



NEW YORK, MARCH 31, 1849.

Scientific Associations.

England, France and a number of other European nations have been long famous for Institutions to promote scientific knowledge and encourage discoveries in science and art. All these associations have done good—incalculable good. In England and France those societies are justly held in high esteem and are liberally patronised and sustained. England especially knows that she is indebted to the genius of her men of science, her engineers and mechanics, more than her soldiers and statesmen, for her greatness and glory. At the present moment there are no less than 300 Mechanics Institutions in successful operation in Britain, besides her Atheneums, her Associations of Civil Engineers, and numerous other associations of a like nature.

We regret that our people have paid so little attention to such Institutions and have exhibited so little enthusiasm in their success. We do not exhibit so much public spirit in those things as may justly be expected of us by other nations, considering the generally admitted ingenuity of our people and their general intelligence. It is true that we have some good associations for the dissemination of useful knowledge, but there should be twenty for every one that we now have, and we hope this will yet be the case.

It gives us pleasure to know that our Civil Engineers have made a movement in the right direction. In Boston there is a society of Civil Engineers, and one has been formed in this State, called The New York State Institution of Civil Engineers. This last association was only organized on the 5th of January last, and on the 10th met at Albany and adopted a Constitution. This Institution has already a respectable number of members of no mean scientific attainments. Its object is to elevate the character of the profession by union, periodical meetings, the reading of professional papers, the discussion of scientific subjects and the delivery of lectures, &c.—Good objects truly. “Union is strength,” “Knowledge is power.” We like to take notice of such institutions—we rejoice in their prosperity. It is something to be regretted, that the task to establish and sustain voluntary associations of this kind, is far more difficult and troublesome, than to found and maintain associations for mere amusement, but it is one consolation to the members of such associations, that their objects are far higher and ennobling.

Boiler Explosion.—Doctors Differ and so do Engineers.

Our readers will remember an account in the Scientific American a short time ago about the explosion of a locomotive on the Boston and Providence Railroad, by which the Engineer, Lucius Cummings, lost his life. A committee of eight experienced Engineers were appointed to examine into the causes of the explosion who reported that in their opinion “the explosion took place from overheating the boiler in consequence of a want of water.” It seems that the same subject had been referred by the Boston Society of Civil Engineers to a committee, in order that they might investigate the matter, also. On the 6th inst. that Committee reported before the society, and an able one it is, which has since been published in the Boston Traveller.

The Report of this Committee is signed by Wm. P. Parrott, and the conclusion arrived at is totally different from the report of the other committee. It says that the testimony is opposed to the water being low, and the difficulty was local below the surface of the water and was occasioned by the under heating of the lower and middle portion of the tubes, thus giving the contained water a spheroidal form.”

It farther says that as the engineer at the moment of explosion put his hand to the steam whistle, that the slight agitation of the water

reduced the spheroidal form of water below into highly explosive steam. The ultimate cause is thus held to result from what is called the spheroid property of water and the primary cause of this, is held to be incrustation in the boiler.

Burning Glasses of the Ancients.

Burning Glasses were known to the ancients. In the second Act of the Clouds of Aristophanes, Strepsiades is made to say to Socrates that he has thought of a fine invention not to pay his debts. He says to Socrates:

“Hast thou seen this fine transparent stone with which they kindle fire?

Is it not glass you mean?

True.

Well what wilt thou do with it?

When they give me a summons I will put this glass to the sun and make the whole writing of the summons melt at a distance.”

The writing here spoken of must have been made on wax, or did he mean to consume it if made on any material?

The scholiast, M. de la Hire, on Aristophanes, says upon this point, that the glass meant above was round thick glass, made on purpose for burning, and was polished with hot oil rubbed upon it.

Pliny speaks of balls of glass which being exposed to the rays of the sun burned either the clothes or the flesh of the sick person whom they intended to cauterise. Lactantius says that a glass ball held to the sun kindled fire even in the greatest cold. Here is the effect of convex glasses incontestably proved. But if the ancients knew that they burned, how were they ignorant of their magnifying qualities,—how were they ignorant of this most important use of the burning glasses?—It must have been owing to the false ideas which the ancients had of vision. They believed that it was made of some substance flowing out of the eyes which went to search for objects. Such views of vision must have been the millstone about their necks which prevented them from seeing any relation between the burning glass and our *foci*. Their burning glasses too, were either balls or globes filled with water, and as the focus of the glass sphere is distant from it about one fourth of its diameter, so if their balls were half a foot in diameter, an object would have been brought within one inch and a half to perceive that it was magnified, and beside in looking through these glass balls, they must have seen distant objects only disfigured or confused, which they might have attributed to vision, for the clear augmentation of distant objects requires very large spheres, or small portions of very large spheres, which the moderns now use with such success, and cannot be found by chance. It is not therefore so surprising that the knowledge of the ancients of burning glasses did not carry the Romans much further, but with the splendid intellect of the Greeks, it is wonderful that they did not discover the telescope and apply it to astronomy. But what would Galileo say if he saw Lord Ross's 6 feet diameter reflector? The progress of discovery is gradual, although some tremendous leaps are frequently made.

Advice to our Contemporaries.

In perusing the last number of the “Farmer and Mechanic” (which by the way is a very good agricultural journal) we notice several articles which had formerly appeared in the Scientific American and afterwards copied into other papers, re-copied into that journal and the papers from which they had copied them credited as being the originators of the articles. It is not to find fault with that journal for copying our articles that we make the above statement but it is to advise them to copy *directly* from the Scientific American, which will thereby enable them to present their readers with as late intelligence upon scientific matters and new inventions as their contemporaries can, of whom they have been accustomed to copy, and besides they will be less liable to make errors in the articles copied, many of which appeared in their last number, some of which were ludicrous. Other papers “take particular note.”—Advice gratis.

Our contemporaries, the Morgan Herald, Lebanon Packet, &c., will please accept our thanks for their very flattering notices of the Scientific American.

Public Notice.

As a number of letters intended for the Scientific American have been directed to Mr. R. Porter, we would state to our readers that Mr. Porter has had no connection with the Scientific American for the last two years. We have received a number of letters from Mr. Porter intended for us and we publish this notice to correct mistakes of that kind for the future. Another reason is this, as Mr. Porter is engaged in getting up the balloon that is to wing its way to California in four days, some people have written to us desiring information about the passage &c. We would most humbly state, that we have no desire to imitate the Philosopher of *Rasselas*, we rather prefer to keep within the range of exact science than soar amidst its improbabilities. Persons who desire to fly to California need not come to our office for wings.

Wonderful Balloon Ascent and Explosion.

At New Orleans on the 11th ult., M. Victor Verdale, a Frenchman, announced that he would ascend with his balloon at 4 o'clock, not as is customary, in a car, but attached to the balloon by a rope, his “feet to heaven, head to earth,” and so ascending, would perform some most wonderful aerial feats, which he did. The afternoon was exceedingly favorable for the daring aeronaut, but an accident occurred as he started which placed him in great danger, as the event showed. It seems that when all was ready for the ascent, and the word was given to let go, a rent of some four feet was made in the balloon by getting foul of a post. The gas, of course, commenced escaping, the balloon at the same time rising majestically, and Verdale going through his novel performances, to the great delight of the assembled multitude. The balloon did not rise to a very great height, but went off steadily in a northern direction, the gas all the time making its escape. On arriving over the Ponchartrain Railroad, third Municipality, horrible to relate, the balloon exploded, and precipitated him to the earth from a distance of 7000 feet! and what is more astonishing he was not the least injured. He owes his miraculous escape of death from a rose bush in the garden where he landed. The wind being very strong the balloon was in a measure kept up in such a manner as to break the fall.

[This is the greatest feat of ground and lofty tumbling, in the annals of the flights of fancy, or fortune.

Patent Flour Barrel Manufactory.

Messrs. Humphrey and Dodge, two enterprising men, have established a Manufactory with patent Machinery to make flour barrels in Williamstown, Oswego County. The Manufactory is on the head waters of Fish Creek and employs from 50 to 75 men, and turns out easily 400 flour barrels in a day. They are manufactured entirely by machinery, each stave taking, in the process of manufacturing, the same position it occupies in the barrel, when set up; consequently all the barrels must be precisely alike. All the staves are of the same width, and after they have been seasoned, are placed through the finishing machine, where they are planed, joined, creased and chamfered. The planing gives the barrel a beautiful appearance; the croze is similar to the croze for tight work, and the chime is left thick and strong. The barrel varies in shape from the article now in use, and is supposed to have many advantages on that account. It is about 1½ inches shorter and has an 18 inch head, with the same sized bilge as other barrels. On account of their size, one fifteenth is gained in storage, and at the same time, the barrel being fuller in the quarter, will allow 196 lbs. of flour to be packed looser than in the present shape. The heading is also passed through machinery, which gives it the same accuracy as the staves. Oswego affords the largest market for flour barrels in the world, requiring for its own use at least a million of barrels per annum, beside the ordinary Canadian demand and the demand from other Lake ports on the American side.

The sheriff at Hagerstown, Md. has seized upon the Franklin Railroad, extending from that place to the Pennsylvania line, with all its land appurtenances, and will sell the same on the 10th of April next, by virtue of a writ issued out of the Washington County Court.

Eminent Female Astronomer.

In the year 1831, a gold medal, of the value of 20 ducates, was founded by the King of Denmark, to be awarded to any person who should first discover a telescopic comet; and on the 1st of October, 1841, 10½ o'clock, P. M. such a comet was discovered by Miss Mitchell nearly vertical above Polaris, about five degrees. With characteristic modesty Miss Mitchell declined to allow her father Hon. William Mitchell, to publish her discovery immediately, remarking: “If it is a new comet, our friends, the Bonds of Cambridge, have seen it.” The failure to communicate by the mail following the discovery to the Minister of Denmark the fact of the discovery, technically debarred her from the receipt of the medal although it was fully admitted by the judges, Prof. Schumacher, at Altona and Prof. Airy, of Greenwich, that the comet was first seen by Miss Mitchell. Mr. Everett first brought the subject before these judges, who were, however, not authorized to set aside the published conditions of the award. He then, by the advice of the excellent Charge d'Affaires for Denmark, and through the agency of our Minister at Copenhagen, and the Danish Minister of Foreign Affairs, appealed to the king of Denmark who directed that the medal should be conferred upon our learned countrywoman, who is said to be the first lady in the world who was ever thus honored. Miss Mitchell's abilities as an observer have for some years been recognized and used in one of the public works of our country. By way of showing this lady's priority in the discovery, we may mention the fact that on the 3d of October the same comet was first seen at Rome by Father de Vico; on the 7th of October in England by W. R. Dawes; and on the 11th of October at Hamburg by Madame Rumker, the wife of the Director of the Observatory in that city.

Manufacturing in Texas.

The town of New Braunfels says the Austin Democrat, is said to be rapidly improving. It is “beautifully situated on the west bank of the Guadalupe River, at the foot of the mountains, and possesses water power of the greatest value. Arrangements have been made for the establishment of cotton and woolen factories there within the present year. This will be the first enterprise of the kind undertaken in Texas, and we have no doubt it will prove eminently successful.—Already there are two saw and grist mills in full operation. The surrounding country is rapidly filling up with industrious and respectable settlers, and the recent immigration from Germany is said to be of the best class. We know of no town in the interior of our State whose prospects are more promising.”

Lake Superior Copper.

The mining has been very successful at Lake Superior last season. At one mine the lode of copper is between six and seven feet thick and is nearly a continued mass of pure metal, so much so that they are obliged to work the rock away around it, and then cut the masses with a chisel in order to handle them. Some masses weighing from one to two tons have also been taken out and a considerable quantity of silver has also been discovered.

Back Volumes of the Scientific American.

A few more copies of complete sets of vol. 3 of the Scientific American may be had at the office, either bound or in sheets. Price neatly bound \$2 75, in sheets suitable for mailing \$2. Send in your orders early if you desire them filled for we have but a few more copies left, and the number is growing less every day.

Our London Patrons.

We are happy in being able to inform our English patrons that such arrangements have been completed with the London Patent Office that the Scientific American may hereafter be found there. Messrs. Barlow & Payne are agents at 89 Chancery Lane, and will receive remittances on account of the Scientific American from those who may desire to subscribe.

Terms—3 dollars per year and postage paid out of the United States.