

## Scientific American

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**Mechanics Fairs.—New York Crystal Palace.**

Fairs, for the display of works of art and the products of industry, are of very ancient origin, and have been the means of doing much good in every country in which they have been established and encouraged. Our country, although young, has been greatly benefited by such exhibitions; they should be sustained with the heart's best enthusiasm of the nation. The objects of such exhibitions are to excite a spirit of laudible emulation, and to present objects of comparison for improvement. The man who exhibits a machine at a Fair, does so because he believes he has produced something which he is proud of displaying, and respecting which he has a consciousness that it possesses peculiar merit. Machines and implements of different kinds arranged together, enable those who are interested to make comparisons of their qualities, to detect defects, and thereby suggest improvements. That spirit, so pre-eminent in our people—the desire to excel—is thereby stimulated, and many men, observers at past Fairs, will be exhibitors at future ones; this is the way to improve and progress. Almost every (if not all) State in our Union has its State Agricultural Society, and the utmost latitude is allowed at the Fairs, for the display of useful machinery; this is right—we are glad that such a spirit is abroad in our land; it has done much for the advancement of Agricultural and Mechanical Art, and it will do much more.

The Annual Exhibition of the State Agricultural Society of New York, takes place at Utica on the 7th of next month (September). The Annual Fair of the State Agricultural Society of Pennsylvania takes place at Lancaster on the 21st of October next. The Fair of the Maryland Institute will take place in Baltimore on the 4th of the same month; and the 25th Annual Fair of the American Institute will be held at Castle Garden, this city, at the same time. We have noticed a few of these Fairs, because inquiries have been made of us respecting them. We hope they will all be well attended and well managed. We have a foreboding that this will be the last Fair of the American Institute, at least for a few years to come; we hope not, but we cannot get rid of this feeling at present. There can be no doubt, now, of the certainty of a World's Fair to be held in this city next year; the gentlemen who are at the head of it have surmounted every obstacle, and it is stated that it will be opened on the 1st of next May (1853), and perhaps continue for four years.

Hitherto we have spoken against this Fair, and called it Riddle's Fair; we now understand that the influence which was exerted at the World's Fair, in London, and of which some of our exhibitors, spoke to us about with unpleasant feelings, and which was deprecated, as being connected with the origin and management of the World's Fair, in New York, is no longer an obstacle. We looked upon this Fair as not National, and when it was asserted, that we were to have a Crystal Palace designed in England, which was to be a mere model form of the London one, we could not speak of the scheme, but as it deserved. But the building to be erected will be American in design and construction, and so far recommends itself to our favor. We always stated we believed it would be a benefit to this city, and so it will, and we hope and believe it will be of immense benefit to our whole country. Measures have been matured, and some discordant elements removed, to make it honorable to all engaged, and profitable to exhibitors and visitors. France, England, Austria, Russia, Prussia, Belgium, Spain, Turkey, and the Isles of the sea, will contribute to the New York Crystal Palace. We may expect to see the greatest Fair ever held in our country, in this city, next year.

**Our First City Railroad.**

The Sixth Avenue Railroad is now completed, as far as fiftieth street, and the cars began running on Wednesday last week. Twenty cars have been placed on it, to follow one another every five minutes. The Common Council, after this road was nearly finished, by

a shameful piece of trickery, endeavored to stop it. If the effort had been successful, in all likelihood the tax payers would have been made to bear the whole expenses of the company to the song of half a million of dollars. This is essentially our first City Railroad, designed to supplant the omnibus system. It is to be hoped that it will be managed with discretion, spirit, and a sacred regard for the good of the people.

**The Yacht Race.—England Learning.**

The Regatta of the Royal Victoria Yacht Club, came off in England on the 23rd of last month. In the contest, the yacht America, which took the prize last year, under the able management of the Commodore of the New York Yacht Club, came in third, two other yachts being before her. This has been made the subject of some rejoicing on the other side of the water, and it has been said boastfully "the American crack clipper has been compelled to take the third place assigned to her, and the honors of the club have been nobly regained." This, we say, is not so; the America, in that race, proved herself, as she did before, to be far superior to any yacht in the Royal Club. In the race, by a mistake, she was sailed for some time on a wrong tack, and thus lost considerable time, but even after this, when the other yachts had obtained this advantage, she passed them all, and would have come in first had the breeze not fallen away almost to a calm. The fact admitted in all the accounts of this race, of the America overhauling and passing all the yachts in the squadron, when the breeze was stiff, is proof positive of her superior qualities. The America, by the regulations of the club, was only allowed to carry but one small top sail, while the winning yacht carried large balloon topsails. The name of the winning yacht is "The Arrow," she is an old stager, but during the last winter she was lengthened, and so far as it, could be done, was remodelled after the America. This fact is the most honorable of all to American skill, for it proves incontestibly that the advantage and superiority of the America is owing to the higher scientific attainments of the Americans in ship-building. The sails of the English yachts were cut in the American fashion, and every thing that possibly could be done, in copying after our celebrated yacht, is an evidence that Uncle John is not too old nor too stubborn to learn from his young relative.

Lord De Blaquiere, the owner of the America, has written a letter to the London Times, in which he speaks, with enthusiasm respecting her qualities. He has sailed 7,978 miles with her since last November, and when under the most trying circumstances of wind and weather, behaved well. She has astonished many practical seamen in the Malta squadron, and has been distinguished by an almost total absence of repairs owing to the economy of her rig. He believes that her well-judged symmetrical lines, and her simple rig are the causes of her unmatched success, and he hopes that his countrymen will profit by her example.

**The Flax Cotton.**

This substance, about which so much has been said, and said favorably too, appears to be a failure; at least this is the view we take of the subject.

A parliamentary paper, recently printed in England, contains a further report from Sir Robert Kane, the Director of the Museum of Irish Industry, on M. Claussen's invention for the production of flax cotton. Some surprise has been expressed, that, if M. Claussen's improvement contained anything real, that the facts have not been communicated to the public. The result of the experiments in Ireland do not, however, appear to sustain the expectation that a substitute for cotton has been found in Claussen's method of working flax. The agents acting for M. Claussen found it impossible to produce satisfactory results in those works which they had themselves selected, and where they had been working previously. This was attributed to defective machinery. Sir Robert Kane, in his report, says that several interesting facts have been already ascertained as to the real nature of the material produced, and as to the true action of the material used. He expresses himself

satisfied that M. Claussen's process does not at all produce a material approaching in structure or organic quality to cotton. The views of the bursting up of the fibres put forward by some of the persons, who have come forward to explain the process in public, do not appear to be well founded. The flax fibres are, in M. Claussen's process, excessively finely divided and separated from each other, but each remains still a thorough and complete flax fibre, and quite unlike cotton; and the same amount of division, and the same fineness and pliability of fibre, may be given, and often is given, to flax, by simple dressing, especially if the flax has been over-rotted. This point, as to structural character, is fundamental to the value and quality of the flax-cotton, and further experiments are to be made. It is asserted since this report that the various minor difficulties which have impeded the practical application of the discovery have been fully surmounted, and that the use of the article has been carried on with great profit for some time past by a body of individuals in Belgium.

We, however, accept the statements about its success with great caution; we are positive that many falsehoods have been told about the cheapness of this production. A patent has been secured for the United States, and a company has been formed for carrying out its objects, but the company, so far as we learn, have done nothing to merit much attention in the way of successfully competing with cotton. We were informed some time ago, that a factory to carry out Claussen's patent had been started at Fall River; but its products are very dilatory in coming to market. On page 125, Vol. 6, Sci. Am., we stated that the nature of what was called flax-cotton was "entirely different from cotton," and the testimony of Sir Robert Kane corroborates our statement. It seems then, that the flax-cotton, so far, has failed to realize the expectations of many, and at the same time, has not turned out according to the representations of those particularly interested in making good their own assertions about the superiority and advantages of the discovery.

**Telegraph Batteries.**

A few weeks ago we published a few statements respecting an invention made by Geo. Little, in Electric Telegraphs, and the "New York Courier and Enquirer" copied them. Some person connected and acquainted with telegraphs, has endeavored to correct some things in the short article, but it is very evident that he is a careless reader. It was thus stated in the article referred to—"Mr. Little calculated to save \$200,000 to the Telegraph Companies; he does not use platinum, mercury, nitric acid, nor sulphuric." Out of this the corrector goes on to prove that this cannot be, as the batteries for all the telegraphs in our country involve only an expense of about \$12,000 per annum. This may be true; we know that Mr. Jones puts down the expense for batteries at a far lower figure—only \$6,100—but the article referred to did not state that the whole saving was to be effected in the battery—it only states he does not use certain materials, and no more. He also asserts that Mr. Little "has discovered nothing new, that the idea of substituting the magnetic electric machine for the galvanic battery, is not a new one. In 1845, Prof. Morse made the experiment on the magnetic principle on the line between Baltimore and Washington, using a magnetic electric machine belonging to Dr. Page, of the Patent Office." He also states that Mr. Davis, of Boston, and Mr. Baily, of Detroit, made successful experiments with a like machine. We would state that like experiments were made twenty years before Prof. Morse attempted it; but how does this man know what machine Mr. Little uses? It was stated in our article that he recorded messages exactly like the chemical records of Bain; Prof. Morse never did that, and if Davis and Baily have done so, let them produce the documents.

**Boiler Explosions in France.**

In twenty-two years there have been only eighteen accidents in France by the explosion of boilers. In that country no locomotive, nor any steam boiler, can be used without having been first submitted to the examination and test of one of the government engineers

appointed for that purpose. This plan we hope to see adopted at no distant day in our own country. Out of 10,000 boilers in use, in one year, there were only two accidents took place. It is creditable to France that she carries out the laws she has enacted.

**What has been Done and what has to be Done.**

There is something almost ludicrous in seeing men in this enlightened day, pulling and puffing at some severe physical toil, when the same thing can be done by a machine whose iron arms never grow weary, and whose sturdy limbs never need repose. Brick-making was one of the most slavish occupations in the world, and a few years ago all the work was done by hand, but man has been driven—in many instances against his own will—from this brutish toil, and the machine now performs that labor, leaving man to follow a nobler destiny. It is needless for us to speak of a thousand blessed substitutions of machine for manual labor, such as the grist mill for the quern; the threshing mill for the flail; the spinning wheel for the spinning frame; the hand loom for the power loom, &c., our object principally, in the few words we have to say, is to direct the attention of mechanics and inventors to the duty of observing and marking such and such severe and toilsome occupations for which machine-labor might be substituted. A company has just been formed in this city, for the purpose of sawing fire-wood by machinery into proper lengths for stoves, and selling it in that state to purchasers. Now, although wood has been sawn by machinery into proper lengths for stoves in many places, still, until now, no such wood could be purchased in this city; the wood used was all sawn by men employed for that purpose with hand saws. It may be said "the men who made it their business to saw loads of wood from door to door, were not very highly paid for their severe toil, and they will thus be thrown out of earning their daily bread, therefore such machine-labor should be discountenanced." Were the premises correct, the conclusion would meet with our assent, but machine-labor, in the aggregate, has not yet created a surplus fund of idlers; men, when thrown out of one occupation, soon fall into others, and in the majority of past instances, the changes have been beneficial. The question might be asked, why was there not such a sensible wooden company organized in this city before? we really wonder why so many of our men of capital were so long wooden headed on the subject.

In this city, where there are so many new brick buildings in the course of erection all the time, it is certainly a subject of wonder to see all the mortar and brick carried up high ladders by men, having little angular wooden boxes called "hods" on their shoulders. The labor is most oppressive and severe; in our opinion, it could well be superseded by machinery, so as to save running up and down the ladders, at least; this surely could be done by block and tackle. We might present some other objects for the consideration of our readers, but as we have so many sermons to deliver in one year, we have said enough upon this text at present.

**Extension of a Patent.**

On the petition of Elisha K. Root, of Hartford Conn., praying for the extension of a patent granted to him the 10th day of December, 1838, for an improvement in punching or forming the eyes of axes, hatchets, &c., for seven years from the expiration of said patent, which takes place on the tenth day of December, 1852.

It is ordered that the said petition be heard at the Patent Office on Monday the 1st of November, 1852, at 12 o'clock M.; and all persons are notified to appear and show cause, if any they have, why said petition ought not to be granted.

Persons opposing the extension are required to file in the Patent Office their objections, specifically set forth in writing, at least twenty days before the day of hearing; all testimony filed by either party to be used at the said hearing, must be taken and transmitted in accordance with the rules of the office, which will be furnished on application.

THOS. EW BANK, Com. of Patents.  
Washington, August 12, 1852.