

Scientific American

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Monuments to Great Men.

On Wednesday evening of last week, a great meeting of the admirers of James Fenimore Cooper was held at Metropolitan Hall, this city. The Hon. Daniel Webster presided, as he can do, with great dignity; William Cullen Bryant, the Poet and Editor, delivered an oration, as flattering to the character of the deceased novelist, as was that of Mark Anthony's over the dead body of Julius Cæsar. It is the intention of the admirers of Mr. Cooper to erect a noble monument in this city as a token of their esteem. The writings of the Novelist form his best monument: they are an honor to his country, and are enduring evidences of his genius. His "Pioneer of the Susquehannah," and his "Skimmer of the Seas," exhibit the versatility of his genius and mental power. He has delighted thousands in every part of the world, and will continue to do so for generations to come,—while dead, he yet speaketh. His descriptions of scenery, and his delineations of character, are inimitable. He is the greatest American novelist; the only fault that ever struck us as a blemish in his works, is the short space of time into which he crowds events. Mr. Cooper was not beloved by his neighbors, nor countrymen, generally. He has left no memory embalmed like that of Scott, in the affections of his countrymen. He was held to be aristocratic, irritable and unforgiving.

We commend the feelings which prompt our countrymen to erect a monument in testimony of their admiration for his patriotism, his genius, and the moral tone of all his writings. As a people, we are not distinguished for erecting monuments expressive of our admiration for the mighty dead. It is our opinion, although many abortive attempts have been made to erect monuments in this city, to distinguished Americans, that this effort of the admirers of Mr. Cooper will not end with this beginning: the right kind of men are at the head of the movement. We hope it will shame our people to erect a tablet to the memory of Robert Fulton. If any city in the world has a debt of gratitude to pay to any one man, it is the city of New York to Fulton. It was in New York waters where his perfectly successful efforts in steam navigation were made, and the benefits which have resulted to the city from his success, no man can estimate too highly. Every steamboat which walks the waters of our rivers and our lakes, is a monument of his perseverance and genius. Let those who know what steam navigation has done for New York especially, take shame to themselves (and all of us are without excuse) that a monument has not been erected to him long ago. It is a credit to England that she has erected a monument to that humble-born but great man and mechanic—James Watt. His tablet stands in Westminster Abbey, among the proudest of Britain's monarchs, warriors, statesmen, and poets.

The first perfectly successful steamboat constructor in Great Britain was Henry Bell, and although his boat was not launched for four years after Fulton's, still his countrymen have not neglected his memory.

In the month of April, 1839, while passing down the Hudson in the old De Witt Clinton, we were forcibly struck with the appropriateness of an elevated spot at West Point, as a situation for a monument to Fulton. Ten weeks after that, while sailing up the river Clyde, in Scotland, on the north shore, close to which the steamboat was running, we were peculiarly impressed with a tall but simple stone shaft, on which were inscribed only three words "To Henry Bell." The place was romantic; the blue highland mountains stood like giant sentinels, at the one side, and away to the west rolled the river to the Atlantic. We were told that it was to that place "Dumglass," Henry Bell's steamboat, made her first trip from Glasgow, 20 miles distant. The monument stands upon the remains of an old tower, part of the Roman wall, erected when Rome was Mistress of the World. It was the limits of that proud empire; beyond it the fierce

Celtic tribes of Caledonia had never been conquered. We could not help saying, "how appropriate the place. Here where the military empire of Rome ended; the empire of marine steam navigation began; but in America we have no monument to Robert Fulton."

We do not undervalue the labors of John Fitch, James Rumsey, or John Stevens; the two first were prior inventors to Fulton, it was the same with Bell; Miller and Symington were prior inventors, in Britain, to Bell; but it is not a little remarkable, that the city of New York in America, and the city of Glasgow, in Scotland, are now more distinguished for building steamships than any other cities in the world. This is an evidence of the benefits conferred on both cities, by first successful efforts at steam navigation. These two cities were first in the race-course of the mighty waters, and they have not yet been overtaken.

To Subscribers—Our Half Volume.

The next number of the Scientific American will complete the half of volume 7. As many of our subscribers pay up every six months, we would respectfully solicit them to send in their subscriptions at the earliest date. It will also afford us pleasure to receive as many new subscribers as choose to send in their names; the more subscribers the better pleased are we; and our friends may say, "you need not tell us any more about that for we know it as well as you do yourselves." Very well, good friends, you know us, and we may say we also know you. We are much obliged to you for past favors; we keep no travelling agents; our circulation, which is now large, has been obtained principally by our subscribers asking friends to subscribe. There is a very intimate relationship existing between us and our readers: we have derived both pleasure and profit by our connection, and a general satisfaction, we believe, exists. We endeavor to present as much new and useful information in a condensed form as we can. We speak freely upon all subjects, and when men endeavor to deceive their countrymen, by pretended inventions, we speak out for truth and the people. We believe that we have done much good to our country by the course we have pursued on all questions. We are not perfect, but we claim to be honest in what we say; it is nothing to boast about, it is our duty. The tone of the Scientific American is moral from principle not from policy. We have tried to be first in the field with those things relating to science and art that are of general practical utility, and we have been successful. We shall still labor with assiduity, and we know that our subscribers, as heretofore, will encourage us. From small things, the Scientific American has arisen to be what is termed "the best mechanical paper in the world," our subscribers have been the means of bringing this about. The larger our subscription list, the more we expend to illustrate our pages, and gain rare information. This volume, when completed, will be the best yet published. See our prospectus for particulars.

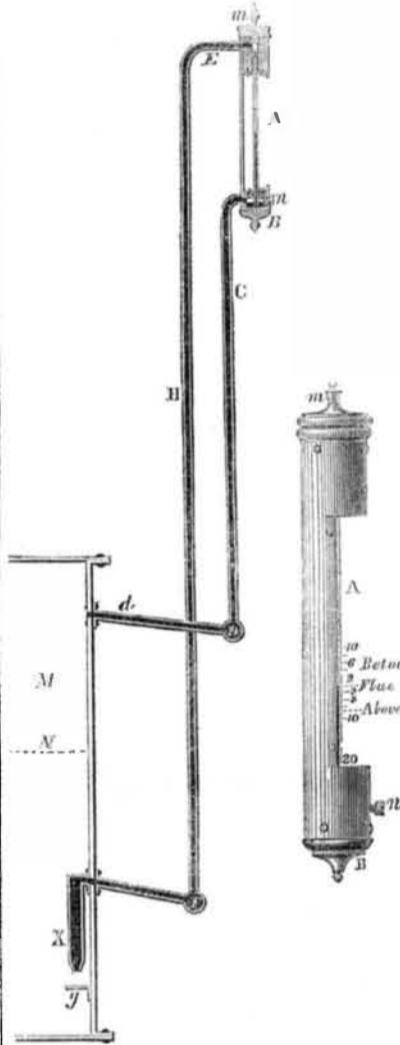
Velocity of Light.

There are two theories respecting the motion of light; one is the emission theory of Newton, the other the undulatory theory by Euler and others. Dr. Hare, of Philadelphia, believes light to be "a subtle matter conveyed by vibrations." By the emission theory, it was asserted that light passing from a rarer to a denser medium was increased in velocity. M. Foucault, of Paris, at the request of M. Arago has recently made a number of experiments to test the two theories, and it is said, "has fully established the theory of undulation," viz., that light travels with less velocity through a dense than a more rare medium—swifter through the air than water. The question then arises, "are not these theories mere names for the mode of action of a certain subtle matter which is termed light?" If light is not a matter why does it not travel with the same velocity through every medium? The answer may be, "light is not a matter, it is merely the name for a certain action of matter, as sound is also for a certain action of matter." Light is the product of a certain action of certain bodies under certain conditions, this is all that can be said

about it; its mode of action is quite a different thing. The principle of right and goodness is compared to light, and so is truth. The great Infinite—He who is called the Moral Light of the World, could alone create light. "A universe of darkness," says Hunt, "would be universal death." The finest apostrophe to light ever penned by mortal man, was by blind John Milton, in his lamentation for the loss of his sight.

Lyman's Boiler Gauge.

This gauge is the invention of Mr. A. S. Lyman, the inventor of the Radiator which was illustrated in our last week's number. The engraving exhibits the gauge applied to a boiler, also the gauge enlarged and by itself.



M represents the boiler filled with water to N, the top of the flue. A is the gauge or water level indicator, consisting of a glass tube with both ends open, and its lower end immersed in a small cup of mercury. B is the cup of mercury; C D is the tube connecting this cup, above the mercury, with the steam chamber of the boiler. E F is a tube connecting the upper end of the glass tube with the lower part of the boiler. The tube, C D, is slightly bent downwards, as it leaves the boiler at d, so that when once filled it remains full of water. We have now a syphon consisting of the shorter leg, D C, and the glass tube A, and the longer leg, H E. This syphon is filled with water, and would all run off by the longer leg, were it not for the mercury in the cup, B, which is forced up the glass tube until, together with the water in the shorter one, it balances the column of water in the longer leg, and this mercury rises to a greater or less height, as the difference in the length of the two legs is increased or lessened. The part, F, of the lower leg below the water surface of the boiler, is balanced by the water in the boiler; and as the water in the boiler rises, more of the column of water in the longer leg is supported, that is, the difference in the length of the two legs of the syphon is lessened, and the mercury falls 2-25 of an inch, while the water rises one inch. If, in the attachment, d, the end of the shorter leg is 50 inches above the surface of the flue, the mercury will stand 4 inches high in the glass tube when the water falls to the surface of the flue. At this point on the scale, the word "flue" is engraved, and the scale above and below, is divided into spaces of 2-25 of an inch. The mercury falls through one of these spaces for every inch the water rises in the

boiler. In attaching such gauges to boilers, it is necessary to connect the shorter leg, at D, 37½ inches from the top of the flue or the point first exposed to extra heat when the water falls too low, and for this reason it is made the zero.

DIRECTIONS.—When steam is raised, open the cock, F, so that the water will flow from the boiler towards the gauge. Turn the three-way cock, D, so that the water will escape from it. The water then passes from the boiler through the cock, F, up the longer leg of the syphon, down the glass tube, the remainder of the short leg, and out of the cock, D. As soon as water flows freely, close the cocks, D and F. The syphon is now filled with water. The mercury is then introduced into the gauge by unscrewing cap, m, and plug, n. It should come up to the level of the opening at n. The cap and plug are now fitted and the cock, E, opened first and then the one, D. All the air must be allowed to flow out at the plugs, m n, before the gauge is truly ready.

SRDIMENT DEPOSITOR.—If the water in the boiler be not very pure, the lower tube will get choked by sediment, unless prevented by some means; this is accomplished by deposition chamber, K, which is a tube three or four inches in diameter, closed entirely at the top excepting the opening into the small tube, F H. It has a shield, y, a few inches below it, to prevent steam rising into it. This sediment depositor is the reverse of the ordinary sediment collector used in English boilers. There is no commotion in it, and the impurities begin at once to settle and pass out into the boiler, and thus the tube is kept free. No impurities ever obstruct the tube, as it enters the boiler above the water line. The tubes of this gauge are not liable to be choked—and even if they do choke, the fact can easily be detected, for the mercury, then, will not exhibit, as it should do, its variable action—it will sink out of sight into its cup; this may be proved any time, by closing one or both of the cocks leading to the gauge. The mercury always tells the position of the water; it is perfectly reliable. This gauge, unlike the common glass gauge, is not liable to be broken by changes of temperature. This gauge may be placed in any situation above or below the boiler, by the side of the engineer or in the captain's office, or in a room far away from the boiler. This is a great advantage for steam vessels or factories. It is not affected by foam.

Other information may be obtained by letter addressed to Mr. Lyman, at Brooklyn, N. Y.

Parker's Water Wheel.

Petitions have been presented to Congress for an extension of the patent for Messrs. Parker's Wheel. It has been extended once already. We have received quite a number of letters, recently, making inquiries about Parker's patent; the tone of them all is nearly the same; they state: "Parker's agents have been round here and asked for a patent tax on our wheel, threatening, if we did not pay it, to attach our property. Some of our neighbors have paid, through fear, but all think it rank injustice. The agents take what they can get, some pay pretty high, others get off for very little." An old gentleman, a Quaker, called upon us last week, who said that, in his settlement, they were using Wilson's Patent Wheel, for which they had paid the owner. They were threatened by Parker's agents, that if they did not pay a certain sum (we forget the amount) they would attach their property. Under such circumstances, we advise all those who are thus threatened not to pay. The old Quaker said he did not want to go to law, but there was something that looked very bad about the conduct of such men, and he did not pay. We told him not to pay. No patentee can attach the property of any man without a trial at law, and a writ granted by a United States Court. We believe that Mr. Parker has never made a great deal out of his patent; but this is no excuse for his agents acting in this manner. It is a sure way to create a general prejudice against all patentees, for these people who have been threatened did not know they were infringing his patent,—they had paid other patentees for their wheels.