

## NATURE AND PROPERTIES OF WATER.

No living thing can exist except it contains water as one of the leading constituents of the various parts of its system. To so great extent does this go, that, in a thousand parts of human blood, nearly eight hundred are pure water. This distribution of organised beings all over the world is, to a great extent, regulated by its abundance or scarcity. It seems as if the properties of this substance mark out the plan of animated nature. From man, at the head of all, to the meanest vegetable that can grow on a bare rock, through all the various orders and tribes, this ingredient is absolutely required. Insipid and inodorous in itself, it takes on the peculiarities of all other bodies; assumes with readiness the sweetness of sugar, and the acidity of vinegar. Distilled with flowers, or the aromatic parts of plants it contracts from them their fragrance, and, with equal facility becomes the vehicle of odours the most offensive to our sense. We talk about the use of water, and imagine that nature furnishes a perennial supply; we constantly forget that in this world nothing is ever annihilated. The liquid that we drink to-day has been drunk a thousand times before; the clouds that obscure the sky have obscured it again and again. What, then, becomes of the immense quantities of water which, thus entering as a constituent of the bodies of animals, give to their various parts that flexibility which enables them to execute movements, or, combining with vegetable structure, fits them for carrying on their vital processes? After the course of a few years, all existing animals and vegetables entirely pass away; their solid constituents disintegrate and take on other conditions, and waters, lost perhaps, for a while in the ground, at last escape in the form of vapour in the air. In that great and invisible receptacle all traces of its ancient relations disappear; it mingles with other vapours that are raised from the sea by the sun. From the bodies of living animals and plants immense quantities are hourly finding their way into the reservoir; the forests and meadows, and wherever vegetables are found, water is continually evaporating, and that to an extent far surpassing what we might at first be led to suppose. In a single day a sun-flower, of moderate size, throws from its leaves, and other parts, nearly 20 ounces weight. In the republic of the universe there is a stern equality; the breath of the rich intermingles with the breath of the beggar. A man of average size requires a half-ton of water a year; when he has reached the meridian of life, he has consumed nearly three hundred times his own weight of this liquid. These statements might lead many to doubt whether the existing order of nature, as dependent on the waters of the sea, could, for any length of time, supply such a great consumption. The human family consists, probably, of a thousand millions of individuals; it would be a very moderate estimate to suppose that the various animals, great and small, taken together consume five times as much water as we do, and the vegetable world two hundred times as much as all the animal race. Under such an immense drain, it becomes a curious question what provision nature has made to meet the demand, and how long the waters of the sea, supposing none returned to the sea, could furnish a sure supply? The question involves the stability of existence of animated nature, and the world of organization, and no man, save one whose mind is thoroughly imbued with an appreciation of the resources upon which the acts of the Creator are founded, would, I am sure, justly guess at the result. There exists in the sea a supply which would meet this enormous demand for more than a quarter of a million of years.

## AMERICAN SLAVERY.

Strange it is indeed that in a country, boasting itself superior to all others in the blessings of freedom, that such scenes should be enacted as are even now transpiring in the United States. We wonder not that so many there should feel their hearts stirred up to the strongest indignation at the conduct of men who having in their mouths the cry of liberty are passing and enforcing laws infringing on the dearest rights of their fellows. Surely the course which America is pursuing on the subject of slavery must if not abandoned lower her in the eyes of the wise and good of every nation. Even France, with all her insurrections and anarchy, and gross misapprehension of the true principles of freedom in other respects, is infinitely in advance of the Great Union in this matter. From the first moment of her renouncing her ancient yoke of an arbitrary monarchy, a hateful form of internal government she may have assumed, her repudiation of negro slavery has been uniform, sincere, and constant. We greatly fear that the example of the United States on the subject of slavery will have the most lamentable effect upon the population of the northern portion of the American continent, where the trade in human beings is still carried on in all its horrors and abominations, for every movement of such a powerful state as the United States will be eagerly seized on as sanctioning the sanction of a great and mighty agent, and a powerful nation to perpetuate the evil of slavery. We well know that the religious and moral portion of the Great Republic as well as all who truly understand and appreciate the principles of freedom are beyond measure pained at the course pursued by those who openly advocate or who wink at slavery. We cannot but strongly sympathize with the great wrong must feel at seeing the name of their country made a reproach to nations. One would little have dreamed some few years since that the labours of Wilberforce and of Clarkson would have been so little influential over so large and intellectual a portion of the Anglo-Naxon race. But the ungodly mammon has borne down all other considerations of justice or of shame, and asserted his triumph over the laws of God and the rights of man. — *Christian Messenger*.

**SIDNEY SMITH ON PROGRESS.**—It is of some importance at what period man is born. A young man, alive at this period hardly knows to what improvements of human life he has been introduced; and I bring before his notice the following eighteen changes, which have taken place in England since I began to breathe the breath of life—a

portion amounting now to nearly seventy years. Gas was unknown. I groped my way about the streets of London in all but the utter darkness of a twinkling oil lamp, and the protection of the watchmen, in their climatic, and exposed to every species of insult. I have been nine hours sailing from Dover to Calais, before the invention of steam. It took me nine hours to go from Taunton to Bath, and now I can go in six hours from Taunton to London. In going from Taunton to Bath, I suffered between 10,000 and 12,000 severe contusions before stone breaking Macadam was born. I paid £15 in a single year for the repairs of carriage springs on the pavement of London; and now I glide without noise or fracture on wooden pavement. I can walk by the assistance of the police, from one end of London to the other, without molestation; or if I am tired to get in a cheap cab instead of those cottages on wheels which the hackney coaches were at the beginning of my life.

I had no umbrella. They were little used, and very dear. There were no water-proof hats, and my hat has often been reduced by rains to its primitive pulp. I could not keep my clothes in their proper places, for braces were unknown. If I had the gout there was no relief. I was bilious there was no calomel. If I was attacked by ague, there was no quinine. There were filthy coffee houses instead of elegant clubs. Game could not be bought. Quarrels about uncommuted tithes were endless. The corruption of Parliament before reform, infamous. — There were no banks to receive the savings of the poor. The poor laws were gradually sapping the vitals of the country. Whatever miseries I suffered I had no post, to which my complaints for a single penny, to the remotest corners of the empire. And yet in spite of all these privations I lived on quietly, and am now ashamed that I was not discontented and utterly surprised that all these changes and inventions did not occur two centuries ago. I forgot to add, that as the basket of stage coaches in which language was then carried, had no springs, your clothes were rubbed to pieces, and that even in the best society one third of the genteel at least, were always drunk.

**LAW AND LADIES.**—Justice is always represented as wearing female attire, and it has been proposed out West that members of the gentler sex should therefore administer the laws. With what grace would the female barrister carry the blue bag, and in what melodious strains they would move to "quash the indictment." Their declarations would be couched in the softest language of the billet doux, their "pleas" in the *persuading* terms of a moonlight *l'ete-a-ete*; their "replications" would be warm; their "rejoinders" cordial and their "rebutters" and "sub-rebutters" irresistible. No three days speeches would be indulged in; but we should hear short, fiery and effective harangues, which would tear away the very curl papers of their opponents. That imposing bustle of court of justice which strikes the stranger with so much interest would be improved upon, and carried out to its full extent. Ugly Jurymen, with stern visages, would give place to twelve "nice young men," selected for their personal charms, who would always decide in favor of the prettiest advocate. But the marshal, with her delicate fairy wand of office, grace in her steps, heaven in her eyes, in every gesture, dignity and love—who could withstand her summons? The felon who should receive upon his shoulder the gentle tap of her delicate fingers, and hear the fascinating accents of "Come along, my fine fellow," would be cured, and fashionable young bucks would knock each other down for the pleasure of being taken up. As for the reporters, they would attend court in full dress, and those who are not married would soon begin to court on their own hook. Wouldn't they, friend Carr?

There is a charm in reflections on this subject, which almost irresistibly binds us to it; but, before we conclude, we would express the hope that ere long our vision may be realized, and we witness justice administered, and the law upheld by our sympathizing matrons, and their no less sympathizing daughters, to which, we doubt not, all good-looking cutpurses will say Amen.

## THE POWER OF A BUSHEL OF COALS.

It is well known to modern engineers that there is virtue in a bushel of coals properly consumed, to raise six or seven millions of pounds weight a foot high. This is actually the average effect of an engine at this moment working at Huel Trewan, in Cornwall. Let us pause a moment, and consider what this is equivalent to in matters of practice. The ascent of Mount Blanc from the valley of Chamouni is considered, and with justice, as the most formidable feat that a strong man can execute in two days. The combustion of two pounds of coal would place him on the summit. The Menai bridge, one of the most stupendous works of art that has been raised to man in modern engineering, consists of a mass of iron, not less than four millions of pounds in weight, suspended at a medium height of about 150 feet above the sea. The combustion of seven bushels of coal would suffice to place it a bushel higher. The great pyramid of Egypt is composed of granite. It is 70 feet in the side of its base, and 480 a perpendicular in height, and stands on a level of ground. It weighs 2,700 millions of pounds, at a medium height of 48 feet; consequently it would be raised by the effect of about 630 chaldrons of coal—a quantity contained in some foundries in a week. The annual consumption of coal in London is estimated at 1,500,000 chaldrons. The effect of this quantity would suffice to raise a cubical block of marble, 2,300 feet in the side, through a space equal to its own height, or to pile one such monument upon another. The Monte Nuovo near Pozzuoli (which was erupted in a single night by volcanic fire) might have been raised by such an effort from a depth of 40,000 feet, or about miles.

**ORIGIN OF THE CHURCH OF ENGLAND.**—St Paul preached the Gospel of Christ in Britain about the fourteenth year of the Emperor Nero, and A. D. 63. He there appointed Aristobolus, mentioned in the Epistle to the Romans, as the first bishop, and established a complete Episcopal form of Church Government. The Church of Britain thus es-

ablished was senior to that of Rome; Linus, the first bishop of the latter place, being appointed by the joint authority of Peter and Paul, in the year of their martyrdom, after Paul's return from Britain. The Church in Britain continued to be governed by its own bishops for 600 years, independent of any foreign church, and was found in that state by Austin, the Pope's first missionary, at which time they had schools and churches, and a learned clergy; and were in a flourishing state, and refused subjection to the Pope or his emissaries. The British Church was the first Protestant Church in the world, having so early as the 7th century, and 900 years before Luther, strongly protested against the errors of the Church of Rome, and refused to hold communion with that Church. Their simplicity and purity of worship was such that they would not sit even at the same table, nor lodge under the same roof, with the followers of Austin, on account of their superstitious and idolatrous ceremonies. These facts are commended to the special notice of those who talk of the Church of England as commencing a "dubious existence in the reign of Henry VIII." To such unfledged controversialists it may be advised, "Tarry at Jericho until your beards are grown." Do not refer to the "page of history" before you have read it. — *Correspondent of the Standard*.

**YANKEES OUTDONE.**—We thought the Down Easters had tried almost every dodge that could turn a current of coin into their pockets, but yesterday there came before our office a curious specimen of a Yorkshire wanderer, bearing on his shoulders a mysterious load of staves, and lugging in one hand a chair without legs and a brass plate that might have been a copy of Achilles' shield. Selecting the unoccupied ground of the ice-cream man, he set up business in a twinkling, and lo! the staves became a strong derrick, whence sprung up a spring scale, and to that was attached the legless chair. "Awly waan cent to be weighed! awly waan cent! Who's ready neaw?" Of course a crowd was there in a moment, one after another popped into the seat, while the Yorkshire took the cents with one hand, and in the other held a card from which (as the scale weighed by the stone of 14 lbs. he calculated the "heft" of his customers. "Alevun sawn!" "Nine stawn foiv pawns!" and so on. After an hour's stay, he departed with his pocket full of coppers, and a sly twinkle of the eye, as much as to say, "You may talk of Yankees as much as you like, but I see Yorkshire!" — *N. Y. Tribune*.

**ADVANTAGE OF A DECISIVE ANSWER.**—During the reign of Louis XI. of France, a gentleman applied to that monarch to be appointed to an office which had lately become vacant. The King peremptorily refused his request; upon which the applicant humbly thanked him, and was about to retire, when Louis, who thought that he had misunderstood his answer, called him back, and said, "Did you fully understand the answer I gave you just now?" "Perfectly, sire; you refused my request." "Why, then, did you thank me?" inquired the King. "For having promptly refused me," returned the gentleman, "and by encouraging in me no false hopes, saving my time, and preventing me being bitterly disappointed at last." The King was so much pleased with this explanation, that he immediately bestowed on him the office he had just before requested in vain.

**A FRIGHTFUL CONTINGENCY.**—A farmer from the neighbourhood of Galston took his wife to see the wonders of the microscope, which happened to be exhibiting in Kilnarnock. The various curiosities seemed to please the good woman very well, till the animalcule contained in a drop of water came to be shown off. These seemed to poor Janet not so very pleasant a sight as the others. She sat patiently, however, till the "water tigers," magnified to the size of twelve feet, appeared on the sheet, fighting with their usual ferocity. Janet now rose in great terpidation, and cried to her husband, "For gude sake, come awa, John." "Sit still, woman," said John, "and see the show." "See the show!—gude keep us a man, what wad come o' us if the awfu' like brutes wad break out o' the water?" — *English Paper*.

The Catholic Hierarchy in England and Scotland numbers 650 chapels, besides other stations where service is performed, 893 priests, 11 colleges, and 134 convents. Fifty-one of the priests employed in England are Doctors of Divinity, and seventeen English priests are residents in various seminaries abroad. This is a much larger force than was supposed. In England and Wales the chapels are 567, Scotland 93.

**TWO GRASS GRASS GRASS.**—A learned clergyman of Maine was accused in the following manner by an illiterate preacher who despised education.

"But you have been to college, I suppose?"

"Yes sir," was the reply.

"I am thankful," replied the former, "that the Lord has opened me mouth without any learning."

"A good word," replied the latter, "took place in B lae's time, but such things are of rare occurrence at the present time."

There is a boy down east who is accustomed to go out on a railroad track and imitate the steam whistle so perfectly as to deceive the officer at the station. His last attempt proved eminently successful; the depot master came out and switched him off.

**EXAMPLE.**—"See here, my friend, you are drunk!"

"Drunk? to be sure I am, and have been for the last three years. You see, my brother and I are on a temperance mission. He lectures, while I serve as a frightful example!"

"I feel the burden of age upon me," as the boy said when his grandfather made him carry him through the mud.

It is said that words hurt nobody; nevertheless, Sampson saved a thousand Philistines to death.