

Scientific American

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The Great Exhibition of Industry.

Last year Prince Albert projected the holding of a Great Fair in London, as an exhibition of the industrial products of all nations. Consequent upon the maturation of the project, invitations were sent to all the established governments in the world, to come there and exhibit the fruits of the genius and industry of the people belonging to the various countries connected with or attached to those governments. The invitations were responded to by every government invited, our own among the number. The Exhibition opened in the first week of last May, and closed on the eleventh day of last month, a period of five months. Since Adam was placed in Eden, history affords us no evidence of any other affair like it in utility, greatness, and grandeur. It is true that the Greek Fairs might justly be called the preludes of this modern one: for to them the Tyrian came with his purple, the Etruscan with his vase, and the Egyptian with his glass; but how different were the objects of the two. The old Fairs were instituted for the purposes of barter, the modern Great Fair merely as an exhibition of the state of the arts and manufactures of different countries. What a change has come over the world since Eschines reproached Demosthenes with trafficking like a rogue at the Olympian Games.

To receive the products of industry, in the course of a few months there was a building designed and erected, the very recollection of which will go down to posterity as one of the World's wonders. A few months before it was commenced, the materials of which it was made were lying by the sea shore, in the shape of sand and salt, and in the bowels of the earth as the crude ore of iron. But although that building was wonderful on account of the materials of which it was composed, it was more an object of wonder and admiration on account of its harmonious proportions, its rare originality of design, and its great dimensions. Some idea of its vast extent may be formed when we consider that, after its halls were filled with huge statues, monster engines, carriages, implements and goods of every description, yet sixty thousand people could freely move through its spacious avenues and corridors. In that building, from the first day it was opened until the day it was closed, there were seen, day after day, from five to sixty thousand persons, all intent upon surveying the handiworks of men who lived near and remote, and whose genius and art were as different and separate as their climes and tongues. What strange ideas, and what strange words were uttered there. The Greek and the Roman were there, but how different from the Greek and the Roman of old. The Egyptian and American, the Scythian, and Saxon; the German and Gaul were there, but what a change since the Carthaginian and Greek were the princes in science and art.

The Great Fair was held in a country whose inhabitants, in the days of Tacitus, dwelt in caves and were clothed with the products of the chase—savages they were, these our forefathers, and so low in the scale of civilization as to be considered unfit for Roman slaves. Now what are they, and what is their country? They are far more elevated in civilization than the Roman, and their empire is greater than was that of the proudest Cæsar. How different is the modern from the old ages of the world. The steamboat and the railroad were then unknown, and the caravan from India to Thermopila was more than a year on its tedious journey. Then the world was a scene of wide-spread ignorance; nations living a few hundred miles separate were often totally ignorant of one another, hence wild men of the woods haunted the imaginations of their poets, and satyrs and strange beings peopled the unexplored forests; yea, even in Queen Elizabeth's time, a dead negro in London was as great an object of curiosity as any thing in the Exhibition. But we live no longer in "the wide, wide world;" the agencies of modern invention have made all mankind next-door neighbors. After all, however, the philosopher standing in the midst of the Great Exhi-

lition, and viewing the wonderful and various works of art displayed there, and, above all, hearing so many languages and seeing so many varieties of men, could not help exclaiming—"what a queer being man is;" how applicable the sentiment, "he is fearfully and wonderfully made;" and, after viewing all the products of his genius and skill, he could not help quoting the poet, "the greatest study of mankind is man."

The question arises, what will be the result of the Great Industrial Exhibition? If no good will be accomplished, then it must produce evil; there can be no question of this, we think. We believe that great good has been done, and more will yet result from it. Our countrymen have come off with honors—great honors. We advocated our participation in the Exhibition, for we knew our countrymen could excel in many things; they have excelled, and it has been admitted that "every triumph of practical utility belonged to the Americans." Although our countrymen have done well, for which we return them our sincere thanks for their heroic individual efforts to sustain the honor of their country; still we have regrets, for we know that we could have excelled in five hundred things in which we were not represented at all. The great honor which belongs to our American inventors who were exhibitors there, consists in this, they have extorted praises from those who, at one time, heaped contumely upon them.

Medical.

NEW CURE FOR CONSUMPTION.—The Mobile Tribune directs attention to a new cure of consumption described in the New Orleans Medical Register, by Professor Stone, on the virtues of the "Phosphate of Lime in scrofula and other depraved states of the system," which is of some moment. It was suggested by an essay in the London Lancet, on the "physical pathology of the oxalate and phosphate of lime, and their relation to the formation of cells."

"The conclusions of the author (says Professor Stone) are based upon careful chemical research and results from the use of the remedy. His researches show that in man, as well as in vegetables and inferior animals, phosphate of lime as well as albumen and fat is abundantly essential for the formation of cells, and he considers that many of the pathological states of the system depended upon a deficiency of this salt. The affections in which it is advised are ulcerations dependant upon general dyscrasia, and not a mere local affection; infantile atrophy; in those suffering from rickets and consequent diarrhoea and tuberculous diseases, particularly of the lungs in early stages."

Struck by this article, Professor Stone tested it, and he thus describes three cases in which virtues were very obvious. The first was that of a slave, who was admitted to the Professor's Infirmary in July, with a disease of the nose, the whole system showing great progress in scrofulous decay. The usual remedies were unsuccessfully applied until August, when cod-liver oil was used, but the disorganization of the stomach was increased by it. The phosphate of lime was then applied—eight grains, three times a day. Its good effects were soon apparent. It and the oil were therefore administered together, and the patient soon was restored to health.

The second case is that of a young lady, aged 24. Her disease was one of "unmixed phthisis, which might have been expected to terminate in the course of a few months," fatally. The upper parts of both her lungs were beginning to soften. The case was evidently a bad one. The treatment of cod-liver oil was at first used, but without marked improvement. The phosphate of lime was then administered with the oil, and the result, as in the case of the negro, was soon apparent. The patient was rapidly getting well.

The third case was that of a child, seven years of age, in which the phosphate of lime was used with complete success.

Whatever can alleviate or prove a curative to this dreadful disease—a disease which claims more victims than any other in our city, and in the whole of the Eastern and Middle States, has great claims upon public attention. Of course we cannot do anything more than present the above statements; we have no

opinion to give but this, that we remember having heard, twenty years ago, of the phosphate of lime, in the form of egg shells, being prescribed successfully in two cases of consumption.

PORK AS FOOD.—The Boston Surgical and Medical Journal states that the New Hampshire Shakers have abandoned the use of pork as an article of food. It believes the Shakers will be gainers in health by this resolution. It gives Moses the credit of being sagacious in interdicting its use among the Jews, and believes he well understood its injurious effects upon the Egyptians. "Scrofulous affections, if not generated," it says, "are thought to be aggravated by the use of pork, and measles have been charged to its use." It states that we suffer more from skin diseases than the people of those countries where pork is not used as food. We do not entertain the same views as the "Journal." Pork made from good corn and potato-fed animals, is just as healthy food as any other. In some countries where pork is little used such as Norway, Denmark, the Highlands of Scotland, &c., cutaneous diseases are more common than with us.

IODIDE OF POTASSIUM FOR ASTHMA.—F. H. Dean, M. D., read a paper at the September meeting of the Medical Society of Virginia, in which he relates three cases of successful treatment of asthma by the use of hydrate of potass. He was first informed of its beneficial effects by a clergyman of Illinois, who, for a great number of years, was very ill with the disease, and who had travelled and consulted the first physicians in Europe, for relief in vain. He is now able to preach, and he is enabled to ward off a paroxysm of this disease by the use of this medicine. He has prescribed eight grains as a dose, taken every four hours, in severe cases.

ALUM FOR LEAD COLIC.—M. Brachet, of Paris, in a chapter on the treatment of this disease, looks to alum as the sheet-anchor in its treatment. He has employed it since 1838, without accident or disappointment occurring. He prescribes it in doses of one and a half to two drachms, in barley-water, to be taken during the day, in drinks, to which has been added 50 drops of laudanum. (This quantity is to last all day, not in one drink.) If the bowels do not act by the third day, a mild laxative is given, and the case is complete. More than 150 cases have been treated thus with complete success, the alum being continued for a day or two after the symptoms had disappeared. Alum, it will be remembered, is the sulphate of alumina, and bears upon its front, a good recommendation. It is a simple medicine, and has also done good service, applied in the same way, for dysentery.

Complimentary to the Scientific American.

Mr. Claiborne, editor of the New Orleans Courier, in speaking of the Scientific American, says it "is certainly one of the most valuable journals in this or any other country, and its contents are full of instruction and entertainment to the mechanic, or planter who desires to embellish, improve, and economize labor, to all classes of readers, in short it is a most valuable publication. It is very ably edited, its details and explanations render the most intricate piece of machinery plain and practicable. We strongly commend it to the public."

The Vicksburg Miss. Whig say:—

"We do not hesitate to recommend it as the best paper of the kind in the United States."

The Savannah Georgian says:—"Common consent of all acquainted with it, pronounces it a work of genuine and unquestionable merit."

The Portland Transcript says:—"The information it contains during the year on a thousand topics is worth many times the price or subscription."

Rev. T. F. Norris, editor of the Boston Olive Branch, an interesting paper—has done the Scientific American good service by frequent notices. In a late number he says:—

"This is a paper which should be in the hands of every mechanic, and every body wishing a general knowledge of mechanical science, and the improvements constantly being made in the mechanic arts. It well deserves a generous patronage, which we are happy to learn it enjoys."

The Journal, Reading, Pa., says:—"This pa-

per is the best scientific and mechanical journal in the country."

The Reveille, Pekin, Ill., says:—"It gives the earliest and most valuable accounts of all the various inventions and improvements going on in this country or in Europe."

The Cultivator, Columbus, Ohio, says:—"This is a most valuable and reliable record of inventions and improvements. Its reputation is too well established to need any endorsement from us."

The Fort Wayne, Ind., Sentinel says:—"This truly useful journal contains a larger amount of valuable information for mechanics, manufacturers, and scientific men than any periodical in this country."

These notices are copied from journals published in various sections of our country. We select these out of a large number, and trust our readers will pardon us for occupying space properly belonging to them.

Electro-Magnetism as a Motive Power

Examiner Page, M. D., of the Patent Office, has been in our city during the past and present weeks, and has delivered lectures on his Electro Magnetic Reciprocating and Rotary Engines. His reciprocating engine is of eight horse-power, and resembles a horizontal steam engine. We were highly pleased with his experiments and his lectures, but we will leave all further explanation of them until our next number, when we shall present something to our readers on the subject, both useful and interesting. A number of papers have given sketches of the lectures, but they are very unsatisfactory, and do not touch the main scientific and mechanical points. We hope to be able to do so with satisfaction to our readers.

Patent Case.

U. S. District Court, Philadelphia, Judge Grier presiding; Oct. 27, 1851.—The case was Burtis vs. Ashton, being an application for a special injunction to restrain the defendant from manufacturing mouldings by the Knowle's Moulding Machine, which is alleged to be an infringement of the long-litigated Woodworth Planing Patent. The injunction was refused. The counsel for the complainant then asked that the matter might be referred to a Master in Chancery, with authority to examine and report. This was opposed, and an issue asked to try the question of infringement, which was granted by the court. An application was then made that the defendant enter into security to indemnify the complainant from damages *ad interim*. This was likewise strenuously opposed, and the application was dismissed. Theodore Cuyler, Esq., for complainant; Henry B. Hirst, Esq., for the defence.

Great Patent Case—McCormick's Reaper.

U. S. Circuit Court, Albany, N. Y., October 31; Judge Nelson presiding.—This case occupied the court for six days: the parties were McCormick vs. Seymour & Morgan, of Brockport, N. Y. The action was one at law for the infringement of the patent of the Virginia Reaping Machine, the same which has cut such a glorious figure in England, and for which the Gold Council Medal of the Great Exhibition was awarded.

The jury rendered a verdict in favor of the plaintiff, with damages against the defendant of the great sum of \$17,606.

Telegraph Case.

U. S. Circuit Court, Philadelphia.—Judge Kane gave his decision on last Monday morning (Nov. 3rd) in the case of Morse vs. Bain sustaining the claims of Morse throughout. The case is to be taken to the Supreme Court.

Steam Governor Valves.

In connection with our notices last week, of Steam Engines, we intended to speak of Junius Judson's "Governor Valves" on exhibition at the Fair, for which a gold medal was awarded. Patents for this improvement have been secured in this country and England, and it has been successfully applied to several steam engines, with the most gratifying results. The improvement consists in making a valve of any form, to move without friction, by the action of the steam, and also with apertures which increase in diameter as the valves open, so that the same resistance will open the same area of valve opening, or nearly; whether the load upon the engine be great or small. Mr. Judson resides in Rochester N. Y.