting of a knife for outlining, with gouges, chisels, &c. of various shapes, for clearing away the wood. They use them with much celerity, especially the knife, which they guide with both hands; this facility enables them to furnish their blocks with great rapidity, and at an astonishingly cheap rate. The Chinese have never attempted the use of moveable types; all their books, illustrative or descriptive, being printed from wooden blocks, cut in the manner described; and this mode is to them far more economical, owing to the low price of workmanship of every kind.

Their method of printing is simple, and peculiar to themselves. The block must be in a firm and level position, being first tightly fixed in a larger piece of wood to give it stability; in front of this the paper is placed, cut to the proper size. The ink (which is merely a reduction without oil of that known as Indian ink) being distributed on a smooth piece of board, the workman takes a moderately stiff brush, which he dips into it, and rubs the block carefully therewith. The paper is next laid over, and rubbed with a second brush, which is soft, and shaped like an oblong cushion; the paper not being sized, a gentle pressure is sufficient, which may be repeated or regulated, as occasion may offer. A third brush very stiff, is used for cleaning the blocks. These brushes are curiously made of the fine fibres of the palm or cocoanut trees. A set of these printing materials, supposed to be the only specimens in Europe, may be seen in the Museum of the English East India Company. In the manner described, without the aid of any press, have all impressions been taken in China, from the earliest periods to the present day. Their paper being so very thin, is printed on one side only, and each leaf in their books is folded in binding, and the edges turned inwards, and stitched with silk. There is much neat and curious execution about some of their cuts, but they seldom go beyond outlines, and are altogether deficient in the true principles of drawing.

Much disputation has arisen as to the period when engraving was first practised in Europe. The earliest specimen of which there is any record is said to have been executed, on wood, at Ravenna, in 1285. In the next, or 14th century, the productions of the art were chiefly playing-cards and figures of saints. It was practised, first in the Venetian States, and afterwards in Germany and the Low Countries, to a great extent. The impressions appear to have been taken by a hand-roller, the press not being known until the following century, in the early part of which larger subjects, of a devotional kind, with inscriptions, were engraved. Several of these curious prints are still extant; amongst them, in the possession of Earl Spencer, is the celebrated one of St. Christopher bearing the infant Jesus, remarkable as being the earliest print to which is assigned a certain date, viz. 1423. The success of these gave rise to a more extensive application of the art. Scriptural designs of many figures were cut with descriptive texts on each block; they were printed on one side only of the paper, and two of the prints were frequently pasted together to form one leaf, with a picture on each side: entire sets were subsequently bound up, and thus were formed the block books so well known to antiquaries. The Apocalypse of St. John, probably the first of these works, was published about the year 1420; one of the identical blocks cut for it still exists in the library of Earl Spencer. The latest and most noted of them, the 'Speculum Humanæ Salvationis,' appeared in the year 1440, and being partly printed from movable wooden types, became the connecting medium that gradually introduced the invaluable art of typography, which, facilitating the production of books, was the means of greatly increasing the demand for wood cuts for primers, prayer books, &c. In 1457, Faust produced his Psalter, printed with metal types, and initials in colours from blocks. Typography was introduced into England in 1474, but was executed in a ruder manner than on the continent; and till 1493, wood cuts every where consisted of little more than outline. In that year, a great improvement was perceptible, and attempts were made at cross-hatching. This was carried to a much higher perfection by Albert Durer, an eminent painter, who published several large works of high talent, and who engraved on copper as well as wood. The 16th century produced Holbein, and many other able wood engravers, in several parts of continental Europe. In the 17th century the art visibly declined, owing to the superior cultivation of copper engraving, and by the year 1700, it had sunk to a very depressed state. With the exception of the French family of Papillon, its annals afford no name of distinction, till 1768, when Bewick, who had the genius of a painter, appeared. His works are well known, and effected, by their excellence, the restoration of an almost lost art. Other artists have since introduced a richer and more varied style of workmanship, which has led to the adoption of the art to so wide an extent as must ever prevent its again sinking into neglect.

The theory and practice of this art are in principle the reverse of engraving on copper; in the latter the lines to be printed are sunk or cut in the plate; these being filled with ink, are by means of a rolling press transferred in effect to the paper. In wood engraving, on the contrary, the parts that are to appear must be raised, or rather left untouched, and hence it is frequently termed relief engraving. In printing, the surface is only charged with ink, and the impression is taken as from types. The copper engraver rarely uses more than three tools of the kind

called burins, or gravers. The artist on wood requires according to circumstances, from ten to fifteen or eighteen, called gravers, tools for tinting and sculptures, the latter are used for cutting out the broader parts which are to be left white. The earlier artists cut on various kinds of wood, such as the apple, pear, &c.: these being termed soft woods, are now only in request for calico printing, and other manufacturing purposes; for as the style of work improved, they were abandoned, and box was tried on account of its superior texture and compactness, which have caused it to be the only kind used for every subject that can be properly termed a work of art. The surface of the wood to be engraved is carefully planed, scraped, &c. so as to render it as smooth as possible, in order to receive the drawing which must be put on the block itself, previously to commencing the engraving. The artist in its execution, has to arrange the strength and direction of the lines required for the various parts and distances, so that the printed impression, though composed of different series of interlincations, may present the same character in effect as the original drawing.

Much care is requisite, on the part of the engraver, to prevent a delicate design from being rubbed during the process of cutting; and it is usually covered with paper, which is removed by degrees as required. It will be apparent also, how much depends upon the skill of the engraver, when it is considered, that with every line cut by the tool, a portion of the effect of his original is removed, and his recollective powers and taste must be in constant exercise, to preserve the points of the design; and the block must be wholly engraved before any impression can be taken. The copper engraver, on the contrary, is enabled to take progressive proofs of his work, and has his original drawing unimpaired, constantly before him. The latter has also another important advantage, in what is termed tinting; inasmuch as all his skies and flat backgrounds can be cut on the plate itself by mechanical means; and his various tints are thereby produced with every required delicacy. The wood-engraver can have no such facility; all depends upon the steadiness of the eye and hand, properly to effect the object, by cutting line after line individually, without any auxiliary assistance whatever.

These brief explanations may show the principles on which all wood engravings are effected. Thus, whether the design relate to landscape, the human figure, or any other subject, it must be composed of an infinite number and variety of projecting portions of wood, produced by those delineations which, in the judgment of the engraver, are best calculated to convey, when printed, the desired effect.

The ancient mode of working was on the side of the grain, the wood being cut the longitudinal way of the tree; this method continued, for all wood cuts, till about the year 1725, when the present method was commenced in England, of cutting the tree transversely, or across. This plan, presenting the end of the grain, admits, from its greater tenacity, of a finer kind of workmanship, and the application of the description of tools before named. The block cutters for paper hangings, &c. have their wood prepared in the same way as the old masters, and of course use similar tools; the chief of which is a knife, shaped somewhat like a lancet, with which the line must be cut on both sides, and the superfluous wood must be removed by gouges, chisels, &c. of various shapes, as derived originally from the Chinese. When we consider that in this way all the finished works of the ancients were produced, it attaches a very great degree of merit to them; it being evidently a more tedious process than the modern; since, if a line be cut with the knife, it must be met by another line, before any wood can be taken out; whereas, in the present mode, the graver, as it cuts the incision, removes the wood at the instant of operation.

The value of wood engraving is becoming daily more and more apparent in both hemispheres, by the demands on the talents of those who practise it. Its prominent points and beauties will hereby, by degrees, become more universally understood; but for this a thorough reformation in printing is necessary. Considering the innumerable works continually issued, illustrated with wood cuts, the public have, with very few exceptions, but little chance of duly estimating its merits; since, in the greater number of these books, the engravings are printed in so heedless a manner, as scarcely to deserve, by their appearance, the name of embellishments. Publishers will no doubt, ere long, discover it to be their true interest to give more serious attention to this subject; which is of vital importance to the reputation of the art.

NATURAL HISTORY AMONG THE ANCIENTS.

In a comparison between ancient and modern times, nothing is more remarkable than the ignorance and misconceptions of the learned men of old, in regard to natural science. Their strictly intellectual cultivation was the most perfect of which human powers are susceptible; but they were mere children in all matters that are to be learned by physical experiments, the observation of facts, and scientific analysis. Pliny the Elder, who lived in the most enlightened Roman era, and had acquired all the science of the ancient world, wrote a huge work on Natural History, which is full of the most laughable absurdities. The more of such false knowledge a man had, the greater fool he was. As a pretty fair specimen of this book, we condense a few passages from that part which describes the characteristics of different nations:—

The Arimaspii, who dwell near the Scythians, are distinguished from other men, by having only a single eye, in the centre of the forehead. Not far from their country, there are found wild people, who associate with the brute beasts, and whose feet grow backwards, being turned behind the calves of the legs. They are prodigiously swift runners. In Albania there is a race of men who are gray-headed from childhood, and who see better in the darkness than by daylight. In Pontus there is a kind of people who can never be made to sink nor be drowned in the water, whatever weight is attached to their bodies. Some of the inhabitants of Ethiopia are so venomous that if their sweat do but touch a man's body, he immediately falls sick of a consumption

In the vicinity of Rome, there are certain families, the individuals of which can walk in the midst of a blazing fire, without being burnt, or anywise incommoded by the heat. There was such medicinal efficacy in the great toe of King Pyrrhus, that by a mere touch he could cure all who were afflicted with liver complaints. In India, there are men seven and a half feet high, and of such excellent constitutions, that they are never troubled with head-ache, tooth-ache, or sore eyes, and very seldom with diseases of any kind. Among the hills of that region, dwell people with heads like dogs, and whose conversation is carried on by barking. There is likewise a race of men called Monoscelli, who are provided with but one one leg apiece, on which they hop very nimbly. The foot, which is appended to this single leg, is so broad, that in the heat of Summer, they lie down on their backs, raise their legs perpendicularly, and thus defend themselves from the heat of the sun by the shadow of their feet. Another people have only two small holes, instead of noses, and legs and arms so limber, that they creep about like serpents. In the farthest part of India towards the East, near the source of the river Ganges, there is a nation that have no mouths, and do not subsist by eating and drinking, but by inhaling sweet perfumes through their nostrils; they dwell among the woods, where they may snuff the scent of wild flowers and fruits; but if any strong and unpleasant odour chance to pollute the air, they are soon overcome by it, and die. (It was a happy circumstance for these sweet-scented people, that there were no skunks in that part of the world; this vile beast being competent to annihilate the whole nation, by one foul catastrophe.) The same country is also inhabited by the Pygmies, whose ordinary stature is a foot and a half, and whose houses are constructed of mud, the feathers of birds, and egg shells. One race of the inhabitants of India live two hundred years, and have hoary hair in youth, which becomes black, as they advance in age. There is another nation, where the women are marriageable at the age of five, and grow old and die at eight. A certain people have long shaggy tails, and are remarkably swift of foot; others have such immense ears, that they serve to cover their whole bodies. Some of the Ethiopians are above twelve feet high. In the deserts of Africa, the traveller often meets with fairies, wearing the semblance of men and women; but, on a nearer view, they vanish away like fantastical illusions.

Like the fairies in the African deserts, all these fabulous varieties of the human race have disappeared, in the progress of modern intelligence; and their memory is worth preserving, only as a sample of what would have been the contents of a Magazine of Useful Knowledge, about eighteen hundred years ago. Yet, let us not look back too scornfully upon those elder times; for Science is even now but in her alphabet; and it is unquestionable, that future investigations will convict the present age of absurdities as intrinsically, though perhaps not so glaringly ridiculous, as any in Pliny's Natural History.

Indian Corn in England.—Indian corn is not ripened in England in ordinary years, but is frequently planted in the best gardens, that a few stalks may annually lift on high their broad flaunting leaves, as a sort of outlandish product, to adorn the border of a walk, and perhaps to flatter the pride of the proprietor of the grounds. He thus beholds all classes of the vegetable kingdom assembled, like the captives from far distant nations brought together in a Roman triumphal procession, in subjection to the art that has in a degree subdued nature, and caused the vegetable tribes of every climate to live and flourish as vigorously in an English garden as in their native soil. Throughout England, an ear of Indian corn, as a sort of curiosity, may be seen suspended from the shop windows of the seedsmen's stores, where it serves as a well known sign. On inquiring for my old acquaintance, the yellow faced pumpkin, I found that it is held in little consideration out of the borders of the land of thanksgivings and pumpkin pies. The squash is known by another name, and is rarely raised in the English gardens. An American gentleman resident at Leeds told me that he had seen at a shop window a dried squash and an ear of Indian corn, labelled 'American Fruits.'—*Selected.*

Andrew Ferrara.—This was the name of a famous manufacturer of sword blades, who dwelt in the highlands of Scotland. He was the only man of his day, in Great Britain, who was acquainted with the method of tempering swords in such a manner, that when the point was bent so as to touch the hilt, the blade would spring back uninjured. In allusion to this artist, broad-swords were long known by the name of Andrew Ferrara.

Goldfinch.—A goldfinch, belonging to the captain of a vessel, became restless and unusually active, for some hours previous to the discovery of land. He sang continually, and his notes were louder, clearer, and more thrilling, than they had been during the voyage. The difference of air, as the vessel approached the land, had evidently enlivened his spirits; and this was so invariably the case, in every voyage, that the captain affirmed that he would trust as much to his bird, for information that land was near, as to his spy-glass.

Potosi.—The most elevated spot on earth, that is permanently inhabited, is supposed to be the town of Potosi, which is situated among the Cordilleras, at a height of 13,265 feet above the level of the Pacific Ocean.

Silk Manufacture.—The silk business is of older standing in the United States, than some may suppose. It is recorded in a newspaper of 1792, that, at the wedding of three couple in Bradford, Pennsylvania, all the ladies wore silk gowns of their own raising and reeling, and which had been woven in the neighbourhood.

INDIANS OF FRASER'S RIVER.

Fraser's River is the principal stream in a large tract of country called New Caledonia, in the western regions of North America. The Indians, inhabiting the upper shores of this river, are of the lowest order of red men; nor can their degradation be imputed to the influence of the whites. Their customs are entirely indigenous, and untainted by any tincture of civilisation.

The usual habitations of these people are large huts, partitioned into several divisions, each of which is occupied by a separate family. In the winter, however, they dig holes in the earth, where men, women, children, and dogs, burrow together in dirt and nastiness, till warmer weather recalls them to the light of day. They appear to be the filthiest wretches that ever polluted the pure air of the forest. They never bathe, nor wash themselves, on any account whatever; and their bodies are consequently encrusted with a thick shell of dirt, which they are careful to preserve unimpaired, as a defence against the cold of Winter and the scorching rays of the Summer's sun.

Their mental and moral habits are in accordance with their physical uncleanness. They are the only uncivilized people who have no reverence for age, nor regard for the ties of kindred and relationship. The sick are left to die, and the old and infirm are turned away to starve. Yet it is a singular contrast to their disregard of these natural ties, that they consider the matrimonial bond too strong to be broken even by death. The body of a dead person is kept nine days in his habitation, during which time the widow must spend all her nights, from sunset to sunrise, by the side of the decaying corpse, slumbering on the same couch where her husband lies in the sleep of death. On the ninth day, the dead man is placed on a funeral pile, constructed of sticks of cypress, intermixed with pieces of resinous wood. The widow is compelled to lie down beside the corpse; fire is communicated to the pile; and thus far, the ceremony bears a striking resemblance to the suttees among the Hindoos. The Indian widow, however, is not burnt to death; but, when her skin is pretty well blistered by the flames, is snatched from the pile by her surrounding kinsmen. If, during her husband's life-time, she has shown herself a negligent or unfaithful wife, his relations seize her, and again throw her upon the funeral pile; and thus the poor woman is bandied to-and-fro, till more than half dead with scorches and bruises.

But the most horrible doom of her widowhood remains yet to be inflicted. It now becomes her duty to collect her husband's bones from among the ashes of the funeral pile, and to roll them up in a covering of birch-bark, which thenceforth she must always carry on her back. The ashes of the body are buried in a grave, which the widow must keep free from weeds, rooting them up with her fingers, while the kindred of the dead stand by and compel her to diligence by blows. She is considered the slave of all the tribe, and is subjected to the severest labours and hardships, and to all sorts of cruelty that the devilish nature of these barbarians can invent. Even the little children have absolute power over the poor woman, who bears her husband's bones upon her back. She suffers this treatment for several years, during all which time, she is not relieved from her dreadful burden of mortality, until perhaps driven to suicide. It is not uncommon, we are told, for the hunters in that region to find the corpses of females hanging to the boughs of trees.

If, however, she possess fortitude enough to endure her sufferings, they are at length terminated by a grand ceremonial in which all the tribe bear part; and she is declared free to contract matrimony a second time. Very few women have the folly to take advantage of this license, at the risk of again undergoing the terrible ordeal of widowhood.

Turkish Coin.—Every kind of Turkish coin, we are informed by the author of Letters from Constantinople, is made of one and the same metal. The para is worth only the seven hundred-and-twentieth part of our dollar, or the fortieth part of a Turkish piastre; but if the para be gilded, it instantly becomes a rubick, which is worth three piastres, or the sixth of a dollar. A twenty para piece, by the process of gilding, acquires the value of twenty piastres. It is to be presumed that there is some regulation as to the quantity of gilding which is laid over the metal, in order to effect this change of value.

Macadamized Road.—Between forty and fifty years ago, Mr. John Curwen, an Englishman, constructed a high-road on the same plan which Mr. Macadam has since claimed as his own invention. It was between Philadelphia and Lancaster. The bottom was formed of common earth, over which was spread a concave layer of stones, broken into about the bigness of a man's fist. 'This road,' says the American Annual Register, for 1796, 'with a small expense for repairs, will endure for centuries. We should like to know whether it is in existence at this moment, without having undergone any fundamental alteration.

Rheumatism.—The Indians on the Western coast of North America are very successful in their treatment of this disease. When it has been recently contracted, they cure it by immersing the patient through a hole in the ice, where he undergoes a friction of the shoulders, back, and loins; the temperature being sometimes so severe, that the water congeals on the upper parts of his body. He is then wrapt in a blanket, placed before a good fire, and soon feels a warm glow throughout his whole system. The repetition of the process generally effects a radical cure. Chronic rheumatism, where the patient is advanced in life, is treated in a different manner. He is placed in a hut of deer-skins, shaped like a bee-hive, about four feet high and three broad. Some hot stones are then introduced, and water thrown upon them; and the entrance being quickly closed, the patient is almost suffocated by the heat and steam. When taken out, in a state of profuse perspiration, he is covered with blankets and conveyed to bed. This operation greatly alleviates the complaint.

VOICE OF THE WIND.

Mr. Head, the author of 'North American Forest Scenes,' who passed a Winter on the shores of Kempenfeldt Bay, an outlet of Lake Huron, has described, in a very pleasing manner, the various natural appearances and events that give interest to an abode in those frozen regions. 'I was,' says he, 'occasionally surprised by sounds produced by the wind, indescribably awful and grand. Whether the vast sheet of ice was made to vibrate and bellow like the copper, which generates the thunder of the stage, or whether the air rushing through its cracks and fissures produced the noise, I will not pretend to say; still less to describe the various intonations that struck upon the ear. A dreary, undulating sound wandered from point to point, perplexing the mind to imagine whence it came or whither it went, whether aerial or subterraneous; sometimes like low moaning, and then swelling into a deep-toned note, as if produced by some Æolian instrument; it being in fact and without metaphor, the voice of winds imprisoned in the bosom of the deep. This night I listened for the first time to what was then perfectly new to me, although I experienced its repetition on many subsequent occasions, whenever the temperature fell very suddenly.'

RETURN OF SPRING.

[Head's 'North American Forest Scenes.']

The following is an animated picture of the breaking up of the ice, at the return of Spring:

'I perceived in the morning all the ice broken in pieces, and floating towards the lake. It was moving slowly away, and a considerable extent of water was already uncovered. This was a joyful sight, for of all things a sheet of water conveys the most lively impressions to the mind; and confined as I was, from the impassable state of the ice, to the shores on one side of the bay, the barrier was no sooner removed than I felt a sensation of liberation, which seemed to be shared by the turbulent waves themselves, as, just risen from their bondage, they rallied as it were, and held council together, bubbling and fretting in their eagerness to press on the rear of their retiring enemy. The wind chased the chilly field before it, which, split into mammocks, was every minute retiring farther from the sight, till about three o'clock in the afternoon, when the lively change was altogether perfect, and Kempenfeldt Bay, so long the type of dreary Winter, became a lovely basin of pure water. And, as if to add to the gratification, the ice had no sooner disappeared than the wind lulled, and the sun beamed forth to embellish a spot excelling in natural charms. As the evening advanced, it was beautiful to see the enormous pines with which the banks were fringed, reflected in the water, while the winding coast presented a pleasing variety of sandy beach and bluff, rocky headland. Nor were the animal creation insensible to the moment; the large fish leaped incessantly high out of the water, and it was scarcely dark before a flock of wild fowl flew round and round in circles, lowering themselves by degrees, till each, one after another, dashed heavily into the favourite element. A sportsman can readily comprehend how animating it was to listen to the wild sounds which now broke upon the ear, as the feathered troop held their babbling conversation together; and diving and splashing by turns, commenced every now and then a short flight for the sake of a fresh launch upon the water. Every thing now was new; nature had thrown off her homely winter's garb, and was beginning to unveil her beauties. My enjoyments were from that day increased, and fish and fowl were added to my resources.'

Mahometan Libraries.—It is difficult to believe that immense libraries were formerly in the possession of the princes of the East, where learning of every kind is now almost entirely obliterated. The library of the Caliphs of Egypt, about a thousand years ago, was contained in forty halls of their palace at Cairo, and consisted of one million five hundred thousand manuscript volumes, many of which were in the hand-writing of the authors. All these books were remarkable for the beauty of the characters in which they were written, and for the splendour of the binding, which was enriched with gold, silver, and precious stones. During the troubles which disturbed a part of the reign of the Caliph Moskaner, about the year 1080, this vast library was greatly injured by the Turkish soldiers, who took the books in payment of their wages. The bindings of some of these books were stripped off, and used as shoe-leather. Others were torn in pieces, and burnt, or thrown into the Nile, or transported to foreign countries. A large number, however, remained in heaps, in the open air, where the wind gradually covered them with earth and sand. Thus several hillocks were formed, which were long visible in the vicinity of Cairo, and were called the Hills of Books.

Turkish Idleness.—A Turk never works, if there is a possibility of his being idle. 'I have never seen one stand,' observes Commodore Porter, 'if by any possibility he could be seated. A blacksmith sits cross-legged at his anvil, and seats himself when he shoes a horse. A carpenter seats himself when he saws, bores holes, or drives a nail, planes, dubs with his small adze, or chops with his hatchet, (I believe I have named all his tools,) if it be possible to do so without standing.' How different are these customs from our own. In America, hardly any workmen, except shoemakers and tailors, sit down; and even clerks stand up to write—a practice which, perhaps, might be advantageously adopted by literary men. But intense mental exertion (except it be oratorical) seems to require a sedentary posture.

Count d' Estaing. This French Admiral, well known in our Revolutionary history, died by the guillotine, in 1793. A similar fate, under the French Republic, befell many who had assisted in founding the Republic of America.

The statue of William III, at Dublin, erected in 1701, in commemoration of the battle of the Boyne, has been blown up and entirely defaced.

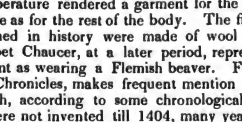
FASHIONS OF HATS.

The *Magasin Universel* (a French Penny Magazine, to which we have been indebted for much useful and entertaining matter) observes, in regard to the subject of this article:—

'In few things is fashion so variable as in hats. Whole volumes might be occupied with the history of the innumerable changes, which this one article of the toilet has undergone. These changes must have cost so much the greater efforts of invention, because a hat is a very simple thing in itself, and susceptible of only a limited variety of combinations. Sometimes the crown of the hat has been lowered, and almost flattened; sometimes it has been elevated into a point, like the cap of a magician. By turns the rim has been widened or narrowed, turned up, or slouched down, and always without reference to the season of the year, which ought to be the chief consideration in fixing the shapes of hats. It has often happened that, in the Summer months, the face is exposed to the scorching rays of the sun, by a hat almost without a rim; while in Winter, when not a particle of sunshine can be spared, an immense breadth of brim throws a circular shadow round the wearer. Fashion is not seldom the reverse of comfort; and it is singular that the majority of people should agree in sacrificing the latter to the former.'

We confess that, in examining the following series of cuts, we have been struck rather by the similarity than the diversity of hats, in different ages. In every specimen we observe a round crown and a brim; and it appears to us that all the variations, which the hat has assumed in the course of many centuries, might have been contrived by an active fancy, in one or two hours. In dress, as in everything else, an absolutely new idea is as rare as the discovery of a new planet.

The hat itself, however, or any other separate covering for the head, except for the purpose of defence in battle, appears to have been unknown among the ancients. As a protection against rain or cold, when the hair was insufficient, they probably drew their mantles over their heads. We are indebted for the invention of the hat to the Saxons, who inhabited a country where the great changes of temperature rendered a garment for the head as desirable as for the rest of the body. The first hats mentioned in history were made of wool or felt. The poet Chaucer, at a later period, represents a merchant as wearing a Flemish beaver. Froissart, in his Chronicles, makes frequent mention of hats, although, according to some chronological tables, they were not invented till 1404, many years after the historian flourished, and were first made in London in 1510. Some of the early fashions may be seen in the two following figures.



At a very early period, white hats were worn by the fashionables of the city of Ghent, in Flanders, and it has been conjectured that the shape and colour of the hat were regulated by the politics of the wearer, and made known the party to which he belonged. Mrs. Trollope, in her recent work, informs us that the same kind of political emblem is now in use at Paris. In an inventory of the personal effects of an English knight, in the year 1459, one entry is of a beaver hat, lined with flowered damask, besides two straw hats. In 1517, hats of enormous size came into fashion, and were worn entirely on one side of the head. Henry VIII. king of England bought a hat and plume for fifteen shillings, or between three and four dollars—which, considering the relative value of money at that period, was a price that could be afforded only by monarchs and nobles. The hats, in the next cut, are said to be copied from a picture, painted in the year 1544. One of them is of so familiar a shape, that we should not ourself be ashamed to wear it this very day, on the sunny side of Washington Street.

It now became the fashion to line hats with velvet, and to manufacture them with high crowns, and occasionally with very broad brims. Specimens of these may be seen in the following cut, the first figure of which is taken from a portrait of the Earl of Morton, a Scotchman, and the second from that of Sir Philip Sidney, who was the most accomplished gentleman of his age. His hat is one of the oddest in the series.

The wearing of hats appears to have been long a privilege, enjoyed only by lords, knights, and gentlemen. In the reign of Elizabeth, it was enacted that every person, above seven years old, unless of knightly rank, or possessed of a certain property in land, should wear a woollen cap, or pay a fine of three farthings. At this period, the privileged ranks were very extravagant in their hats. Some were made of silk, some of velvet, some of taffeta, some of wool, some of a fine species of fur, which was imported from distant regions. They were adorned with black, white, brown, red, green, or yellow ribbons. In course of time, hats became so common as to lose their sacred character, and to be worn not only by knights and nobles, but by their meanest domestics.

In the reign of Charles the First, and until the

accession of the Prince of Orange, broad brims were in fashion. The Puritans were distinguished from the Cavaliers by their steeple-crowned hats. Some of the modes which prevailed, during this interval, are represented in the four following figures.

But these broad brims being found troublesome, the inconvenience was remedied, not by cutting them off, but by turning them up against the side of the hat. First one segment of the brim was elevated; then, two.

About the commencement of the last century, or somewhat sooner, the third segment of the brim was raised, and the result was a three-cornered cocked hat.

During the fifty or sixty years that ensued, the three-cornered hat, with unimportant variations of shape, was universally worn by men of all ranks and ages. Children, likewise, were adorned with a pair of breeches at one extremity of their persons, and a triangular hat at the other. Round hats first began to be worn by the common people in 1750, or thereabouts, but were not adopted by the higher classes till nearly thirty years later. In times not long gone by, we used occasionally to be greeted by an apparition of

'The old three-cornered hat,
And the breeches—and all that,'

but now, we are inclined to doubt whether the last of the three-cornered hats be not hung upon a peg.

On reviewing our series of cuts, we do not perceive that a single one of these successive fashions was calculated to add grace to the wearer's aspect, nor very well adapted to the more important purposes of a garment for the head. Nor can the more modern variations be considered as improvements, in either respect. Would it be beneath the dignity of men of science, taste and genius, to turn their attention to this, and other matters of dress? By bringing philosophical principles to bear upon the subject, with regard to elegance and utility, they might possibly present the world with fashions, which should be as universal as the difference of climate would permit, and immutable in the countries where they should be once established. We have not much faith, however, in any projects which seek to contravene the maxim, that the 'fashion of this world passeth away.'

Fire Worshippers.—There is a sect in Hindostan, who call themselves descendants of the ancient Persians, and, like their ancestors, pay adoration to the sun, the moon, and stars, but especially to fire, esteeming all these objects as visible emblems of the invisible Deity. Like the Roman Vestals, they keep a perpetual fire in their temples, feeding it with odoriferous woods, of great value. Private individuals, when rich enough to sustain the expense, likewise keep these fires in their house, and thus transmute their wealth into the perfumed smoke which arises from the costly woods. Niebuhr affirms, that he saw, in one of the temples of these people, at Bombay, some fires which had been kept perpetually burning for two hundred years, and had probably been all that time supplied with odoriferous fuel. Such is their veneration for the element of fire, that they will not permit a candle to be blown out, lest the breath of man should pollute the purity of the flame. It has been remarked, that if there could possibly exist an idolatry founded on reason, and which did not degrade the Divine Majesty by the symbols of its worship, it would be that of the adorers of fire, and of the eternal lustres of the firmament. There is, in truth, nothing that can be seen or felt, which combines so many symbolic attributes of splendor, terror, and beneficence, as fire.

Machinery.—An English writer observes, that, since the year 1760, 'machines have been invented which enable one man to produce as much yarn as 250 or 300 men could have produced then—which enable one man and boy to print as many goods as 100 men and 100 boys could have printed formerly; and the effect has been, that now the manufacture supports *fifteen hundred thousand* persons, or upwards of *thirty-seven* times as many as in the former periods'—before these improvements in machinery were invented.

Stenography.—The first stenographer employed in taking down the debates in Congress, was Mr. Lloyd, an Englishman; the second, was Mr. John Carey, a native of Ireland.

LIFE OF ELIOT.*

The name of Eliot, 'the Apostle to the Indians,' has come down to us in traditionary honour from an early period of our annals; and in the present age of benevolent enterprise, cannot but be venerated in proportion as it is known. His life and labours are here recorded in a very pleasing and judicious narrative, bearing internal evidence of the same conscientious fidelity to truth so remarkable throughout the series of volumes of which it forms a part; and which enables us to read them all with undoubting confidence, and with the conviction that they are written not for effect, not for gain, but with the veritable purpose of instructing the public on some of the most interesting points of our history. This praise, indeed, belongs to whatever is attested by the authority of Mr. Sparks,—himself eminently trust-worthy as well as discerning; uniting more excellencies than any other biographical writer in our language,

'Comprehensive, clear,
Exact and elegant,'—

in some essential qualifications unrivalled, and even unique.

The author of this work has done justice to the conduct of the first colonists of New England towards the Indian tribes. He has shown that Eliot was zealously assisted in his benevolent plans by the magistrates and people of Massachusetts. And in answer to the questions scoffingly proposed; 'what after all was the use of this difficult effort, this hard toil? Was it not a wasted labor? Were the Indians benefited, or was Christianity planted with an abiding power in their wigwams and villages? Did not the whole disappear, like the snow-wreath in the sun?'—he says:

'But even if not one of the Indians had been personally benefited by the labors of the Apostle Eliot, still those labors, like every great benevolent effort, have answered a noble purpose. They stand as the imperishable record of good attempted by man for man; and such a record, who, that values the moral glory of his country, will consider as a trivial portion of her history? It constitutes a chapter in the annals of benevolence, which every Christian will contemplate with pleasure, even if his gratification be mingled with the sad reflection, that so much was done for so small results. When the settlers of New England came hither, and built new homes on these shores, they and the natives, the stranger emigrant and the old inhabitant, stood side by side, each a portion of God's great family. Had our fathers never cast one kind regard on these wild men, had they never approached them in any office of kindness or any manifestation of sympathy, had they stood off from them in surly or contemptuous indifference, except when occasion might serve to circumvent or crush them, a melancholy deduction must have been made from the reverence, with which every son of New England loves to regard their character and doings.

'But it is not so. The voice of Christian affection was spoken to the savage. The accents of pious kindness saluted his ear. For him, benevolence toiled, and faith prayed, and wisdom taught; and the red race did not pass away, carrying with them no remembrance but that of defeat and wrong, and submission to overpowering strength. The Christianity of the white man formed a beautiful, though transient bond of interest with them. The light, which Eliot's piety kindled, was indeed destined soon to go out. But there his work stands forever on our records, a work of love, performed in the spirit of love, and designed to effect the highest good which man is capable of receiving. Nonantum and Natick will ever be names of beautiful moral meaning in the history of New England.'

We extract the following account of Nonantum, the first settlement of Christian Indians, established about the year 1646. 'Mr. Eliot's care for the Indians was not confined to religious teaching. It was his favorite and well known opinion, that no permanent good effect could be produced by efforts for their spiritual welfare, unless civilisation and social improvement should precede or accompany such efforts. In conformity with this sound view of the subject, he had already endeavoured to introduce among them the benefits of a school. He now aimed to soften, and gradually to abolish, their savage mode of life, by bringing them together under some social arrangement. The Indians, with Waban at their head, formed the plan of a settlement, and framed certain laws for their own regulation. These laws are interesting, as specimens of savage legislation, and as indicating the existing habits among these people. They relate entirely to the promotion of decency, cleanliness, industry, and good order.

'When the natives had received a grant of land for the settlement, they next wished to find a name for it. Their English friends advised them to call it Noonatomen, or Nonantum, which name was accordingly adopted.*

'They now began to work very industriously, being encouraged and aided by Mr. Eliot, who promised to furnish them with spades, shovels, mattocks, iron crows, &c. and to give them sixpence a rod for their work on the ditches and walls. So zealous were they in their new enterprise, that he says they called for tools faster than he could supply them. The wigwams they built were in a better style than formerly. Before this time they had used mats; but now they used the bark of trees in constructing their humble dwellings, and had in them distinct rooms.

'By Eliot's direction they fenced their grounds with ditches and stone walls, some vestiges of which were remembered by persons in the latter part of the last century. Their women partook of the spirit of improvement, and became skilful spinners, their good teacher himself taking pains to procure wheels for them. They began to experience the stimulating advantages of traffic, and found something to carry to market in the neighbouring towns. In the Winter, they sold brooms, staves, eel-pots, baskets, and turkeys; in the Summer, whortleber-

[* Library of American Biography, Vol. 5. Life of John Eliot, the Apostle to the Indians:—By Converse Francis.]

* 'This towne the Indians did desire to know what name it should have, and it was told them it should be called Noonatomen, which signifies in English *rejoicing*, because they hearing the word and seeking to know God, the English did rejoice at it; and God did rejoice at it; which pleased them much; and therefore, that is to be the name of their towne.'—*The Day Breaking of the Gospel*.

ries, grapes, and fish; in the Spring and Autumn, strawberries, cranberries, and venison. In the season for hay and harvest, they sometimes worked on wages for their English neighbors, but were not found to be hardy and persevering laborers.

'The impulse of improvement, however imperfect, was strongly felt. The poorest wigwams among them were equal to those of the princes or Sachems in other places. Their infant settlement, rude and poor as it must necessarily have been, already began to show that man, amidst the relations of a community in some degree orderly, working with his own hands for himself and his family, is a being far superior to man roaming through the forest in reckless vagrancy, with no excitement to industry in any form, and dividing his time between hunting and sleep.'

Eliot, strong in temperance, in well ordered exertion, and in faith, lived to the age of eighty-six. There was a saying among the people, 'that the country could not perish, so long as he remained.' But to himself, death was welcome. 'He used sometimes pleasantly to say, that he was afraid some of his old Christian friends, who had departed before him, especially John Cotton of Boston, and Richard Mather of Dorchester, would suspect him to have gone the wrong way, because he remained so long behind them.'

Eliot's Indian Bible, and his other translations, with his Indian Grammar, Primer, &c. are highly esteemed, by scholars of the present day, as contributions to the science of philology. But the hope that cheered and encouraged him in the composition of these works, the confident trust that they would be read by the Indians and their posterity through successive ages, was, we need not say, disappointed. 'The second edition of the translation of the Scriptures was the last. The printer never was, and never will be again called to set his types for those words, so strange and uncouth to our ears. A century and a half has elapsed since the last impression of the volume appeared, and it is a thought full of melancholy interest, that the people for whom they were designed may be considered as no longer in the roll of living men, and that probably not an individual in the wide world can read the Indian Bible. It is a remarkable fact, that the language of a version of the Scriptures, made so late as the latter half of the 17th century, should now be entirely extinct.'

REVOLUTIONARY SENTIMENTS.

There is a good deal of rough energy, and yet a classical turn, in the following passage, which we extract from old Timothy Pickering's 'Easy Plan of Discipline for a Militia,' published in 1775. The introductory remarks, prefixed to the treatise, are well worth reading, because so thoroughly characteristic of the writer and of the times. They give us a perfect idea of the thoughts and feelings of a plain, strong-minded, upright citizen, conscientiously compelled to become a soldier, yet carrying a quaker-like simplicity into the ranks of war.

'Why throw away our money,' cries the Revolutionary colonel,' for a fool's baubles?—Will a long tail and powdered hair obstruct the passage of the keen-edged sword? Or a rich garment prevent the entrance of the pointed steel?—If an enemy be pierced through the heart with the ball or bayonet of a rough, plain-dressed warriour, would he be more effectually pierced, though the ball or bayonet were sent by the arm of a tinselled beau? Away then with the trappings (as well as tricks) of the parade. Americans need them not, their eyes are not to be dazzled, nor their hearts awed into servility, by the splendour of equipage and dress; their minds are too much enlightened to be duped by a glittering outside.'

The colonel complains of the enormous waste of silk in the manufacture of standards:—

'Two-thirds of the silk imported from Great Britain,' he remarks, 'which is made into colours, would amount to a considerable sum; (for every company has its colour;)and so much, at least, we might save in future, if colours be reduced to a reasonable, and useful size. Three or four square yards of silk are taken to make one. This obliges the Ensigns, whenever they are in the ranks, or the wind blows, to gather up the colours in their hands, till by several folds and doublings, they are reduced to a quarter of their size when fully displayed, and thereby the distinguishing marks, by which the men might find their own regiments or companies, are liable to be wholly or in part concealed. At any rate, all that is thus doubled up is absolutely useless.'

There is something of the old Puritan spirit in the following remarks on military music; they remind us of the Cameronean leader, who ordered his drummer to beat the hundred and nineteenth psalm. As a battle-tune, the author would evidently have preferred Old Hundred to Yankee Doodle.

'Whenever the battalion marches, in order to perform the firings, advancing and retreating, the fifes are to play some tune to regulate the step. And tunes, which have some grandeur and solemnity in them, are undoubtedly to be preferred. The light airs, frequently played for a march, would appear to me as unnatural and improper to be used when a battalion is advancing toward an enemy, as the church music, censured by the poet, is unfit and indecent on those occasions when it is commonly used,—

> 'Light quirks of music, broken and uneven,
> Make the soul dance upon a jig to Heaven.'

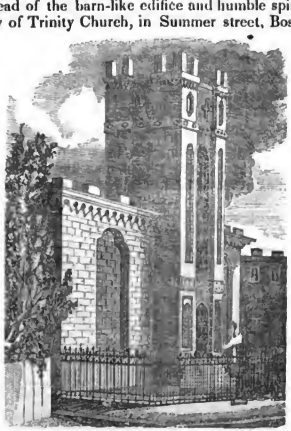
If Colonel Pickering, after spending a few years in the service, had re-written this pamphlet, he would probably have made great alterations, and thereby have destroyed its peculiar and characteristic value. Any practised soldier might form a better system of Military Discipline; but here we see the New England militia-man, putting himself on his defence against the drilled warriours of Britain.

Birch Tree Sugar.—Where sugar and molasses cannot be otherwise obtained, recourse is sometimes had to the extract of birch. It is obtained by perforating the tree, as in making maple-sugar, and causing the sap to flow into kettles, in which it is afterwards boiled down to the consistency of molasses. The taste is a bitter sweet.

CHURCHES AND CATHEDRALS.

There is one department of architecture—that of edifices for public worship—in which it does not appear probable that our own country will ever produce such magnificent specimens, as may be seen in many parts of Europe. Those grand and noble structures are the symbols of an established national religion, and could never have had existence, unless a portion of the public wealth, drawn from the people by other than voluntary taxes, had been devoted to the purpose. They may as justly be numbered among edifices of state, as the royal palaces, the fortresses, and the national prisons. They do not form a fair expression of the degree of religious zeal, which influences those who assemble beneath their stupendous domes. In the United States, on the contrary, every church is a type of the united zeal of private individuals; the building is as much the work of the congregation which worships there, as if each member had laid one of the stones that compose the walls. Thus, our temples, instead of the pride and splendour which state policy imparts to those of other countries, generally possess a neatness and elegance, more analogous to the decorations of private dwellings. Another reason for a simpler style of architecture in our churches, may be found in the simplicity of our faith, divested as it is of those elaborate inventions, which being of earthly origin, require an earthly grandeur in every thing connected with them.

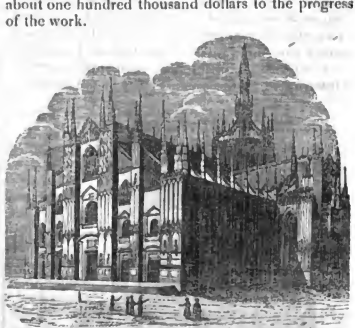
We should be glad to give an engraving of one of the primitive meeting-houses of New England, such as the Puritans first reared, when they ceased to worship beneath the open sky, or the canopy of forest boughs. None such being at hand, we present, instead of the barn-like edifice and humble spire, a view of Trinity Church, in Summer street, Boston.



This is a massive structure of rough gray stone, with a square and lofty tower, the whole forming as good a specimen of architecture, in the Gothic style, as may generally be found on this side of the Atlantic. Yet it is chiefly serviceable for our present purpose, as a contrast to those wondrous edifices which have been consecrated to religion in other parts of the world.

In Europe, there are cathedrals of so vast a size that this church might be contained entire within the walls, yet scarcely appear to occupy more room than some of the noble monuments which have been erected there. Five hundred workmen were employed during thirty-five years, in the construction of St. Paul's, in London. Other cathedrals are of unknown antiquity; but, from their immense extent, must have demanded the labour of whole generations of men, and have become venerable with age even before they were completed.

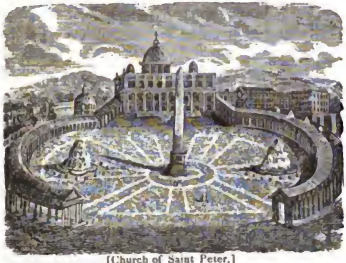
The cathedral of Milan, in Italy, is thought to excel all others in grandeur and magnificence, except St. Peter's, at Rome. It is composed entirely of white marble, and decorated with an innumerable multitude of beautiful ornaments, and according to some authorities, with no less than four thousand five hundred statues. The edifice is surmounted by one hundred and thirty-five spires, each of which sustains twenty-seven statues. At the summit of the principal steeple stands a colossal statue of the Virgin, richly gilt; and from the floor of the cathedral to the top of this statue, the whole height is nearly four hundred feet. The interior of the edifice corresponds with its external magnificence. The vaulted roof is sustained by fifty-two gothic pillars, of prodigious height and circumference, all of which are ornamented with capitals of different designs. The sides of the principal entrance are composed of two columns of granite, each of which was hewn from a single block; and they are supposed to be the loftiest that ever were employed in architecture. This cathedral, though commenced in the middle ages, is still far from being completed. The late Emperor of Austria devoted an annual sum of about one hundred thousand dollars to the progress of the work.



(Cathedral of Milan.)

The church of Saint Peter, at Rome, is the wonder of the world, and undoubtedly the most sublime monument that mankind ever consecrated to the Deity, since the creation; nor is it probable that future ages will produce any thing similar to its vast magnificence. This edifice has so often been described, that we will refer our readers to the works of every traveller who has visited Italy, and content

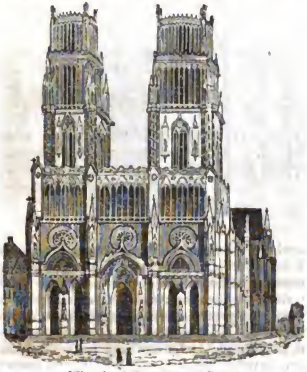
ourself with a diminutive representation of its external form, as given in the cut. More than a century was occupied in completing it, at an expense equal to one hundred and sixty millions of dollars. It is said, however, that the structure is now greatly out of repair—that there are many cracks in the cupola, which has been surrounded by an iron hoop of several millions of pounds in order to prevent it from breaking down—and that large and increasing sums are annually required, to make good the dilapidations of each successive year. Spain formerly paid about four hundred thousand dollars per annum, for this purpose.



[Church of Saint Peter.]

The religious edifices of France are less grand than those of Italy, or than the monuments of the Catholic faith in England.

The Church of Notre Dame, however, is a noble structure, nearly four hundred feet in length, with two towers, each two hundred and four feet high. It was completed more than six centuries ago, after two hundred years had been spent in building it. The great length of time, that was often consumed in rearing these ancient structures, must be imputed partly to the disadvantages under which the workmen laboured, from the want of proper tools and machinery. It is likewise probable that such works were often interrupted by the public events of the period.

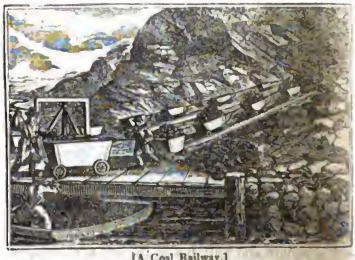


[Church of Notre Dame at Paris.]

There is one species of religious edifice which should not be forgotton, in glancing at the various temples of the Christian faith; although the specimens that remain are now consecrated to Paganism. We allude to the ancient Greek churches, in Constantinople and its vicinity, which have only been preserved from destruction by being converted into mosques. Travellers remark that the cross, and other symbols of Christianity, are still visible upon their desecrated walls. The most celebrated of these buildings is the Mosque of St. Sophia, which is two hundred and seventy feet in length, and two hundred and forty in breadth. Its architecture is peculiar, and somewhat of an Oriental cast, and is probably less calculated to impress the spectator with devotional awe, than is the sombre sublimity of the churches in western Europe. This mosque, although many centuries old, is still in good repair, and may stand till the true faith be again preached beneath its splendid dome.

[Mosque of St Sophia.]

In conclusion, let us bless God that the narrowest closet may be a temple consecrated to His worship, and that a devout heart may find Him there as well as in the loftiest cathedral on earth.



[A Coal Railway.]

COAL.

The cut represents the method used in Pennsylvania for transporting coal from its native beds to

the streams, by which it is conveyed to Philadelphia, thence to be distributed over a wide extent of country. Coal, for the purposes of fuel, is fast taking the place of wood. In a few years, its comparative cheapness will have become so decided, that almost all the good old-fashioned fire-places will probably be succeeded by diminutive grates, filled with red hot lumps of anthracite, diffusing an intense heat, but never gladdening the room with a cheerful blaze. The furnaces of the American steamboats will likewise be replenished with coal, as is already the case with those Europe. Yet even when this change shall have been completed, the only difference will be, that, instead of cutting down the trees which are now flourishing, we shall build our fires with the carbonized forests of past and forgotten ages. All coal is evidently of vegetable origin, and is supposed to have been reduced to its present state by the combined influence of heat and pressure. Masses of this substance often bear the impress of the bark and leaves of enormous vegetables, thus displaying to modern botanists the forms and characters of plants, some of which are analogous to those of the present day, while others have entirely vanished from the garden of nature.

Bituminous coal consists of carbon, or charred wood, combined with an earth. Having been exposed to an inferior degree of heat and pressure, it retains a larger portion of inflammable matter than the anthracite, and is likewise softer; hence it takes fire more easily, but evolves a far less quantity of caloric. This is the sort of coal which is dug from the mines of England, and constitutes almost the whole fuel of that country. The anthracite coal is combined with a portion of flint and iron. Such is the hardness of some of its varieties, that they are occasionally carved into inkstands, and other articles of use and ornament, which possess a beautiful black lustre, and would probably receive little injury in an ordinary wood fire. A few years ago, it was deemed impossible to apply the harder species of coal to the common purposes of fuel; but the improvements in the construction of grates will doubtless enable mankind to consume everything of a combustible nature, whether on the surface of the earth, or within its bowels. In a million or two of years, perhaps, the world will thus have been destroyed by a piecemeal conflagration.

Girdle for the Earth.—The English cotton manufacturers, though they cannot, like Shakspeare's fairy, 'put a girdle round the earth in forty minutes,' might perform this feat in little more than a month. It is stated that the 'wrought fabrics of cotton, exported in one year, would form a girdle for the globe, passing *eleven* times round the equator;' and also, that 'the yarn spun in a year would, in a single thread, reach fifty-one times from the earth to the sun.' If all this yarn were to be wound in one huge ball, it would form a good-sized planet by itself.

THE CAT.

In treating of the moral qualities of the Cat, we are aware that we are touching on debateable ground. While some bestow upon poor Puss all the epithets of treachery, cruelty, and ingratitude, others, finding in its disposition, kindness, gentleness, and playfulness, are warm in eulogies of their favourite. In fact the character of the Cat is judged of too much by comparison, and thus, like many persons in the world, its stock of really good qualities are thrown into the back ground, and all its bad propensities magnified. That the Cat has not the sagacity, approaching almost to human reason, of the Dog—that it has not his devotedness of affection, his entire self control and patient submissiveness under the rebuke of his master,—is not to be denied, nor, from its natural inherent habits, is it to be expected that it should have these qualities to the same extent. Neither can it be affirmed, that the Cat is in disposition to be estimated like the noble and patient Horse, another of the chief and favourite companions of man. Yet Puss is not only the affectionate sharer of the clean and quiet hearth of the lonely widow; but it will be found quietly reposing on the silken covered cushion in the boudoir of the more wealthy; and from the palace to the cottage it everywhere finds its patrons, to whom its gambols and its fawnings, the beauty and symmetry of its elegant figure, and its graceful motions, are all circumstances of recommendation. In fact, it is bad usage alone that calls forth the savage propensities of this Feline domestic; with gentle and kind treatment, it can be as gentle, and kind, and insinuating as any other animal. It is true, even in its most domestic state, it exhibits a native propensity for prey, and hence is derived its usefulness: though fed with the most delicate dainties, it will still prefer as a peculiar delicacy a Mouse, caught by its own prowess and cunning, and it will revel in the quivering flesh of the yet gasping victim. Still nothing can exceed the affection of the Cat to those who treat it kindly This affection it expresses by rubbing its body close on the individual, and by the loud purring noise indicative of its satisfaction. It will not, however, bear to be crossed, and though it returns kindness by every expression in its power, it is also prompt to retaliate on the slightest opposition. Neither has it the perception of the Dog, in desisting from any action when commanded to do so; it will persist in clawing food off one's plate, and has no hesitation in stealing whenever it can. Although the Cat can be made to perform some actions at the command of its master, such as leaping, and other tricks, yet it does so always with reluctance, and has by no means the teachable and persevering disposition of the Dog.

The Cat, however, shows many instances of a species of reasoning powers, which, like similar cases in the Dog, almost surpass what can strictly be termed instinctive. Thus Smellie relates an instance of a Cat that frequented a closet, the door of which was fastened by a common iron latch. A window was situated near the door; when the door was shut the Cat gave herself no uneasiness: as soon as she was tired of her confinement, she mounted on the sill of the window, and with her paws dexterously lifted the latch and came out. This practice she continued for years. We recollect once observing a Cat, seated on a table, make several efforts to put her head into a long narrow vessel containing some

milk. Finding her efforts ineffectual, she at last dipped her fore paw into the milk, licked it off with her tongue, and continued to help herself in this way, till her appetite was satisfied.

An anecdote of a Cat discovering a murderer, is thus given in the *Monthly Magazine*, for January, 1801:

'A physician of Lyons was, in July 1800, requested to inquire into a murder that had been committed on a woman of that city. In consequence of this request, he went to the habitation of the deceased, where he found her extended lifeless on the floor, weltering in her blood. A large white Cat was mounted on the cornice of a cupboard, at the far end of the apartment, where he seemed to have taken refuge. He sat motionless with his eyes fixed on the corpse, and his attitude and looks expressing horror and affright. The following morning he was found in the same station and attitude, and when the room was filled with officers of justice, neither the clattering of the soldiers' arms, nor the loud conversation of the company, could in the least degree divert his attention. As soon, however, as the suspected persons were brought in, his eyes glared with increased fury, his hair bristled, he darted into the middle of the apartment, where he stopped for a moment to gaze at them, and then precipitately retreated under the bed. The countenances of the assassins were disconcerted, and they were now, for the first time during the whole course of the horrid business, abandoned by their atrocious audacity.'

It has been affirmed that the Cat has no individual attachment to man; yet instances occur every day to contradict this assertion. A Cat frequently recognizes that individual in the family who shows it the greatest kindness; and instances occur where it will follow persons about the house and gardens like a dog. We knew a Cat which was so much attached to a young lady, that it followed her even when she went out on horseback. Pennant mentions, that when the Earl of Southampton, the friend and companion of the Earl of Essex, in his fatal insurrection, was confined in the Tower of London, he was surprised by a visit from his favourite Cat, which, it is said, obtained access to its master by descending the chimney of his apartment. An anecdote of the attachment of a black Cat for the celebrated Arabian horse Godolphin, is mentioned by Lawrence. These two animals were companions, for many years, and when at last the horse died, the Cat had to be removed by force from his dead body. She crawled away with extreme reluctance, and was found dead some time afterwards in a hay loft. There was a hunter in the late king's stables, at Windsor, to which a Cat was so attached, that whenever he was in the stable, the creature would never leave her usual seat upon the Horse's back; and the Horse was so well pleased with this attention, that to accommodate his friend, he slept, as horses will sometimes do, standing. This, however, was found to injure his health, and the Cat was at length removed to a distant part of the country.—*Selected.*

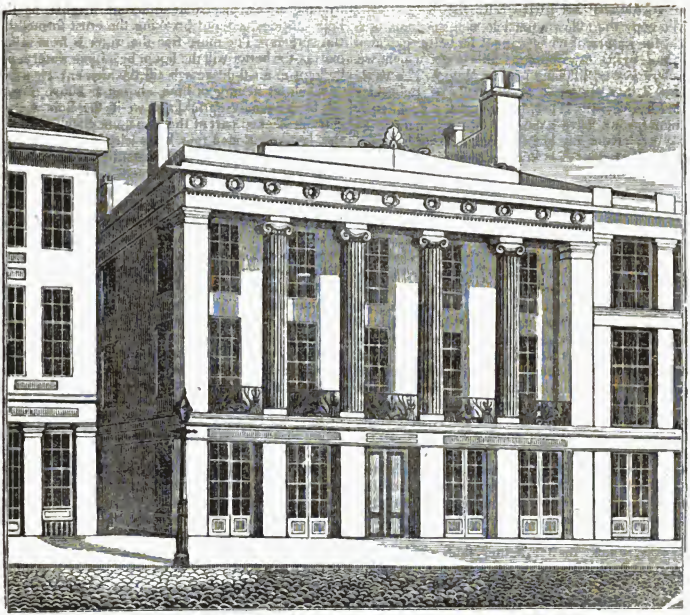
Eyesight of the Horse.—Horses see much better than men, in the night-time. Their eyes are supposed to be of a similar structure to those of the cat.

Feminine Characteristics.—Bishop Aylmer preaching a sermon before Queen Elizabeth, spoke in very uncourtly terms of the great body of the female sex. It will not be unfair, perhaps, to consider the first clause of the following passage as merely complimentary to his royal auditress, and to set down the remainder as the Bishop's *bona fide* opinion. 'Women,' observes he, 'are of two sorts:—Some of them are wiser, better learned, discreeter, and more constant than a number of men; but another and a worse sort of them, and the Most Part, are fond, foolish, wanton flibbergibs, tattlers, triflers, wavering, witless, without counsel, feeble, careless, rash, proud, dainty, nice, tale-bearers, eavesdroppers, rumour-raisers, evil-tongued, worse-minded, and in everywise doltified with the dregs of the Devil's Dunghill!' 'It would be a bold man, in our day, who should stand up in a pulpit and repeat these words. At the time when they were uttered, and long afterwards, there was a species of cant in vogue, which aspersed the daughters of Eve with all their mother's frailties, and denied their claim to any of her heaven-born virtues. Modern cant (if we may venture to think it such) would produce a very curious counterpart to the above passage from Bishop Aylmer.

Puritanic Scraps.—There is remarkable vigour in the following extract from a letter of Randall Holden to the Governour of Massachusetts, in 1643. The writer was a leading man among a party of turbulent heretics, who gave the Puritans much trouble:—'For we are resolved, that according as you put forth yourselves towards us, so shall you find us transformed to answer you. If you put forth your hand to us as countrymen, ours are in readiness for you. If you exercise your pen, accordingly do we become a ready writer. If your sword be drawn, ours is girt upon our thigh. If you present a gun, make haste to give the first fire; for we are come to put fire upon the earth, and it is our desire to have it speedily kindled!' In the same letter, is this sharp allusion to the severities exercised by the Puritans on religious offenders:—'We live not by blood as you do, either through incision of the nose, division of the ear from the head, stigmatics upon the back, suffocation of the veins through extremity of cold, by your banishments in the winter, or stranglings in the flesh with a halter.'

Titles of the Sultan.—The titles of Sultan Mahmoud, which are placed at the heads of treaties and other public documents, are above a score in number. Some of the most singular are, 'The Shadow of God upon Earth,'—'The Odour of Paradise,'—'The Agreeable of Soura.' Among the mass of people, however, instead of these celestial designations, the Sultan goes by the name of 'The Man-slayer,' or 'The Blood-Drinker.'

Marble Balls.—Commodore Porter says, that a portion of the marble, which composed the edifices of ancient Troy, has been manufactured into balls of several hundred pounds weight, for the Turkish cannon at the Dardanelles.



[View of Suffolk Bank, State street, Boston.]

All who have visited State street, within the last year or more, must have noticed the elegant front of the Suffolk Bank, with its range of granite pillars, forming perhaps the most splendid object in that beautiful portion of our city. The edifice occupies, we believe, the site of the ancient Custom House, and looks down upon the spot where the first American blood was shed by the hands of the British soldiery. It may therefore be said to throw its shadow across the very tract of ground, where the Revolution—the progress and consequences of which were to shake the world—began its career of violence. No succession of events, no brilliant nor mournful vicissitudes of our history, can obliterate the remembrance of what once occurred there, nor prevent this spot from being famous, so long as posterity shall feel an interest in the deeds and sufferings of their fathers. The Massacre, if not of primary importance in itself, became so by the use which was made of its anniversary, for many years afterwards, in kindling up the spirit of the people, and renewing as it were, the traces of their kindred blood upon the stones of King street. The event itself was little more than a Riot; but it gave a mighty impulse to a Revolution. When the former building was taken down, therefore, it might not have been undesirable to appropriate a part of its site to an historic monument, or to have connected such a design with the modern edifice, so that no stranger, nor schoolboy should pass through the street, without being aware that his feet were treading now where the blood-tracks once had been. It would have been in consonance, we think, with the character of New England, to associate a memorial of this nature with the daily business of the people, and to consecrate even the Exchange by some architectural or sculptural device, which should point to the Past, as surely as the clock on the Old State-House points to the noontide hour.

But we have gone somewhat astray from the proper subject of our article. The Suffolk Bank was erected in the course of the year 1834. The cost of the carpenter's work, as we learn from a copy of the survey-bill, was more than eight thousand dollars, and the net cost of the granite, furnished by the Railway Company, was ten thousand, five hundred dollars. The entire cost of the edifice, in its finished state, is estimated at about forty thousand dollars. The architect was Isaiah Rogers, Esq. to whom the country is indebted for the designs of several of its most admired structures.

Indian Proverb.—'If the fog goes a fishing, (i.e. if the wind blows it seaward,) we shall have fair weather; but if it goes a hunting, (towards the interior,) then look out for a storm.'

AMERICAN BUILDE'RS BOOK.*

We copy the following article as a specimen of a work, the nature of which cannot be better explained than by its own copious title-page, which we therefore give at full length, in the Note.* The work is now in the press, and will shortly be published by M. Burns, 139, Washington street. From such portions as we have examined, we are inclined to think very favourably of its merits, and cordially recommend it to that class of the community for whose use it is intended.

LIME AND SAND CEMENT.

The best methods of preparing calcareous cements, have been investigated by Dr. Higgins, with great ability. He has advanced the most satisfactory proofs, founded upon analysis, that the Romans, whose mortar or cement, after a lapse of two thousand years, instead of being decayed, has become as hard as the stones it binds together, possessed no uncommon secret, which we are unable to discover. Sharp sand, free from clay, salts, calcareous, gypseous, or other grains less hard and durable than quartz, is better than any other. When a coarse and fine sand, corresponding in the size of their grains to the coarse and fine sand hereafter described, cannot be easily obtained in its native state, the following method of sorting and cleansing it must be resorted to.

Let the sand be sifted in streaming clear water, through a sieve which will allow all grains, not exceeding one sixteenth of an inch, to pass through, and let the stream of water be so regulated as to wash away the very fine parts of the sand, the clay, and every other matter lighter than sand. The coarse rubbish left on the sieve must be rejected. The sand which subsides in the receptacle must then be further cleansed and sorted into two parcels, by the use of a sieve, which allows no grains to pass but what are less than one thirteenth of an inch in diameter. That part which passes through the sieve we shall call fine sand; the remaining portion, coarse sand. These separate portions should be dried in the sun, or by a fire.

That sort of lime must be chosen, which heats the most in slacking, and slacks the quickest when duly watered; which is the freshest made, and has been the closest kept.

Put fourteen pounds of the lime chosen according to these important rules into a brass wire sieve, still finer than the last mentioned. Slack the lime, by alternately plunging it into, and raising it out of a butt of soft water; reject all the matter which does not pass easily through the sieve, and use fresh portions of lime in a similar manner, until as many ounces of lime have passed through the sieve as there are quarts of water in a butt. This is the lime water that contributes so materially to the excellence of the stucco. As soon as a sufficient portion of lime has been imparted to it, it should be closely covered, until it becomes clear, and then drawn off by plug holes placed at different heights, as the lime subsides, without breaking the crust formed on the surface. The more free the water is from saline matter, the better will the liquor be. Lime water must be kept in air-tight vessels till the moment it is used.

Slack 58 pounds of lime, chosen as above directed, by gradually sprinkling on it the lime water. Sift the slacked part of the lime immediately through the last mentioned fine brass wire sieve; the lime which passes must be used instantly, or kept in air-tight vessels, and the rest rejected. This finer, richer part of the lime, may be called purified lime.

The materials of the cement being thus prepared, take 56 pounds of the coarse sand, and 42 pounds of the fine sand; mix and place them on a clean mortar board, to the height of six inches, with a flat surface, wet with the lime water, and allow all that the sand in this condition cannot retain, to flow off the board.

To the wetted sand, add 14 pounds of the purified lime, in several successive portions, mixing and beating them well together. Then add 12 pounds of bone ashes in successive portions, mixing all together, and the sooner the cement thus formed is used, the better it will be. As this cement is shorter than mortar or common stucco, and dries sooner, it ought to be worked expeditiously, in all cases. The materials used along with it in building, or the ground on which it is laid in stuccoing, should be well wetted with lime water at the instant of laying it on; and when the cement requires moistening, lime water should always be used.

The proportions above given, are intended for a cement suited to exposed situations, where it is necessary to guard against the effects of hot weather, or rain. In general, half the quantity of bone ashes will be sufficient; and although the cement in this latter case will not harden deeply so soon, it will be ultimately stronger, provided the weather be favorable.

This cement should never be applied to walls before they have become perfectly dry, otherwise the damps or gases, that should escape by exposure to the atmosphere, are held in the wall, or on the surface behind the cement, which being converted by frost into ice, separates the cement from the wall; but if prepared and applied as above directed, it may be used for all outside purposes on brick or stone work, or upon lathwood, having first a strong prick-up coat of lime and hair, without any danger of its cracking, or of being injured by frost. When the work is required to be frescoed, or colored, to imitate stone, it should be done in the following manner. Take of the lime water before described, and add 5 ounces of copperas to every gallon, with as much of the powdered lime as will make a thin whitewash: this may be tinted of any desired color, by adding ochre, umber, blue black, red lead, or other color, to give the desired tint, and applied to the cement, as soon as it is laid on.

* The American Builder's General Price Book and Estimator, to elucidate the Principles of ascertaining the correct value of every description of Artificers' work required in building, from the prime cost of materials and labor, in any part of New England: deduced from extensive experience in the art of building; to which are added a variety of useful tables, memoranda, &c. by James Gallier, Architect. Second edition. Revised and Improved.

A Musical Ear.—As an argument to induce a gentleman to patronise itinerant musicians, it was stated that another person had attended their performances, although he was deaf. 'And so would I,' replied the gentleman, 'if I were as deaf as he!'

MAJOR BURNHAM'S ORDERLY BOOK.

We have in our possession the Orderly Book of the late Major Thomas Burnham, of Ipswich, who acted as Adjutant to a militia regiment during the siege of Boston. It supplies us with several interesting extracts, and among them, the following order of Washington, relative to the formation of his body-guard:—

'The General being desirous of selecting a particular number of men as a Guard for himself and baggage, the colonels and commanding officers of each established regiment (the Artillery and Riflemen excepted) will furnish him with four, that the number selected may be taken out of them. His Excellency depends upon the colonels for good men, such as they can recommend for their sobriety, honesty, and good behaviour. He wishes them to be from five feet eight inches high, to five feet ten inches,—handsomely and well made; and as there is nothing in his eye more desirable than cleanliness in a soldier, he desires that particular attention may be had, in the choice of such men as are neat and spruce. They are all to be at Head Quarters tomorrow, (11th March, 1776) precisely at twelve o'clock, at noon, when the number wanted will be chosen. The General wants men neither with uniforms nor arms; nor does he desire any man to be sent to him, that is not perfectly willing and desirous of being of the Guard. They should be drilled men.'

The following Order affords a hint of the degree of proficiency which the American forces had made, in the business of soldiership:—

'As it is exceeding good weather for exercise, and little or no fatigue, the General desires all officers of every rank to exert themselves in disciplining the men, especially the captains and subalterns, as it will be a great disgrace to them to have their men make an awkward appearance, after being under discipline some months. The character of the officers will be formed from the appearance of their men. From the present situation of the Enemy, there is a probability of our moving from hence in a few days. The General hopes the Officers will spare no pains to make a good appearance, as well for their own credit, as for the benefit of the service.'

The enemy, as appears by the next passage, were suspected of plotting the destruction of the insurgent army, by a very dishonourable mode of warfare:—

'As the Ministerial Troops in Boston, both from information and appearances, are preparing to evacuate that town, the General expressly orders, that neither officer nor soldier presume to go into Boston without leave from the General-in-Chief at Cambridge, or the commanding General at Roxbury; as the Enemy with malicious assiduity, have spread the infection of the small-pox through all parts of the town. Nothing but the utmost caution, on our part, can prevent that fatal disease from spreading through the army and country, to the infinite detriment of both. His Excellency expressly commands every officer to pay the exactest obedience to this order.

'If, upon the retreat of the Enemy, any person whatsoever is detected in pillaging, he may be assured the severest punishment will be his lot. The unhappy inhabitants of that distressed town have already so severely suffered from the iron hand of oppression, that their countrymen surely will not be base enough to add to their misfortune.'

We find the danger from the small-pox again insisted on, the next day—partly, perhaps, from motives of policy, in order to restrain these half-disciplined troops from the irregularities, which they would otherwise have been likely enough to commit:—

'The General was informed yesterday evening, by a person just out of Boston, that our Enemies in that place have laid several schemes for communicating the infection of the small-pox to the continental Army, when they get into the town. This shows the propriety of yesterday's orders, and the absolute necessity of paying the strictest obedience thereto.'

General Green, Brigadier of the day, on the fifteenth of March, issues the following order:—

'From the present situation of the Enemy, we have the strongest reason to apprehend that they are meditating an attack by surprise. The officers of all ranks are desired to keep in their quarters, that they may be ready at a moment's warning. The General is informed that the captains and subaltern officers make frequent and unnecessary visits to Cambridge and other places, and there continue till late in the evening. This conduct is dangerous, in our present situation; and those who are imprudent enough to continue it may expect to be arrested, if detected. The security of the Post, and the preservation of the Troops, are objects too considerable to give place to private indulgences.'

On the nineteenth of March, after the evacuation—

'All officers, soldiers, and others, are positively forbid going into the town of Boston without a pass, or being sent expressly upon duty. As soon as the Selectmen report the town to be cleansed from infection, liberty will be given to those who have business there to go in. The inhabitants, belonging to the town, may be permitted to return to their habitations—proper persons being appointed at the Neck, and Charlestown-ferry, to grant them passes.'

We have a suspicion, from the reiterated injunctions with respect to personal appearance, that there was rather an unusual degree of slovenliness among the New England troops. It was easier to outshine them on the parade-ground, than in the battle field. When they were to march, it was thought expedient to admonish the officers, as follows:—

'Head Quarters, March 23d, 1776.

'Colonels James Reed's, Nixon's, Poor's, Prescott's Arnold's and Baldwin's regiments are the first to march, under Brigadier General Sullivan. They are to be ready at a moment's warning.—The General flatters himself that the commanding officers of each of these, and the other corps, will exert themselves (as they are going to join the troops of other Colonies) in sprucing up their men, that they may look as soldierlike and reputable as possible. This, and a proper attention to the good and orderly behaviour of the men, and a proper care of the arms, ammunition, and accoutrements, are qualifications

especially necessary to every commanding officer. Therefore, for their own honour, and the honour of the New England Colonies, it is hoped they will diligently exert themselves at this time.'

Apprehensions, it seems, were entertained of an attack from the British forces, some days after they had been embarked on board the fleet:—

'The enemy still continuing in the harbour without any apparent cause for it, after winds and weather have favoured their sailing, there is abundant reason to suspect that they may have some design of aiming a blow at us, before they depart. The General, therefore, in the strongest terms imaginable, recommends to the commanding officers of every corps to prevent their men off duty from straggling, but to have them ready to turn out at a moment's warning, with their arms and ammunition in good order. For this purpose, strict examination is to be paid to roll-calling, and delinquents severely punished. The General Officers, in their several departments, are to take care that proper alarm-posts are assigned to every corps, that no confusion may ensue, in case they are called out.'

The concluding entries in the Orderly Book refer to the payment of the militia regiments which had assisted at the blockade of Boston. The patriotism of these citizen-soldiers was as disinterested, we presume, as is generally met with; but, nevertheless, there appears to have been some little difficulty about settling the terms of remuneration for their services. They put in a claim to pay and rations from the time that they had volunteered to perform a tour of duty; whereas the Commander-in-Chief decided, very reasonably, that their emoluments were to commence only from the date of their actually leaving home. On quitting the Army, they were to be allowed one day's pay for every twenty miles of their homeward journey, besides a penny a mile, to defray their travelling expenses.

Every document, that refers to this period of our Revolutionary warfare, is particularly worthy of attention. It was at the Siege of Boston that the American people first acted together, as one nation; and not till then do the separate streams of their history unite in one mighty current. Nothing could be more interesting than to investigate, were it now possible, the composition of the motley army which surrounded the trimontane Peninsula, and to observe the points of difference and agreement among the natives of various colonies, then, for the first time brought into mutual contact. These diverse ingredients were then, as we may say, undergoing the process of fusion, in order to form a homogeneous mass. This, of all other scenes and periods in American annals, offers the best field for an historical novel; and it is singular that no one has attempted to work out the striking and strongly contrasted picture which it presents. Mr. Cooper, indeed, in his Lionel Lincoln, has hit upon the right moment; but he erred in confining his story almost exclusively within the British lines, instead of establishing his head-quarters near the earthern ramparts of Dorchester and Roxbury.

Duelling.—By the old law of Massachusetts, duellists were to be punished by fine, imprisonment, setting in the stocks, or whipping. In case of a fatal result, the dead body was to be buried either at the place of combat, or in the most public highway, with a stake driven through it. The body of the slayer (after hanging) was to be treated in the same manner. These were good and wise laws, where (as was the case among our forefathers) the state of public sentiment would permit them to be executed. The deep ignominy of the punishment was well adapted as an antidote to all notions of false honour.

It appears to us that the present tone of the public press in regard to duelling, though doubtless well meant, is of very evil tendency. A bloodless duel becomes a topic of ridicule and jest-breaking in every newspaper throughout the Union. Unless one of the duellists be left dead or mortally wounded on the field, both must expect to be universally hissed, like two unskilful gladiators in the Roman amphitheatre.

Most young men would deem it far more tolerable to undergo the most solemn and weighty expressions of public abhorrence, for murder committed in a duel, than to encounter such 'grinning infamy,' for stopping short of murder. This we conceive to be one of the reasons, why duelling in America is a more bloody business than anywhere else in the world. In England, where, in theory at least, every gentleman must hold himself responsible to a challenge, or lose his place in society, nothing is more rare than a fatal duel. The reason is, that, while the custom of private combat continues in apparent force, it has in reality been so refined away, that its more horrible features are almost obliterated. Duelling (except in the few cases of mortal injury and animosity) is there a mere ceremony; but, by that mere ceremony, the antagonists incur no public ridicule, and are supposed to vindicate their honour. It is time that we should adopt the same refinement. Doubtless, if duelling could be entirely put down by the force of law, or of public sentiment, it would be infinitely the better way; but, that being manifestly impracticable, it should be our endeavor to make the custom fade away from realities, and become gradually a phantasm.

Tomb of the Saviour.—Although Jerusalem has been under the dominion of the infidels, during many centuries, yet the Tomb of Jesus has been kept sacred from them. When the city was taken by the Turks, the Holy Sepulchre was redeemed for a sum in gold, by the Christians of Syria.

Coral.—This substance was formerly of considerable value in Europe, as a material for the manufacture of ornaments. Such ornaments are not at present worn, except by the inhabitants of the Indies, who are said to value jewels of coral more highly than pearls; because the colour of the coral harmonizes with the dark skin of the wearer.

Town-Whipper.—This personage was annually appointed, while whipping-posts yet remained in New England; and his office was one of considerable labour and emolument.

MOBS.

[From Dewey's Old World and New.]

'Liberty seems yet to be regarded among us rather as a boon to be carelessly enjoyed, than as a trust to be faithfully discharged. It is rare to meet with any production of the periodical or daily press, that enters deeply into the moral and social, as well as political dangers inseparably connected with free institutions. The pulpit addresses our people precisely as it would the people of China or Hindostan—taking no account that ever I have observed of the peculiar discontents and exposures of a community circumstanced as we are. Meanwhile, there are enough to prate about liberty—demagogues and party orators—to tell the people continually of their power and importance—not of their duties—and the people, hearing little else, are led to conclude that their situation offers only occasion for pride and gratulation. In addition to this, there is always a *vis inertia* in the body of every society, not disturbed by actual revolution—an indolent and passive habit of feeling as if all must be well, which disinclines, and almost disenables us, from forming any discriminating judgment of the peculiar perils of our situation. That this is all wrong, that we have entered upon a new era in society, an era of as much peril as promise; that society cannot adjust itself to its new duties and relations without much consideration and care, I think I distinctly see; and I cannot but deeply feel that a momentous experiment for happiness and virtue is passing over us.

'I trust that, in our country we are to show that the people may be confided in; and that the interests of a country may be more faithfully kept by popular intervention than by despotic authority. But if we are to show this, we must see to it in season, and charge ourselves with this responsibility, and prove ourselves faithful, as no people before us has ever done, and as no people after us will ever have equal advantages for doing. We must see to it, that knowledge is built up, and religion promoted, and virtue practised, that every man be sober and vigilant, and stand upon his individual guard and watch, as if he were a sentinel for the safety of an empire. Especially must we see to it that the venerableness and sanctity of the laws are sustained among us.

'If all the multitudes in our American republic were assembled, the whole body of them, almost as one man, would pronounce the law and the government established among us to be good and beneficient. Then I say, it is a matter of *conscience* to obey it. If we break it, we are moral offenders;—not mere technical or political offenders, according to some arbitrary or unacknowledged rule;—but offenders against conscience and against God, and we must answer it, not at the human tribunal only, but at the bar of an eternal judgment!

'The disposition on the part of some of our citizens to take the law into their own hands—public executions without legal trial in one part of the country, and the mobs and riots in some of our cities, demand a fixed and serious if not anxious consideration. Nothing can restrain these excesses but a universal and deep conviction among the people that a religious reverence and an exact obedience to the law is our only safeguard. The only alternative is a standing army—an alternative not to be thought of. Moral restraint, then, is the only expedient. And we shall duly estimate the importance of this restraint, when we consider how surely the very principle of irregular and authorized interference destroys every good end of government and society. The action of a mob, and all action of bodies of men against the laws is necessarily fatal to the very object which a man proposes to attain. For let us do the justice to these bodies of violent and misguided men to say, that they usually propose to themselves some good end.

'The trades unions subject themselves to the same censure, whenever they overset the limits of the law. The prejudice of many against them is so violent, that they probably regard the very combinations as unlawful. But let it be considered, whether any body of people has not a right to assemble to deliberate and act for the common welfare. It never has been denied, that employers have a right to agree upon the wages they will give; certainly, then the employed may agree upon those they will demand. Doubtless, combinations of a particular class for almost any purpose, are liable to do much mischief and wrong. I regret them, because it is the policy of our institutions, not to separate, but to blend the different classes of society. Trades unions are a device of the Old World, naturally enough springing from fixed and repulsive distinctions of classes. The sensible mechanics and laborers of our country ought to see this, and to hold their hands from those association-bonds as they would from manacles. The man who aspires to a higher place in society, should take care how he links himself with a combination, which is likely to embrace the lowest and vilest of the community. He lessens his power by doing so, he lessens his free action; he lessens his chance of rising in the world. I appeal to any intelligent trades-unionist, whether the body to which he belongs is not likely to be led by one or two demagogues, who have not more sense, but a greater gift of speech than the rest, and whether it is not likely to be absolutely controlled by the poorest and most desperate of its class. With these, then, notwithstanding all his mental remonstrances, he must be confounded in the eyes of the world. He ought to have something too much pride for that. He ought also to reflect, that although such a combination may be lawful in the outset, it is very likely to be lawless in the end. And when it does become lawless, when it assumes the character of a mob, when it breaks in with violence upon the peaceful labours of those who are still inclined to work for the support of their families, or compels them by threats of violence to desist from their lawful occupations—then, I say it as much for the sake of the poor as of the rich, that there ought to be an armed police, strong enough to put a stop to such outrages upon the public order! I am perhaps as averse as any one can be to such a remedy. But it would preserve in the end more lives than it would sacrifice in the outset, and lives of far greater value; to say nothing of the wives and children of these misguided insurgents, who are brought to the extremity of poverty and distress,

to disease and perhaps to death, by the idleness of their natural protectors—or who perhaps are begging at one end of the town, while their husbands and fathers are violently arresting industry and destroying property at the other—one part of the family levying contributions for charity upon the very wealth which the other part are laying waste by violence. But I said, that lives of far greater value were lost; I mean those of our police officers. The policeman, too, has a family; and he goes from it in the morning knowing perhaps that he has that day to encounter a mob. Can he do so without anxiety? Does not his family implore him, for their sakes, to take care of himself? But forth he must go. At the magnanimous risk of everything dear to him, he goes into that wild and lawless crowd. For the public safety he goes there. To shield the whole community from violence, he offers his head to the blows of an infuriated multitude. He falls; he sinks in the crowd; he is beaten to death! Is there no remedy against such a cruel issue as this? Are the public justice and honour to sleep in supine indifference, or to shrink back in pusillanimous fear, when the faithful servants of the public are thus sacrificed to lawless violence?

'We have had scarcely time yet to set up the necessary guards against new and recent forms of popular violence. This is the explanation of that unexampled state of things in some of our Atlantic cities, and some of our Western towns, which is the wonder and ridicule of Europe. That public opinion is entirely right with regard to these enormities, is our security; for the public opinion in America is law. That this opinion will find out some way to repress mobs, and the murderous executions of the too far-famed but not too odious Lynch law, I cannot doubt. I believe that these things have no more to do with the perpetuity of our institutions, than the vexatious stings of a wasp, or the irritating attacks of a swarm of flies, with the life of the mighty elephant.'

PITCH GATHERERS.

In a French work, we find an account of a curious personal conformation, by which, it appears, an entire class of people are distinguished, and which has been caused by the nature of their labour. In the arid region of the south of France, extending from Bordeaux to Bayonne, large tracts of land are covered by immense forests of pitch-pines. The resin of these trees is extracted by the country people. This is their sole occupation; and, from the manner in which they pursue it, their feet have acquired a singularity of shape, unlike those of any other human beings, but considerably resembling those of the monkey-tribe. In order to clamber up the trunks of the pines, the pitch-gatherer makes use of a pole, which is placed against the tree, and is crossed by little rounds, or pegs, at intervals one above another, thus forming an imperfect species of ladder. In climbing the tree, the person places the toes of one foot on the successive rounds, while with the other foot, he grasps the trunk of the pine. The great toe acts in opposition to the others, precisely in the manner of the thumb and fingers. So nimble and dexterous do the feet of the pitch-gatherers become, that not only are they able to strip off the bark of the pines, but even to grasp the instrument with which they make incisions, in order to extract the resin of the trees. They can likewise pick up the smallest objects with their toes, as readily as with their fingers. It is easy to distinguish the tracks of these people in the sand, from those of the other inhabitants of the same country.

ST. CLAIR'S CONQUEROR.—The following description is given of the personal appearance of the Indian Chief, by whom General St. Clair was so disastrously defeated, in 1791:—

'The Messesago Chief is a person six feet high, about forty-five years of age, of a very sour and morose countenance, and apparently very crafty and subtle. His dress was Indian hose and mocassins, a blue petticoat that came half way down his thighs, an European waistcoat, and surtout; his head was bound with an Indian cap, hanging half down his back, and almost entirely filled with plain silver broaches, to the number of more than two hundred. He had two earrings to each ear; the upper part of each was formed of three silver medals, about the size of a dollar; the lower part was formed of quarters of dollars and fell more than twelve inches from his ear; one from each ear over his breast, and the other over his back. He had three very large nose jewels of silver, that were curiously painted. The account he gave of the action was, that they had killed fourteen hundred of the whites, with the loss of only nine of their own party, one of whom had killed himself by accident.'

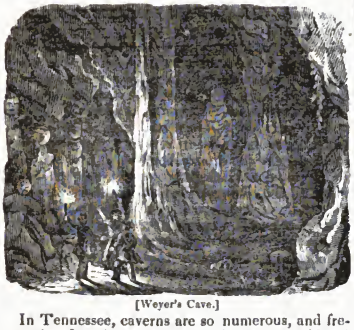
The leader who gained so complete a triumph as this, over a general trained to war from his youth upward, should hold an honourable place in the list of military men. Had such a victory been achieved by one civilized army over another, the conqueror would have slept beneath a marble column; but none can tell under what tree this warlike savage is taking his final rest. Military glory is so connected with ideas of silken banners, swords, drums, epaulettes, and marshalled lines, that these appear to make up the sum and substance of it, and the grim war-painted Indian is denied a place among the gorgeous heroes who shine in history.

LONGEVITY OF ANIMALS.—The average life of a Bull has been estimated at fifteen years; that of an Ox, twenty; of an Ass, thirty; a Horse, from twenty to thirty; a Dog, from fourteen to twenty, or more; a Sheep, a Cat, and a Hare, ten; a Goat, eight; and a Hog, twenty-five. The feathered tribe are generally longer lived. Peacocks, turtle-doves, and partridges, have each a span of twenty-five years. Ravens and Eagles are birds of a whole century. A Goose has been kept in a family from time immemorial; nothing could be said of its age, except that it had been paddling in the same pond, when the great grandsires were infants. Such ante-diluvian geese, we suspect, are sometimes seen in the market.

BEES.—A hive of bees, in the Autumn, should weigh not less than twenty-five to thirty pounds, and should contain half a bushel of bees.'

CAVERNS.

Tennessee, Kentucky, and the western parts of Virginia, abound with caves, which, both for their extent and the fantastic magnificence of their sparry petrifactions, may be ranked among the wonders of the world. Weyer's Cave, in Virginia, contains a great number of halls, passages, and galleries, most of which are adorned with concretions of splendid and variously colored spar, formed by the gradual deposit of earthy matter from the water that moistens the roof and walls. Many of these concretions have assumed the shape of fluted columns, pyramids, thrones, and colossal statues, ranged in long colonnades, and, by the dim light of the torches, perfectly resembling the handiwork of mortal sculptors. It might be imagined that some great potentate had here built for himself a deep and secret palace, or perhaps a tomb, and enriched it with all the treasures of art, which he deemed too precious for mankind even to look upon. But, on a nearer view, it is found that these objects have been wrought by no earthly hand: and the whole scene, with all its indescribable splendour, affects the mind like the illusions of a dream. The largest and loftiest hall in the cave has been dedicated to the memory of Washington, and contains, among other gigantic figures, one which bears the name of Washington's Statue.



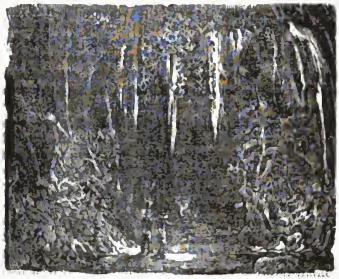
[Weyer's Cave.]

In Tennessee, caverns are so numerous, and frequently of such vast size, that they are considered hardly worth mentioning to the curious traveller, unless it be possible to wander for miles within their mysterious recesses. At the summit of a lofty peak of the Cumberland Mountains, there is a hollow descending perpendicularly to a depth which has never been sounded; so that here, we might almost believe is the mouth of the Bottomless Pit, or at least a passage-way to the central cavity of the globe.

The Mammoth Cave, in Kentucky, has been explored to the distance of sixteen miles—the longest journey that ever was performed within the bowels of the earth. Through the mouth of the cave there is a continual current of air, which for six months of the year, is drawn inward, and during the other six, rushes outward with force enough to extinguish a torch. It is one of the breathing-places of our mother Earth, where she performs her long respirations, and heaves her mighty, yet unavailing sighs, for the sin and sorrow of her children. Within the cavern, the spectator beholds hills, plains, and valleys, high precipices, and awful chasms, and deep rivers, broken with waterfalls—the whole presenting a picture of what the external world would be, were the sun extinguished, and only a few torches glimmering amid the darkness of Eternity. In the spacious gloom of this cave, the innumerable wretches who are weary of the light of day, might build a City of Despair; or, should a pestilence depopulate the land, the dead might here find a sepulchre. Should the former of these two projects be adopted, the inhabitants of the subterranean city might hold communication with the outer world by means of a stage-coach, which, it is stated, might be enabled, by a trifling expenditure, to run fifteen miles within the cavern.

[Mammoth Cave.]

The most celebrated cavern of the old world, is the Grotto of Antiparos, in Greece. As regards extent, it cannot compare with the vast caverns of America; although it appears to equal them in the fantastic combinations of its stalactites, and its imitations of natural and artificial objects; and perhaps to excel them in the beauty of its many-coloured spar, and the indescribable brilliancy of



[Grotto of Antiparos.]

its crystals. The roof and walls are festooned and decorated with what seems the richest ornamental sculpture, and the floor is absolutely paved with substances that glow and sparkle like the diamond.

Until the seventeenth century, this resplendent cave remained hidden from the world. To the adventurer whose torch first gleamed upon those glittering walls, the spot must have seemed the treasury of Nature, where she had hoarded up her brightest and choicest jewels, lest man should snatch them from her grasp.

ASBESTOS.

[Translated from the Magasin Universel.]

Different specimens of this mineral have a great dissimilarity of contexture. Some are so flexible and brilliant as to resemble the most beautiful white silk; some are hard and brittle, and when broken, resemble splinters of wood. Under these two appearances, it possesses the most opposite qualities; in one the utmost possible softness and delicacy of fibre, and in the other, a flinty hardness, which will sometimes cut glass. Now we find it compact and elastic, like cork, in masses of a dirty white, similar to the dried paste of paper: and at other times, it occurs in small pieces, the filaments of which appear twisted together. Ancient mineralogists gave it the different epithets of mountain cork, leather, and fossil paper.

It was a precious article among the Ancients. They employed its filaments in the manufacture of cloths, for the purpose of enveloping dead bodies when committed to the flames, that the ashes of mortality might not be mingled with those of the funeral pile. Bernard de Montfaucon, a learned Benedictine monk, informs us, that, in 1702, a great urn of marble was discovered in a vineyard, not far from the principal gate of Rome. Within this urn was found a cloth of asbestos, more than seven feet long and five broad, similar in appearance to coarse hempen cloth, but as soft and smooth to the touch as satin. It enclosed some half-burnt bones. This cloth was deposited in the library of the Vatican.

As the asbestos of the ancients was brought from Persia, at a great expense, the custom of burying dead bodies in cloth of this material must have been confined to the rich. The article, in its manufactured state, bore so high a price that Pliny considered it as reserved exclusively for the burial of kings. At luxurious banquets, the napkins and table-cloths were made of the finest asbestos; and when the feast was over each guest threw his napkin into the fire to purify it. Wicks for consecrated lamps were likewise composed of asbestos. Pliny did not class asbestos among minerals, but considered it a vegetable, and a species of flax. He compares its value to that of rich pearls, and observes that this flax, flourishing in the burning deserts of India, is thus rendered capable of sustaining the heat of the fire. We cannot but wonder at the facility with which the ancient philosophers lent their faith to the wildest fictions. By the testimony of a physician, the great Roman naturalist was led to believe, that, if a tree were surrounded with a girdle of asbestos, it might be cut down with an axe, the strokes of which would produce no noise.

Asbestos is found among the granite of the mountains of England, and also in France, among the Pyrenees, in Savoy, Corsica, China, Siberia, and generally in most of the primitive formations of the earth. Corsica, especially, contains it in great abundance. Tarentum produces a peculiar kind, which is silky, and the fibres of which are about a foot long. The species found in Siberia has this singular quality, that, when first taken from its native bed, it is compact and hard, and becomes flexible and silky by imbibing the moisture of the air. It occurs in veins in the mountains, and is never incorporated with the gneiss or granite, in the midst of which it is often found. Its formation must therefore have been posterior to that of these rocks.

Although asbestos is called incombustible, it must be remarked, that this expression is not rigorously correct; for, whenever it undergoes the action of fire, it loses a portion of its weight; and if exposed to the flame of a blow-pipe, it may be converted into a dark-coloured glass. Asbestos is not acted upon by acids; and being of a spongy texture, it is used in oxygenated tinderboxes to absorb the sulphuric acid, by means of which the matches, tipt with chlorate of potash, are kindled.

Edward Drinker.—This person was born in 1680, on the spot where Philadelphia now stands: and died in 1782. Few men have seen greater changes in their travels far and wide, than Edward Drinker, during the century which he spent on his native soil. 'He saw the same spot of earth,' observes one who knew him, 'covered with woods and bushes, the haunt of wild beasts and birds of prey, afterwards become the seat of a great city, not only the first in wealth and arts in America, but equalled by few in Europe. He saw great and regular streets, where he had often pursued hares and wild rabbits. He saw fine churches rise upon morasses, where he used to hear nothing but the croaking of frogs; great wharves and ware-houses, where he had so often seen the Indian savages draw fish from the river; and that river afterwards full of great ships from all parts of the world, which, in his youth, had nothing bigger than an Indian canoe. And on the spot where he had gathered berries, he saw the City Hall erected, and that hall filled with legislators, astonishing the world with their wisdom and virtue!' When the hoary patriarch had seen all this, he must have felt as if he had more than one century on his shoulders; or perhaps these changes appeared dreamy and unsubstantial, like the scenery of a theatre, which shifts many times in an hour or two.

Parchment Currency.—In 1721, the legislature of the province of Massachusetts-Bay passed a law for the emission of five hundred pounds, in bills of one, two, and three-pence. They were to be made of parchment; the form of the penny-bill was to be round, that of the two-penny square, and the three-penny, sexangular. There were many small bills in circulation, of five shillings, and less. In order to make change, it was customary to tear the bills in halves or quarters.

SKETCH OF THE FUR TRADE.

[An Indian Hunter.]

We have thought fit to illustrate the above cut of an Indian Hunter, by preparing a brief abstract of the history of the Fur Trade; in reference to which department of commerce, (and to this department only,) do the native tribes of America hold an important connection with the industry of the civilized world.

The only people of antiquity, that used furs for the purposes of luxury and ornament, were the Persians. They imported considerable quantities from the northern tribes, with whom they held commercial intercourse, and who were compelled, by the severe cold of the region which they inhabited, to clothe themselves almost entirely in skins and furs. The ordinary and most suitable garments of the Persians were made of linen, cotton, or wool; they used furs chiefly as couches and carpets, and occasionally to decorate their robes. There was a peculiar species of mouse-skin, great numbers of which they used to sew together as linings for garments. The Jews, in accordance with the laws of Moses, attached the idea of uncleanness to skins and furs. The Greeks considered it a mark of rusticity and lack of refinement to wear dresses of this material. The Romans had a peculiar abhorrence for furs.

In the middle ages, furs were used in all parts of Europe, although confined exclusively to the rich and great, on account of the enormous expense by which only they could be procured. The skins of seven hundred and forty-two ermines were contained in a single dress of the King of France, in the thirteenth century. At an earlier period, Charlemagne had worn an otter-skin cloak, and also a surcoat, trimmed with fox and squirrel-skins. The fashion was at its height during the Crusades; and sumptuary laws were enacted, forbidding any persons to wear furs, without an income of one hundred pounds. In later times, the use of this article in dress was succeeded by that of silk; and it is supposed that plush and velvet were first manufactured in imitation of furs. At the present day, the largest quantities of furs are used by the Poles, Russians, Chinese, Persians and Turks; in other countries, they are chiefly in demand for ladies' muffs, boas, and capes, for military caps, or sometimes for the decorations of fashionable equipages.

That portion of the globe, which now constitutes the Russian Empire, was formerly the source whence the fur-market received its supplies; but since the discovery of America, the trade has been almost wholly turned in that direction. The French, from their earliest settlement in Canada, were accustomed to penetrate thousands of miles into the interior of the continent, visiting regions which even now are imperfectly known, and holding commerce with tribes of Indians, whose descendants are still hunting on the same plains. They continued the fur-trade in full vigour until the conquest of Canada. Meantime, in 1670, the Hudson's Bay Company had been formed in England, and pursued the traffic in the more northern parts of America. More than a century afterwards, the North-West Company was likewise established, and extended their operations over the tract between Lake Winnipeg and the Rocky Mountains. The rivalry of these two Companies soon broke into open enmity, and gave rise to a state of actual war, between the parties of traders belonging to each. Skirmishes were fought, fortresses were besieged and taken, and much kindred blood was shed on both sides; and as no law could penetrate so far into the wilderness, the offenders remained unpunished. Peace was finally established, not many years ago, by a junction of the Companies. An American association for carrying on the fur-trade was likewise swallowed up by these two great Companies; it had been formed in 1811, by John Jacob Astor of New York, and other merchants, and might probably have met with good success, but for the almost immediate occurrence of the War with England.

The European traders depend for their supply of furs upon the Indian hunters, whom they pay chiefly with muskets and ammunition, blankets, and other useful articles, toys and ornaments, tobacco and rum. They deal, of course, at a most exorbitant profit. The principal furs obtained in America are those of bears, otters, foxes, beavers, wild-cats, wolves, and of many smaller animals. The black bear-skins are used for the hammer-cloths of coaches, for sleigh-coverings, for grenadier-caps, and knapsacks: the russet bear-skins for muffs; the silver-gray, white, or polar bear-skins for rugs. The fur of the racoon is coarse, and is mostly disposed of in Germany and Poland, as is likewise that of the badger, and the wolverine. Minks and marten skins are employed in muffs and trimmings; the first quality of marten-skins sell for more than four dollars a-piece. The sea-otter is a beautiful and highly valuable fur, jet-black, with a silken gloss, and frequently intermingled with silvery hairs. Of foxes, the black is the most valuable species found in America; red foxes have not latterly been considered worth purchasing. The skins of Russian foxes are said to be worth their weight in gold. Beav

er and musk-rat, and hare and rabbit skins are used by the hatters, and in trimmings.

All these furs are exported from America in what is called the raw state, precisely as when they were stript from the animals, except that they have been dried. In this condition, they are stiff and rigid, and liable to break or tear. On arriving in England, in order to render the skins soft and supple, they are trodden with refuse butter. They are then put into a revolving barrel, having spikes on the insides, by which the superfluous grease is combed from the fur, and absorbed by chalk, gypsum, or saw dust. The greater part of the furs are then consigned from London to Leipsig in Saxony, where they are sold at an annual fair, and thence distributed all over the continent of Europe. Thus the Indian Hunter, the aboriginal American, despised as he is, has no trifling office to perform, in providing the richest materials for female dress, the proudest robes of potentates and nobles, and the shaggy decorations of disciplined armies.

CITY OF BUENOS AYRES.

The city of Buenos Ayres, the capital of the country of the same name, is situated on the river of La Plata, sixty-six leagues from its mouth. At the distance of some miles, the domes of cathedrals, the steeples of churches, and long ranges of white edifices, are visible, amid the vast plains that stretch in every direction around the city. Buenos Ayres, like most of the other Spanish cities in South America, is built on a regular plan, with streets crossing each other at right angles, and forming uniform parallelograms. It covers a great extent of ground in proportion to the number of inhabitants; many of the streets being two, or even three miles in length. Except in some of the public edifices however, the stranger perceives no beauty of architecture, nothing but a collection of barn-like houses, mostly of a single story, without any of those embellishments which bespeak the affection of a people for their domestic walls. Since the revolution that has separated it from the mother country, improvements are taking place in these particulars. The navigation of the river La Plata is difficult and dangerous; but notwithstanding the disadvantages of its situation, the ships of all nations appear in the road-stead of Buenos Ayres; and the city possesses a greater European trade than any other port in South America. The population is variously estimated at from 40,000 to 70,000, only one-fourth of whom are of purely white descent, and the remainder Indians and negroes, or a mongrel breed of all races.

Price of Victory.—The only king, that we ever heard of, who seemed to understand that blood is a high price to pay for glory, was Louis the Twelfth, of France. When he heard of the death of the gallant Gaston de Foix, in the arms of victory, at Ravenna, in Italy, he exclaimed, 'I would to heaven, that I could give every inch of the soil of Italy, and, by that sacrifice, restore life to Gaston de Foix, and the brave men who have perished with him! God forbid, that we should achieve many such victories, at the price of so much blood!'

Cutting of Fruit Trees.—In the East, when olive-trees do not bear, a deep gash is cut in their sides with an axe, by way of punishment, and as a warning to the trees to perform their duty, the next season. This is a custom of great antiquity, and is said generally to produce the desired effect. The question is asked, whether a similar process might not be beneficial to our own fruit trees, when they drop their fruit before maturity. The cut is made in the spring of the year when the sap is rising, and is supposed to drain off the superfluous portion of the sap.

Antiquity of Scalping.—Pliny speaks of a race of Anthropophagi, or man-eaters, who dwelt far towards the north, ten days journey beyond the river Borysthenes. It was their custom to take off the scalps, hair and all, of the dead, and to wear them upon their breasts. The river Dneiper in Russia, is the ancient Borysthenes. Thus two thousand years ago there was a people in the north of Europe or Asia, distinguished by a custom which is now universal among the North American Indians. This fact may throw some light on the mysterious origin of the red-men.

Disorders.—'Few persons,' observes a celebrated English Surgeon, 'are attacked by dangerous disorders without due notice and repeated warnings. I have never known an instance of apoplexy or palsy, until after many previous intimations, nor any serious affections of the stomach, bowels, or liver, without the precedence of some morbid visitation, such as head-ache, flatulences, acidity, or local pain. It is more than probable, that inflammatory diseases occur only in vitiated habits; and when they seem to arise spontaneously, or to be occasioned by inadequate causes, they are in truth but roused into activity, and owe their remote origin to an ill-conditioned state.'

Hidden Fountains.—In order to discover fountains under ground, before digging for them, people were formerly accustomed to go out at sunrise, and ascend some hill, or high place, and there lie down on their stomachs, with their chin touching the ground. If, from any spot in the landscape, a mist or exhalation were seen to arise, they made sure that, by digging there, they should find a spring of water.

Slave Trade.—Our New England ancestors, we believe, were the only people who ever bartered one kind of slaves for another. In 1637, Captain Rice, of the ship Desire, was commissioned to transport fifteen Pequod boys and two women to Bermuda, as slaves. He brought back an assorted cargo consisting of cotton, tobacco, salt, and *negroes*.

Book Printing.—The first regular office for book printing, in Philadelphia, was established about the year 1785, by Mr. William Young, a native of Scotland. Twelve years afterwards, there were upwards of thirty offices in that city, devoted exclusively to the printing of books. We have no estimate of the present number.

RATTLESNAKE.

The Rattlesnake inhabits all parts of the United States. In the northern regions, however, they seldom grow so large as at the South, where some varieties attain the size of a man's leg, and are six or seven feet in length. They appear to thrive best in a hot and moist region, where vegetation is abundant. The venom of the Rattlesnake possesses a terrible energy, which becomes more virulent in proportion to the heat of the climate. The instant the bite is inflicted, the poison begins to take effect; it is communicated from the limb to the brain; the head swells to an enormous size; the heart throbs with quick, but interrupted violence; and a few hours generally terminates the sufferer's agony, together with his life. Should he survive longer, a mortification ensues throughout the whole system. Such, at least, are the terrible phenomena which often result from the bite of a Rattlesnake; although we have understood that death, or even serious injury, are not the invariable consequences.

The organization of a Rattlesnake's jaw is very curious. Annexed to the upper jaw-bone there is a long, sharp, and crooked tooth, which is hollowed like a pipe, and is placed on a gland, situated underneath the eye. This gland contains a yellow and venomous essence. Except when the snake wishes to inject his venom, he conceals this tooth under a fold of his gum. His head is of a triangular shape, being enlarged at the sides by the poisonous fangs, which are all contained in the upper jaw. The tongue is very long, and the throat is capable of great dilatation.

The Rattlesnake, as is well known, derives his name from the remarkable organ at the end of his tail. It consists of conical rings, which are jointed together, and are moveable. One of these rings is supposed to be formed, every year, from the snake's skin, which is transformed into a dry and hard membrane, that crackles like parchment. Thus is produced the peculiar sound, which gives notice of the vicinity of the Rattlesnake. As their formation is annual, the rings of course betoken the number of years which the snake has lived: and it is said that the tails of some of these reptiles bear the indubitable proofs of an existence of forty or fifty years.

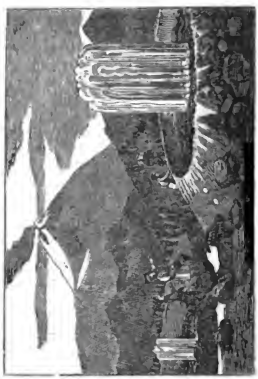
Rattlesnakes, like most other serpents, have the faculty of swallowing animals of much greater bulk than themselves. In the American Traveller, recently, we noticed an account of a Rattlesnake killed in Holliston, Massachusetts, which was six feet long, and contained an entire rabbit and two squirrels.

The Indians have the art of handling Rattlesnakes without incurring injury from their venom. They are capable of learning to dance, and may be taught to keep accurate time, either to vocal or instrumental music. They likewise make excellent food, and are considered a first-rate dainty by the Canadian voyageurs. Whenever these people encounter a Rattlesnake, they take care to kill or stun him with a single blow; because, if he be but partially injured, he will immediately strike his fangs into his own body, and thus render it unfit for sustenance. But, if properly killed, the Canadian proceeds to skin the snake like an eel. The body is then transfixed with a stick, which, by planting one end in the ground before a fire, becomes a sort of spit. When duly roasted, the flesh of this terrible serpent possesses (according to the testimony of such as have feasted upon it) a delicate whiteness, a rich and savoury smell, a delicious flavour, and very admirable properties of digestion.

WILD HORSES.*

'Although the Horse is not a native of America, yet the wild horses of the Western country deserve particular notice here. Herds of these animals, the offspring of those which have escaped from the Spanish possessions in Mexico, are not uncommon on the extensive prairies that lie to the west of the Mississippi. They were once numerous on the Kootannie lands near the northern sources of the Columbia, on the eastern side of the Rocky Mountain Ridge, but of late years they have been almost exterminated in that quarter. They are not known to exist in a wild state to the northward of the fifty-second or fifty-third parallel of latitude. The Kootannies are acquainted with the Spanish American mode of taking them with the *laso*. Major Long mentions that 'horses are an object of particular hunt to the Osages. For the purpose of obtaining these animals, which in the wild state preserve all their fleetness, they go in large parties to the country of the Red Canadian river, where they are to be found in considerable numbers. When they discover a troop of horses, they distribute themselves into three parties, two of which take their stations at different and proper distances on the route, which by previous experience they know the horses will most probably take, in endeavouring to escape. This arrangement being completed, the first party commences the pursuit in the direction of their colleagues, at whose position they at length arrive. The second party then continues the chase with fresh horses, and pursues the fugitives to the third party, which generally succeeds in so far running them down as to noose and capture a considerable number of them.' The domestic horse is an object of great value to the nomadic tribes of Indians, that frequent the extensive plains of the Saskatchewan and Missouri; for they are not only useful in transporting their tents and families from place to place, but one of the highest objects of a young Indian's ambition is to possess a good horse for the chase of the buffalo, an exercise of which they are passionately fond.'

* In illustration of the above cut, we copy a passage from Goodrich's Universal Geography; and in so doing, it would be inexcusable not to bear testimony to the excellence of a book, to which the present number of our Magazine owes more in the way of embellishments, than we have willingly borrowed. Mr. Goodrich has advanced no mean nor unacknowledged claims to more than one species of literary reputation; but most men would have been content to stand upon the solid and elevated pedestal, which is formed by the thousand pages of this most useful and entertaining volume. The plan of the work is entirely original; and it bears the same relation to the dry and barren systems of geography which had previously existed, that a complete picture of the earth's surface, with its diversified scenery and various inhabitants, would bear to the naked outline of a map. Such a book, with the changes that the world's moral, political, and physical history may introduce into the successive editions, cannot fail to become permanent in literature.



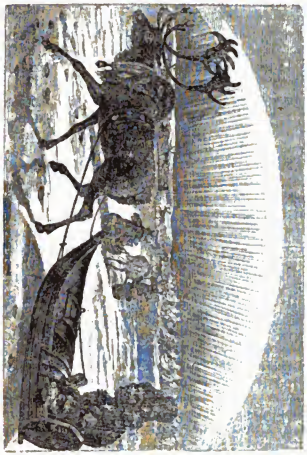
[The Great Geyser.]

HOT SPRINGS OF ICELAND.

The Icelandic fountains of boiling water, termed the Geysers, are attributed to the effect of fires within the earth; and the whole island is supposed to owe its origin to the same cause, and to have been thrown up by the eruption of some terrific volcano. The Great Geyser is situated in the centre of a basin, more than fifty feet in diameter, and gushes up through an immense tube, of a stony substance, nearly seventy feet deep. The water, at the moment of issuing from the tube, is probably at the boiling point; but in the surrounding basin, it stands only at about 190 degrees of Fahrenheit's thermometer. The silicious matter, contained in the hot water, is deposited by it in cooling, and covers the tube and floor of the basin, and everything else with which it comes in contact. 'Every sort of adventitious fragments,' observes Mr. Barrow, 'whether of pieces of wood, bones, or horns of animals, were here found in a silicified state; and among other things, by the edge of the stream, I met with a piece of printed paper which, with the letters perfectly legible, exhibited a thin plate of transparent flint, giving it the appearance of a child's horn-book; but the moment it was removed, it fell in pieces. Previous to our departure, the Governor had shown to me a worsted stocking which, by lying on the banks of this streamlet about six months, had been completely converted into stone, as had also a blue handkerchief, which exhibited all the

checks and colours of the original; these were solid enough to bear handling, and as hard as silex itself.' Yet the same traveller remarks, that this water may be kept in bottles for years, without depositing any sediment; and only the slightest possible deposite can be obtained by the application of chemical tests.

Some of the Geysers, instead of pure water, vomit large quantities of hot mud. Mr. Barrow states, that in order to bring on an eruption of this kind, the guide threw large masses of peat into the orifice of one of the fountains. Immediately, as if the Geyser were enraged at such treatment, it burst forth with a filthy column of black mud and water, intermingled with fragments of peat, to the height of sixty or seventy feet.



[A Reindeer Sledge.]

LAPLANDISH CUSTOMS.

A Lapland Winter begins, at the latest, in November, and seldom closes much before June. During a considerable part of this long interval, the sun continues below the horizon, merely approaching so near its edge as to throw a feeble glimpse of twilight over the snowy desolation. But the absence of the solar rays are in some degree compensated by those mysterious phenomena, the Northern Lights, which dart from the horizon to the zenith, in fantastic and everchanging shapes, the celestial brilliancy and beauty of which are inconceivable by the inhabitants of other climes. By the light of this etherial illumination, the Laplander makes long journeys across the ice and snow, drawn by a reindeer, which whirls the boat-like sledge along, at the rate of nineteen miles an hour. It is affirmed that a messenger once travelled, with a single reindeer, (which was not changed during the journey,) from the frontiers of Norway to Stockholm, a distance of eight hundred miles, in forty-eight hours. The sledges are so constructed, that an overturn is apt to take place many times in the course of a day's journey; but as the riders are securely fastened in, they manage to right themselves without stopping the reindeer, and seldom incur material damage.

In the month of June, the Laplanders make an annual migration from the mountainous interiour of the country to the seaconst. As the snow has now vanished, they leave their sledges behind, but take with them their entire herds of deer, which are laden with the skins and furs that constitute almost their only articles of traffic. These annual journeys are not, however, undertaken so much for the purposes of trade, as from a tender regard for the health of the rein-deer, which cannot be preserved except by the beneficial influence of the sea-breezes, in Summer. After a few months spent in fishing for cod, coal-fish, huge plaice, and halibut, the emigrants return to their native mountains, still accompanied by their herds, which now carry burdens of meal, cloth, manufactured articles, and spirituous liquors.

[Migration of the Laplanders.]

The Laplanders are a dwarfish people, averaging little more than five feet in height. Their life is one of great endurance and hardship, which, however, instead of breaking down their constitutions renders them healthy and active. They are meagre and bony, yet, like most of the northern races, are capable of devouring, at a single meal, such immense quantities of food as might afford them a comfortable subsistence for many days.

[Male and Female Laplanders.]

The appearance of the two sexes, in their ordinary costumes, may be seen in the preceding cut. Their garments are chiefly composed of the fur of reindeer. They have no shirts nor stockings, the place of the latter being in some measure supplied, by thrusting dried grass into their shoes. It is averred by travellers, that the Lapland ladies are accustomed to wear a certain article of dress, which men in other countries are most anxious to keep to themselves.

CONFORMATION OF MAN.

['Cuvier's Animal Kingdom.']

The foot of Man is very different from that of the Monkey; it is large; the leg bears vertically upon it; the heel is expanded beneath; the toes are short, and but slightly flexible; the great toe, longer and larger than the rest, is placed on the same line with, and cannot be opposed to them. This foot, then, is peculiarly well adapted to support the body, but cannot be used for seizing or climbing, and as the hands are not calculated for walking, Man is the only true bimanous and biped animal.

The whole body of man is arranged with a view to a vertical position. His feet, as just mentioned, furnish him with a base more extensive than that of any other of the Mammalia. The muscles which extend the foot and thigh are more vigorous, whence proceed the projection of the calf and buttock; the flexors of the leg are inserted higher up which allows full extension of the knee, and renders the calf more apparent. The pelvis is wider, hence a greater separation of the thighs and feet, and that pyramidal form of the body so favourable to equilibrium. The necks of the thigh bones form an angle with the body of the bone, which increases still more the separation of the feet, and augments the basis of the body. Finally, the head in this vertical position is in equilibrium on the body, because its articulation is exactly under the middle of its mass.

Were he to desire it, Man could not, with convenience, walk on all fours; his short and nearly inflexible foot, and his long thigh, would bring the knee to the ground; his widely separated shoulders and his arms, too far extended from the median line would ill support the upper portion of his body. The great indented muscle, which, in quadrupeds, suspends, as in a girth, the body between the scapulæ, is smaller in man than in any one among them. The head is also heavier, both from the magnitude of the brain and the smallness of the *sinuses* or cavities of the bones; and yet the means of supporting it are weaker, for he has neither cervical ligament, nor are his vertebrae so arranged as to prevent their flexure forwards; the results of this would be, that he could only keep his head in the same line with the spine, and then his eyes and mouth being directed towards the earth, he could not see before him;—in the erect position, on the contrary, the arrangement of these organs is every way perfect. The arteries which are sent to his brain not being subdivided, as in many quadrupeds, and the blood requisite for so voluminous an organ being carried into it with too much violence, frequent apoplexies would be the consequence of a horizontal position. Man, then, is formed for an erect position only. He thus preserves the entire use of his hands for the arts, while his organs of sense are most favourably situated for observation.

These hands which derive such advantages from their liberty, receive as many more from their structure. The thumb, longer in proportion than that of the Monkey, increases its facility of seizing small objects. All the fingers, the annularis excepted, have separate movements, a faculty possessed by no other animal, not even by the monkey. The nail, covering one side only of the extremity of the finger, acts as a support to the touch, without depriving it of an atom of its delicacy. The arms, to which these hands are attached are strongly and firmly connected by the large scapula, the strong clavicle, &c.

Man, so highly favoured as to dexterity, is not at all so with respect to force. His swiftness in running is greatly inferior to that of other animals of his size. Having neither projecting jaws, nor salient canine teeth, nor claws, he is destitute of offensive weapons; and the sides and upper parts of his body being naked, unprovided even with hair, he is absolutely without defensive ones. Of all animals, he is also the longest in attaining the power necessary to provide for himself.

This very weakness, however, is but one advantage more—it compels him to have recourse to that intelligence within, for which he is so eminently conspicuous. No quadruped approaches him in the magnitude and convolutions of the hemispheres of the brain, that is, in the part of this organ which is the principal instrument of the intellectual operations. The posterior portion of the same organ extends backwards, so as to form a second covering to the cerebellum; the very form of his cranium announces this magnitude of the brain, while the smallness of his face shows how slightly that portion of the nervous system which influences the external senses predominates in him.

Surgery.—The period, it is said, can be recollected in this country, when skilful surgeons were accustomed to ride one or two hundred miles, to perform difficult operations. A gentleman crossed the Atlantic, in order to have the operation of lithotomy performed by the celebrated Dr. Cheselden.

Pie-bald Negroes. Dr. Terry describes one of this variety of the negro race as having circular spots of white, on his hands, arms, and face, from the size of sixpence to that of a dollar; these spots were smooth, and of the colour of a fair and healthy man.

Roman Houses.—Until the great conflagration of Rome, in the time of Nero, many of the houses were of wood. After that event, there was a singular regulation as to their height—they were not to exceed seventy feet. Our modern by-laws limit the lowness, instead of the height, of houses.

Want in Ireland.—In some parts of Ireland, for want of other food, the people are compelled to bleed the cattle and eat the boiled blood!

ÆROLITES.

There are said to be two hundred and eleven recorded instances of the fall of stones from the upper regions of the air. Twenty-seven of these phenomena are known to have occurred previous to the Christian era; but the unrecorded instances must have been infinitely more numerous; as there have been no less than sixty, since the year 1803. Sometimes the stones have fallen in showers, as was the case in 1798, at Benares, in the East Indies. Generally, however, the aerolite finds its way to the earth in a single mass, of such weight as often to bury itself beneath the soil. Pallas, the French naturalist, speaks of one that he examined in Siberia, which weighed about fourteen hundred pounds. On being analyzed, all these aerolites, or atmospheric stones, are found to resemble each other in their composition; and it is especially remarkable that they all contain the metal called *nickel*, in its native state; although nickel is never found native in any other mineral.

The phenomena of large stones, descending through the atmosphere to the earth, appeared so strange, that many naturalists maintained an absolute incredulity in regard to their fall from the upper regions, and even as to the existence of the stone called aerolite. The latter fact, however, was susceptible of most abundant proof. One philosopher then denied that they fell from the air, but supposed that they were drawn out of the earth by the attraction of a thunder-cloud. But if aerolites did really exist in the earth, and at so slight a depth that they could be thus drawn to the surface, they would occasionally be found, like other minerals, by digging. This has never been the case. Nor can these stones have been thrown up from volcanoes, (at least, not from the volcanoes of our own globe;) for none of the substances disgorged by Ætna and Vesuvius, and other burning mountains, are anywise similar to the aerolite. But some highly distinguished naturalists have adopted the theory, that aerolites are shot from volcanoes in the moon. That planet, according to their explanation, being only one thirty-second part as large as the earth, the force of gravitation is there proportionately small; and, of course a body thrown upward from the moon will fly thirty-two times farther than if, with an equal impetus, it were thrown from the earth. It is calculated that a stone flung from the moon, with twice the force of a cannon-ball, would reach the earth in two days and a half. If this theory be the true one, the Moon, as she sails through the ocean of space, may safely cannonade the Earth, without any dread of retaliation on our part; although the two planets are as unequal in bulk, as a gun-boat and a seventy-four.

Other theorists suppose that aerolites are formed in the atmosphere by a chemical combination of the different ingredients, and that the masses fall to the earth, the moment that they come into existence. Another opinion is, that aerolites are very small planets, which have their own separate orbits and regular movements, and all the other attributes of the great celestial bodies, except that they may be no bigger than one of the varnished globes on which we study geography. When the limit of existence, which the Creator has assigned to these miniature worlds, is fulfilled, they come, as if by chance, within the sphere of attraction of our own or other planets, and are drawn thitherward. By the velocity of their motion, they kindle into a blaze, and are fused into a mass of stone. By a similar process, perhaps, the Earth itself may hereafter become an aerolite, and be precipitated upon the surface of some mightier world, there to be wondered at, as we wonder at the moon-stones.

However fanciful the last-mentioned theory may appear, it is said to have been adopted by the illustrious Sir Humphrey Davy. Nothing, however, seems to be determined respecting the origin of aerolites, except that they do really fall through the air, and that their fall is attended with a meteoric appearance in the atmosphere. On arriving at the earth, they are found to possess a considerable degree of heat.

SPECIES OF MEN.

Linnæus, in his classification of the natural world, divided the genus Homo, or Man, into two species. The first was the *Homo Sapiens*, or Man endowed with intellect; this species comprehended all the descendants of Adam. The second species was the *Homo Troglodytes*,—or Orang Outang! The pride of the *Homo Sapiens* certainly revolts at the idea of being placed so nearly on a level with these great monkies; but when the claims of the latter are fairly considered, we might almost allow them to be our cousins, though we deny them the name of brethren. Persons, who are acquainted with the nature and habits of the Orang Outang, entertain no doubt, that their communities are governed by fixed laws, and that punishments are inflicted upon transgressors. Their government and social condition considerably resemble those of an army; and severe penalties are incurred by those who infringe the rules of military discipline. Mr. Holman, the blind traveller, describes the punishment of a baboon for neglecting his duty as a sentinel on guard. It is another remarkable fact, which assimilates this monkey-tribe to the human race, that the female baboons are fond of little children, and delight in giving them food; although, as their dexterity is not equal to their good intentions, they do not make very eligible nurses.

But, however close upon our heels the inferiour tribes of creation may seem to tread, there is one great and invariable mark of distinction between the Man with a soul, and the Animal without one. The latter cannot communicate his intelligence to succeeding generations, nor accumulate it from age to age; there is no progressive developement of the intellect of the race. It is otherwise with Man; and as he is capable of adding wisdom to wisdom, throughout Eternity, we may full surely trust, that an Eternity will be allotted for the infinite expansion of his capacities.

Duels.—In the sixteenth century, during a space of only twenty years, the King of France bestowed eight thousand pardons on duellists, who had killed their antagonists.

MARY AND ELIZABETH.

Queen Mary and the Princess (afterwards Queen) Elizabeth are thus described by an eye-witness, in 1557:—

'Mary Tudor is rather of little than middle stature, thin and delicately formed, lively eyes, short-sighted, a strong, deep voice like that of a man, so that she is heard from a distance, extremely diligent in sewing, embroidery and other female labours, so finished and able a performer on the spinnet that professors are astonished. Her passions, public and domestic, often throw her into deep melancholy. She is vexed about her husband, her own barrenness, the state of religion, &c. but, above all about her sister Elizabeth, upon whom, as her successor, the eyes and minds of all are directed.

'Elizabeth, now twenty-three years old, is a young woman who is considered as not less remarkable for the graces of the mind than for those of the body, although it may be said that her countenance is rather pleasing than beautiful. In figure she is tall well-shaped, her flesh well to look on, though tending to olive in complexion; fine eyes, and above all, a beautiful hand, which she seeks to display. Her spirit and intellect are admirable, so that she has known how to conduct herself, displaying both in times of suspicion and peril. She surpasses the queen in knowledge of languages, for, besides knowing Latin, and Greek to a moderate extent, she understands Italian, better than the queen, and takes so much pleasure in the latter language, that she will converse in no other tongue with natives of Italy. She is proud, and considers herself as no less or less worthy than the queen. Henry the Eighth had set apart for her an annual income of 10,000 ducats. She would consume much more, and incur great debts, if she did not purposely, to avoid increasing the suspicions of the queen, limit her household and attendance; for there is not a lord or gentleman in the realm who has not sought to place himself, or a brother or son, in her service. So great is thus the affection and good will which is shown her, by which, in one way or another, her expenses are increased, although she opposes her poverty to the proposed enlargements of her establishment, which crafty excuse, however, merely increases her party of hangers on, it being considered not only unusual, but in the highest degree unbecoming, that a king's daughter should be so hardly dealt with, and so ill maintained. She is to appearance at liberty in her country residence, twelve miles from London; in fact, however surrounded with spies and shut in with guards, so that no one comes or goes, nothing is spoken or done without the queen's knowledge.'

CLIMATE OF ITALY.

A French writer, speaking of the country in the vicinity of Nice, observes:—'The Winter months are here most delicious. But from February till the end of March, there is a prevalent northeast wind, which dries up the lungs, and nullifies all the good effects which may have resulted from spending the winter in this region. It is at this period that consumptive patients perish. All invalids are unfavourably affected by this pernicious wind. Yet it requires great self-denial not to venture into the open air, when the blue sky and the brilliant sunshine, seen through the windows, seem to promise the temperature of Summer. The English physicians appear not to be sensible of the disadvantages of the climate. Their consumptive patients may be seen sitting on the banks of the Gulf of Genoa, for whole hours, exposed to the deadly blasts of the northeast wind. It is thus that the stubborn prejudices of medical science rob these poor wretches of the little breath that remains to them.'

Physician's Fee.—In Burmah, when a young woman is taken ill, her parents agree with the physician, that if he cures the patient, he may have her for his trouble, but if she dies under his medicines, he is to pay them her value. It is said that successful physicians have large families of females, who have become their property in this manner.

Mummy Cloth.—In the mummy pits and sepulchres of Egypt, there are such immense quantities of the ancient cloths, in which mummies were formerly enveloped, that the article has become an object of speculation in Europe, for the use of the paper-manufacturers. These cloths are linen, and sometimes possess great beauty and delicacy of texture. It is observed that the warp has generally twice or thrice, and often four times as many threads in an inch of cloth, as the woof has. Modern weavers consider this circumstance as a proof that the ancient Egyptian weavers threw their shuttles with the hand.

Church of Saint Sophia.—This edifice, of which we have given an engraving in another part of our Magazine, was built by the Emperor Theodosius. He superintended the work in person, and encouraged the artificers by gracious words, and promises of recompense. When it was completed, the Emperor was so struck with the grandeur and beauty of the church, that he named it Saint Sophia, or Holy Wisdom; and exclaimed,—'Glory to God, who has judged me worthy to achieve this magnificent work! Oh, Solomon, your temple was nothing to it!'

Custom.—The count de Seze, while an advocate at the French Bar, had undertaken the defence of Louis XVI, at the peril of his own life. After the return of the Bourbons, Louis XVIII, made de Seze a peer of France. One of the courtiers observed, that it had never been the *custom* to bestow this high dignity on an advocate. 'No,' replied Louis; 'nor was it the *custom* of old, that a King of France should perish by the guillotine; and neither was it the *custom*, that an advocate should have the courage to defend him, at the risk of sharing his fate!'—*Magasin Universel.*

Complexion.—Ladies who wish to preserve a fine complexion, (as what lady does not?) must take care, especially if they dwell near the sea-shore, not to venture out in the evening at twilight, nor in the morning at day-break. But the latter caution is superfluous.

FIRE AT MIRIMACHI, (N. B.) IN 1825.

['Martin's History of the British Colonies.']

On the 6th of October, the fire was evidently approaching Newcastle; at different intervals fitful blazes and flashes were observed to issue from different parts of the woods, particularly up the N. W. at the rear of Newcastle, in the vicinity of Douglastown and Moorfields, and along the banks of the Bartibog. Many persons heard the crackling of falling trees and shrivelled branches, while a hoarse rumbling noise, not dissimilar to the roaring of distant thunder, and divided by pauses, like the intermittent discharging of artillery, was distinct and audible. On the 7th of October, the heat increased to such a degree, and became so very oppressive, that many complained of its enervating effects. About twelve o'clock, a pale, sickly mist, lightly tinged with purple, emerged from the forest, and settled over it. This cloud soon retreated before a large dark one, which occupying its place, wrapt the firmament in a pall of vapour. This incumbrance retaining its position till about three o'clock, the heat became tormentingly sultry. There was not a breath of air—the atmosphere was overloaded—an irresistible lassitude seized the people, and a stupifying dulness seemed to pervade every place but the woods, which now trembled, and rustled, and shook, with an incessant and thrilling noise of explosions rapidly following each other, and mingling their reports with a discordant variety of loud and boisterous sounds. At this time the whole country appeared to be encircled with a *fiery zone*, which gradually contracting its circle by the devastation it made, seemed as if it would not converge into a point while any thing remained to be destroyed.

Peal after peal, crash after crash, announced the sentence of destruction. Every succeeding shock created fresh alarm; every clap came loaded with its own destructive energy. With greedy rapidity did the flames advance to the devoted scene of their ministry; nothing could impede their progress. They removed every obstacle by the desolation they occasioned, and several hundred miles of prostrate forests and smitten woods marked their devastating way.

That the stranger may form a faint idea of desolation and misery which no pen can describe, he must picture to himself a large and rapid river, thickly settled for one hundred miles or more, on both sides of it. He must also fancy four thriving towns, two on each side of this river, and then reflect, that these towns and settlements were all composed of wooden houses, stores, stables, and barns; that these barns and stables were filled with crops, and that the arrival of the fall importations had stocked the ware houses and stores with spirits, powder, and a variety of combustible articles, as well as with the necessary supplies for the approaching winter. He must then remember that the cultivated, or settled parts of the river, is but a long narrow stripe, about a quarter of a mile wide, and lying between the river and almost interminable forests, stretching along the very edge of its precincts, and all around it. Extending his conception, he will see these forests thickly expanding over more than six thousand square miles, and absolutely parched into tinder by the protracted heat of a long Summer. Let him then animate the picture by scattering countless tribes of wild animals; hundreds of domestic ones; and even thousands of men through the interior. Having done all this he will have before him a feeble description of the extent, features, and general circumstances of the country, which, in the course of a few hours, was suddenly enveloped in fire.

Newcastle, yesterday a flourishing town, full of trade and spirit, and containing nearly one thousand inhabitants, was now a heap of smoking ruins; and Doughs-town, nearly one third of its size, was reduced to the same miserable condition. Of the 260 houses and store-houses that composed the former but twelve remained; and of the seventy that comprised the latter but six were left. Dispersed groups of half-famished, half-naked, and houseless creatures, all more or less injured in their persons; many lamenting the loss of some property, or children, or relations and friends, were wandering through the country. Of the human bodies some were seen with their bowels protruding, others with the flesh all consumed, and the blackened skeletons smoking; some with headless trunks and severed extremities; some bodies burned to cinders; others reduced to ashes; many bloated and swollen by suffocation, and several lying in the last distorted position of convulsing torture. Brief and violent was their passage from life to death; and rude and melancholy was their sepulchre—'unknelled, uncoffined, and unknown.' Thousands of wild beasts, too, had perished in the woods, and from their putrescent carcasses issued streams of effluvium and stench, that formed contagious domes over the dismantled settlements. Domestic animals of all kinds lay dead and dying in different parts of the country; myriads of salmon, trout, bass, and other fish, which, poisoned by the alkali formed by the ashes precipitated into the river, now lay dead or floundering and gasping on the scorched shores and beaches; and the countless variety of wild fowl and reptiles shared a similar fate.

* The immediate loss of life in this fire was upwards of five hundred human beings; there were one hundred and fifty large vessels in the Mirimachi river; some of these were consumed to the water's edge, and most were several times on fire.

Improve.—The use of the word improve, as in the following phrase—'*improved* as a tavern,' (instead of occupied, or used as a tavern,) is a Yankeeism. It originated with Dr. Cotton Mather. The Doctor's hand writing was very difficult to decypher; and the printer of one of his publications mistook the word *imployed* for *improved*. Cotton Mather's verbal authority being of great weight, this mistake had the effect of giving a new (but not *improved*) meaning to the word.

Bibles.—The Duke of Wirtemburg, in 1789, possessed no less than eighty thousand copies of the Bible, no two of which were alike. They were in upwards of fifty languages.

Funerals.—At old fashioned funerals, if the dead person were a man, the men followed next the coffin, two and two; if a female, the women took the precedence, in like manner.

THE POPE.

[Dewey's Travels.]

The Pope is an absolute sovereign; and it is found quite impossible, I understand, to restrain the present pontiff in a course of expenses that threatens the ruin, in temporal power, of the papal see. It is said that the annual expenses of the government now exceed the income, by about three thousand piastres. To meet this deficiency the revenues from one village and district after another of the Roman State are pledged away to the bankers from whom the money is borrowed, without any prospect of redemption: and I am told that ten or twelve years of extravagance like this must leave the papal exchequer completely bankrupt.

It might be inferred from this that Gregory the Sixteenth is a very ambitious pontiff. Yet he affects very little state, is not disposed to exact observance, and brings his personal and household expenses, within the most moderate allowance. But with all this simplicity about the world, I suspect that he has a great deal of spiritual ambition. One or two circumstances will illustrate this. He wrote a book before his elevation to the popedom, which gained little or no attention. He has since caused this work to be published in every form, from the folio to the small pocket volume. Saint Paul's Cathedral, a mile and a half out of the walls, was once built, I suppose, in the midst of a populous neighbourhood. A few years ago it was destroyed by fire. The pope is now rebuilding it, at an immense expense, in what is nearly a waste field; and for no ostensible reason that I can see, but that he may, by and by, write upon its pediment, 'Gregorious XVI, ædificavit hanc basilicam.'

Weight and Substance of the Globe.—There has been much dispute among Philosophers, as to the materials of which the inside of our globe is composed. The composition of its external crust or shell, is known from actual observation; but no excavations have ever reached the kernel. Some suppose that the globe is filled with water, whence originate the fountains which gush so abundantly over its surface. Others believe it to contain nothing more solid than gas, like an inflated balloon. According to the hypothesis of other theorists, the inside of the world is stuffed with loadstone, or with solid or molten metal. Our countryman, Captain Symmes, lived and died in the belief, that the globe is hollow, and contains inhabitants; and, in recompense of a life of disappointment, we heartily wish that the poor Captain may now have gone to that inner region, and have found it a better and brighter world than the exteriour. But all the above theories, and especially the Symmzonian, are thought to be irreconcileable with the known weight of the globe, which is capable of being accurately ascertained, by means either of natural philosophy or astronomy. We are not, indeed, prepared to say precisely how many pounds the earth does weigh; but its ponderosity is computed to be three or four times as great, as if it were entirely composed of the heaviest stones with which we are acquainted. It therefore follows, that the interiour substance of the globe must be extremely dense and heavy.

Big Kettle.—In a convent at Pisa, there is a cast-iron kettle, fifty feet high, and one hundred and forty feet in circumference. It is affirmed that soup for six thousand paupers is daily prepared in this vast cooking utensil. We should apprehend, however, that such an ocean of soup would be apt to prove rather watery, and that a poor man must either drown himself in it, or depart unsatisfied. Charity, to be truly efficient, should have a personal feeling; for, if it embrace too many objects, it will probably become meagre and unsubstantial, like a soup for six thousand paupers.

Temperance in Iceland.—Till within a recent period, there was no part of the civilized world where intoxicating liquors were so little used as in Iceland. The inhabitants were abstemious, indeed, because their poverty refused them the means of being otherwise; but to this forced abstinence may be attributed many of the simple virtues, which have always flourished in that frozen and dreary region. At present there seems reason to apprehend a change for the worse. Brandy has become much cheaper than formerly, and is more generally used; the annual importation being estimated at about a thousand barrels, which would allow somewhat more than two bottles to each inhabitant of the Island.

American Architecture.—A Swedish traveller remarks, somewhat severely;—'The architecture of most public and private buildings in America, is unfortunately, copied partly from England, partly from Italy, and even from Greece; but it is seldom preserved in its original taste. The temple of Theseus at Athens, St. Peter's at Rome, and a house in Regent street, London, are all mixed together; and out of this variety a whole is produced, which is denominated American Architecture.'

Valley of Caverns.—In the island of St. Michael, one of the Azores, is the celebrated valley of Caverns. In this valley, there are three large basins of boiling water, which are continually bubbling and steaming, as if an intense fire were blazing underneath. The diameter of the most capacious is about twenty feet; and the temperature of its water varies from 80 to 220 degrees Fahrenheit. One of these three boiling springs throws up an immense quantity of mud, somewhat resembling soap, and which possesses wonderful virtues as a remedy for ulcers and cutaneous diseases. It is affirmed, that if a loud noise be made at the mouth of this spring, by shouting or otherwise, the boiling water will suddenly be spouted forth, sometimes to the distance of ten feet.

Hot Springs.—In Germany, beyond the Rhine, (says Pliny,) there were fountains so fervid, that whoever drank of the water would feel the heat within him, for three days afterwards. The waters of another fountain, when put up in bottles, retained their heat three days.

Goats.—In the pastures of New England, soon after the settlement of the country, goats were as common as cows are now.

SPIDER'S WEB.

Kirby and Spence, in their work on entomology, have described the process by which a spider spins its web. There is a four-fold apparatus, or rather four separate instruments, which act together for the formation of the thread. Each of these instruments resembles a sieve or colander, being pierced with holes so fine, that the microscope discovers a thousand of them on a surface no larger than the point of a pin. From each of these holes proceeds a thread of incredible tenuity; and all these threads unite themselves, thus forming one combined thread from each of the four instruments. At the distance of about a tenth of an inch from the spider's body, the four threads unite, and compose the main thread, of which the tissue of the web is woven. The smaller species of spiders spin their threads so fine, that many thousands of them, if twisted together, would not equal the thickness of a hair. This is the most wonderful fact that has ever been observed, in regard to the extreme divisibility of matter. The thread of a silk-worm is not nearly so fine as that of the spider, although it has been proved, by very exact experiments, that the thread which is wound round a silk-worm's cocoon, is generally thirty-six thousand feet long. Threads of metal have likewise been drawn out to an almost incredible fineness, but the skill of the human artist comes infinitely short of that of the spider or the silk-worm, and no mortal fabric, whatever may be the material, will ever equal theirs.

New Hollanders.—It is said of the natives of the south-eastern part of New Holland that, till the Europeans visited their country, they had never thought of tasting an oyster, although these delicious shell-fish are very abundant on their coasts. Even now, they will not eat them raw. Generally, however, they are by no means nice in regard to the quality of their food; and among other delicacies equally tempting, they devour serpents, lizards, and the eggs of pismires.

El Dorado.—From the first discovery of the new world till within half a century, it was firmly believed that there existed a region in the interior of South America, where the hills were of solid gold and silver, and every thing in a style of corresponding magnificence. The King of this bright land was anointed every morning with precious gums, and then covered with gold dust, which adhered to his body, and gave him the appearance of a golden image, or a living Man of Gold. Among numerous other adventurers, the illustrious Sir Walter Raleigh went in search of El Dorado, or the Golden Kingdom. The last expedition for its discovery was undertaken so lately as the year 1775.

Ship Timber.—Except for the supply from Canada, the British government would be unable to obtain masts for their ships of the line. Even in the primeval forests, a tree, 'fit for the mast of some great admiral,' is rarely met with. According to the contract, such trees must be 'ninety-nine feet long, thirty inches cube at fourteen feet from the base, and measuring twelve loads eighteen feet each, when dressed.' The cost, including the expense of transportation, is enormous. It is calculated, that, taking the forest at large, not one tree in ten thousand is fit to cut, even for ordinary ship-timber.

English Nobles.—A traveller in England, in the year 1551, remarks,—'The people in general are tolerably tall of stature; but most of the nobles are little, which comes from the prevalent custom of marrying rich damsels under age.' At the present day, the upper classes of the English are said to be physically superiour to those beneath them.

Japanese Cookery.—The people of Japan, observes a traveller in that country, use every product of the seas and rivers as food, from the whale down to the cockle. Even the whalebone is finely scraped, and forms an ingredient of some of their dishes.

Nature's Penalties.—'Nature, although so kind a mother, preserves her laws by severer punishments than any of human origin. What human castigation is equal to a fit of the gout, with which she scourges the wine-bibber? Compare a healthy peasant's cheek with the livid countenance of a gin-drinker, and who can say that a magistrate's fine for drunkenness is as severe as her's? What earthly retribution is so terrible as the torment of a guilty conscience?'

Edible Bird's-Nests.—The nests of a certain species of swallow are eaten as the highest possible delicacy, in China, and sometimes sell at a great price. In order to form the nest, the swallow eats a quantity of a peculiar weed, which is disgorged, after being converted into a jelly in the bird's stomach.

Jerusalem.—In the sacred city are still pointed out the precise spots, where many of the events recorded in Scripture are supposed to have occurred. There are the ruins of Pilate's mansion, and the path which the Saviour trod from thence to Calvary. The place is likewise shown, where Simon the Cyrenean helped Jesus to bear his cross. All these localities, however, have probably been settled on no better authority than that of the monks, who dwelt in Jerusalem after it had been conquered by the infidels.

Musquitoes.—The Quarterly Review speaks of a traveller to the northern regions, who placed upon his fire a large piece of what he conceived to be peat. In a short time, the room was filled with a cloud of musquitoes. It appeared that the supposed peat was, in reality a frozen mass of these insects, and that the warmth of the fire had revived them from their torpidity.

Eggs.—An Egg is so constructed, that, roll it how you will, the yolk must always be upper most.

Sperm Whales.—'The sagacity of Sperm Whales,' observes Obed Macy, in his interesting History of Nantucket, 'is in no way so remarkably manifested, as in the instantaneous knowledge they possess when one of their number is struck and wounded, at a distance of two, three, and even four miles apart. Whether they receive this knowledge by sight or sound, we shall not pretend to say. When a whale is struck, those around, and feeding undisturbed, sometimes instantly, as with one accord, make the best of their way towards the wounded whale, which gives the disengaged boats a fine opportunity to fasten. At other times, they will collect in a body, and go in a contrary direction as fast as possible, to all appearance much frightened.

'Sperm whales migrate far and wide. Instances can be cited of whales having been struck, and making their escape in the Atlantic Ocean, being afterwards taken in the Pacific, with the heads of harpoons in them, bearing the marks of ships known to have been cruising eastward of Cape Horn.'

Incurable Disease.—Sir Edward Coke being oppressed with infirmities, a friend sent him several physicians to hold a consultation upon his case. But Sir Edward told them, that he had 'never taken physic since he was born, and would not now begin; and that he had now upon him a disease, which all the drugs of Asia, the gold of Africa, the silver of America, nor all the Doctors of Europe could cure, —Old Age!' Yet human nature has not always been content to believe that there is no remedy for this disease; men have often wasted the oil of life, and grown old faster than there was need, in vain researches for some medicine that should recall their youth. Were we to judge merely from the great advances that have been already made in science, such a medicine might not seem beyond the reach of the philosopher. But it *is* beyond his reach, because the Creator has absolutely debarred mankind from all inventions and discoveries, the results of which would counteract the general laws, that He has established over human affairs.

Algerine Surgery.—'When a person is to be bled,' says Mr. Lord, in his work on Algiers, 'the operator commences by tying a string round the patient's neck, so tight that he is almost choked. When the veins in the forehead appear so full as to be ready to burst, he then takes a razor and makes five or six incisions, from which the blood gushes all over the patient's face, and its flow is assisted by rolling a round wooden cylinder over the incisions. When the operation is finished, they wash the wound, staunch the blood with a little argillaceous earth, tempered with water, and bind round it a handkerchief. Their application to a raw wound is melted butter, poured on as hot as possible, or the application of a heated knife round its edges, so as to convert the wound into a burn. This is the principle also of their dressing after amputations, which are generally performed at a single stroke, as they see done by the Sultan's or Dey's executioner, after which the limb is thrust into a kettle of boiling pitch, which certainly will put an end to the bleeding, but must needs be most excruciating torture. The patient, too, is always subject to the danger that, when the burnt surface is separating, the blood may break out afresh.'

Mile-Stones.—In France, the central Mile-Stone of the whole kingdom is placed near the church of Notre Dame. All the roads which set out from the frontiers, or from any other point, have their termination there. In ancient Rome, the central Mile-Stone was a golden column, erected by the Emperor Augustus in the forum, near the Temple of Saturn; and from thence all the magnificent roads of the Empire diverged, like radii from a centre. It is doubtful whether the United States will ever have a central Mile-Stone; nor, perhaps, is it desirable that they should; for it would be one of the phenomena of a government and nation, consolidated to a much greater degree than at present. If, in future times, such a Mile-Stone should ever be established, its site ought to be near the national Capitol; but a glance at the map will convince us, that the Capitol must then be far westward of Washington.

Short Nights.—'On approaching the higher latitudes' (says Mr. Dewey, in 'The Old World and the New,') 'one of the most remarkable things that drew my attention, was the extreme shortness of the nights. It is not quite two hours from the end of the evening twilight to the first dawn of the morning. The sun sets, I think, at about half-past eight o'clock, and rises at half-past three in the morning. (On the 26th of June.) A gentleman on board said that he had read in England, by twilight, at 10 o'clock in the evening, without difficulty.'

EDITORIAL NOTICE.

Owing to circumstances unforeseen when we assumed the charge of this periodical, (in March last,) the present Number will probably terminate our connection with it. The brevity of our continuance in the Chair Editorial will excuse us from any lengthened ceremony in resigning it. In truth, there is very little to be said on the occasion. We have endeavoured to fill our pages with a pleasant variety of wholesome matter. The reader must judge how far the attempt has been successful. It is proper to remark that we have not had full controul over the contents of the Magazine; inasmuch as the embellishments have chiefly been selected by the executive officers of the Boston Bewick Company, or by the engravers themselves; and our humble duty has consisted merely in preparing the literary illustrations. In some few cases, perhaps, the interests of the work might have been promoted by allowing the Editor the privilege of a veto, at least, on all engravings which were to be presented to the Public under his auspices, and for which his taste and judgment would inevitably be held responsible. In general, however, the embellishments have done no discredit either to the artists or their employers. Any causes, which may hitherto have impeded the prosperity of the concern, will probably be done away in future, and the Magazine be rendered worthier of the public favour, both as regards Literature and Art.

N. Hawthorne?