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**Inventors' Congress.—Great Enthusiasm!—Six Members in Council!!**

An adjourned congress of inventors and authors (so called) was held at the Crystal Palace on the forenoon of the 28th ult., for the purpose of adopting a constitution for a confederation of inventors and authors, to be composed of STATE COUNCILS, and a Grand National Council—the latter to have its headquarters and its executive officers, and to hold its minor sessions and annual congress in this city.

Clinton Roosevelt acted the part of President of this ponderous body; a constitution was adopted, and a declaration of principles put forth. One object of this movement was stated to be the formation of a party having political weight, to carry out certain particular measures, such as reforming the patent laws, &c.

Such an association is, in its design, an impracticable piece of foggyism, totally useless and inefficient to do anything but evil to inventors. We have too many political parties inflicting our country already, without adding an inventors and authors' party to the list. Such a party would be one of caste and class, and would justly excite the jealousy of other classes. As well might mechanics, manufacturers, lawyers, and merchants, soldiers and sailors form parties on the same caste principles, and organize themselves into political clubs and conclaves. Such a party and such associations of persons are generally subversive of honest legislation, and we know they will be repudiated by all intelligent inventors and authors—they do not want to be considered a one-sided class different from the people, but of and belonging to the people.

If any necessary reform of the patent laws is wanted, such a party would tend to defeat this object, and thus inflict injury upon inventors, who require the good will, the influence, and the political weight of the people to get a redress of grievances. An exclusive inventors organization would lead the public to suspect them of seeking exclusive privileges, and thus defeat the very objects they had in view, even if they were commendable and just.

As it is intended by those interested here in this movement to send circulars to inventors throughout the different States, inviting them to contribute and cooperate in the formation of this party, we advise inventors not to be deceived as to the numbers and influence of those who have originated the scheme. We attended the meeting, and it was composed of exactly six persons.

It excited no interest whatever among our respectable inventors who did not attend it, none of them having the least confidence in the practical wisdom of its founders or the necessity for such an institution.

As notices of this affair have appeared in various papers, magnifying its importance, the public can judge whether the astonishing number of six persons, in such a city as New York, entitles such a meeting to the appellation of a "Congress of Inventors." Why the thing is a perfect mockery—a great mountain and a very small mouse.

**Automatic Whistle.—Safety on Railroads.**

Every improvement that gives security and safety, on railroads, should be fostered and encouraged. Of the many accidents that occur on railroads, nearly all are the result of the want of proper care and management on the part of the operatives.

The engineer of a train has the greatest responsibility and the most delicate duties to perform. He is subjected to certain rules and regulations, issued by the executive officers of the company. With those rules and regulations he must be perfectly conversant, and they not only refer to his own train, but they relate to all other trains on the road. Every motion of his engine must be constantly watched while it is in operation; he must know by personal inspection that his machinery is all right; he must regulate his quantity of steam, and have a watchful eye on his assistant and fireman; he must regulate his

speed by the changing and varying grades of the road; every mile, yes, every foot of track must be carefully scrutinized; every switch must be seen by him to be correct, and at a long distance ahead of his rushing train; he must warn all persons on the railroad crossings that his train is approaching, and the same must be done at all stations. All these and many more duties must be performed by him with a clock-work regularity and correctness.

Knowing these great and varied duties of our locomotive engineers, it is not surprising that many accidents should occur from the neglect of some of them; the wonder is without exposed railroads, that more do not take place. Every invention which has for its object the positive execution of a single duty, to relieve the engineer, must certainly add to the safety of railroad traveling, and this is peculiarly the case, with operating the steam whistle, which requires to be sounded so very often.

There is a State law compelling an engineer to blow his whistle at all crossings and while approaching all depots, day or night. This duty is frequently neglected at the proper time and place, from the pressure of other duties, from darkness, and perhaps from inattention, and serious consequences are the results. But a remedy has been provided in the Automatic Whistle of Jas. Harrison, Jr., of the Union Works, corner 22nd street and Second Avenue, of this city, and described on page 245, Vol. 11, SCIENTIFIC AMERICAN.

It has been applied to the locomotive *Fordham*—running on the Harlem Railroad, and has operated with unerring certainty, and in no instance, failed to give the proper alarm according to the testimony of the Master Machinist, M. P. Miller. A short time since a party composed of several members of the press, in this city, superintendents of railroads and others, were invited to witness its operations on the *Fordham*, in running to Croton Falls (51 miles) and back. From New York to Croton Falls, and back, there are 104 crossings and depots, or points where the engineer should and must sound his whistle. Previous to starting the whistle, it had been "set" to alarm at all these stations or crossings, and it did not fail to give the warning at the very bar and tie for which it had been adjusted.

Being a part of the engine, it requires no effort on the part of the engineer to operate, and is entirely independent of him. When once adjusted, it must continue so for the whole time the engine is run upon the road. We see no reason why it should not be brought into general use, upon all railroads, as an unquestionable means of safety. It is simple in construction and not expensive in its application to locomotives, and we commend it to the attention of railroad men to investigate.

New Spring Saddle.

Fig. 1

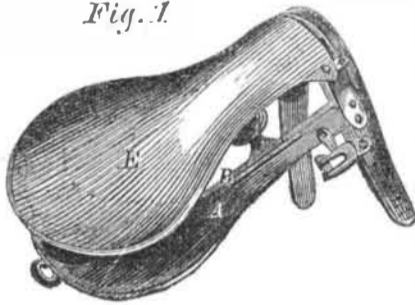
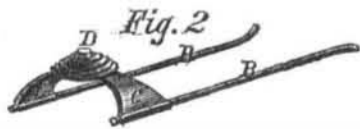


Fig. 2



By Prof. John C. F. Salomon and Geo. E. Cooper, of Baltimore, Md.—Consists in providing the saddle tree with a spring, which relieves the rider from the effects of rough jolts, and renders horseback riding much more comfortable than it is, when the ordinary saddle is used.

In our cut, A, is the saddle-tree and B a frame, secured on the edge of A. C is a spring chair extending across the saddle-tree, and furnished, in its center with a volute spring, D, said spring and chair rest and slide on frame B, and may be moved back and forth

upon it at pleasure. The seat, E, is made of metal, and may be covered with any suitable material. No bolstering or strapping is required. Patented July 22, 1856. For further information address the patentees as above.

**Great Exhibition of the American Institute at the Crystal Palace, New York. SIXTH WEEK CONTINUED. Close of the Exhibition.**

Want of space, last week, prevented us from closing up our reports of the Exhibition, which terminated, as announced on the 25th ult. On the 28th the regular closing Address was delivered at the Broadway Tabernacle, by Prof. Bache, of the U. S. Coast Survey. A large audience of ladies and gentlemen were in attendance. It has heretofore been customary to announce the awards of premiums at these annual meetings, but it was omitted on this occasion, and even at the hour of going to press the premiums had not been made public.

The examinations by the judges, this year, were conducted in a better and more careful manner than in times past. It has been usual for the judges to appoint a day, or an hour, when they would meet the exhibitor to examine his article and receive from him a personal explanation of its merits. Thus the exhibitor, cocked and primed beforehand, would often succeed in procuring an award to which, in strict justice, he was not entitled. These circumstances, combined with a general laxity, or want of system, in making the awards, have always been the cause of dissatisfaction.

The managers, we learn, desirous of preventing such abuses this year, caused the examinations to be made, for the most part, in secret. The judges passed around as spectators, and made their observations unknown to the exhibitors. This was a good method.

The premiums are now undergoing digestion. They will shortly be announced. We shall then see whether favoritism or impartiality, has ruled in the councils of the Institute,—whether bed-quilts and confectionery, toys and toupees, have, as formerly, overridden genius and science.

**Meetings of the Exhibitors.**

On the 27th ult. a large and enthusiastic meeting of exhibitors was held in the Palace for the purpose of expressing their opinions in relation to its management. Resolutions of thanks to the officers and Managers were unanimously adopted. These expressed gratitude for the liberal accommodation afforded, and the great attention exhibitors had received. The utmost courtesy was shown to them; every wish met with a response, and every want was promptly supplied. All the exhibitors appeared highly gratified with the manner they had been treated, and it was generally acknowledged that it was the best managed Industrial Fair ever held in this city.

**The Annual Address.**

Prof. Bache, as stated, delivered the Annual Address on the 28th. His subject related to the benefits of education, science, and invention, and contained some brilliant passages. He alluded to the rapid growth of everything in our country—the march of improvement in science and art—and how from very small beginnings the American Institute was now able to fill with articles for exhibition such a large building as the Crystal Palace. He did not specifically dwell upon certain machines exhibited, nor did he endorse the sublime opinions of Judge Meigs in his Opening Address, namely, that the steam engine was about to be surpassed by the new and wonderful power of electro-magnetism displayed in the electric machines on exhibition, which, alas for the scientific and practical acumen of the Judge, remained during the Fair like gaunt, and grieved spectators of their own insolvency.

Prof. B. touched upon the subject of weights and measures, and hoped the day would soon come when there would be a universal system adopted. He contended for a speedy reform of our weights and measures, advocating one unit of weight, one unit of line measure, and one unit of cubic measure. He spoke of the conduct of Le Verrier, the French astronomer, who recently has put forth as something new, and his own discovery, the method of determining longitudes by the electric telegraph, which has been practiced in the United States

for eight years. How different was the spirit of the Astronomer Royal of England—Prof. Airy—who has given this invention the title of "the American Method of Observation."

The address occupied about two hours in its delivery, and if Prof. Bache could have had more time to condense his matter, and to have made it one-half shorter, it would have been much better.

We conclude our notices of articles on exhibition as follows:—

**Verne's Electro-Magnetic Engine.**

An Electro-magnetic Engine is composed of a series of electro-magnets, the circuits of which are broken alternately as they revolve; the current being generated by a battery. On page 184, Vol. 9, SCIENTIFIC AMERICAN, we illustrated the Electro-magnetic Engine of Prof. Vergnes, of this city, for which he received a patent on the 15th of April last; and a very large engine of this character was early put on exhibition. High hopes were excited respecting its operations, but owing to some defect—some break in its complex and intricate conductors—it failed to operate with satisfaction at any time, and stood motionless during the Fair.

*The Magneto-Electric Engine.*—This machine is entirely different in its nature from the Electro-magnet Engine; the latter is operated by a current generated in a battery; this one is driven by another power (mechanical) and generates a current in itself from permanent magnets and helices, placed near to one another, and revolved in close proximity to their poles. If a piece of insulated copper wire is wrapped spirally around a piece of soft iron, the ends of which are allowed to project beyond the coil, the ends of which are brought near to one another, and if this helix is revolved very close to the poles of a powerful permanent magnet, a current of electricity will be generated and pass along the wires of the coil. This is the simple magneto-electric engine of Saxton. If several helices and magnets are fitted up in a machine, and thus operated, a very powerful current is generated by conducting the several currents of the magnets into one main current. This is the character of Edward Shephard's engine on exhibition. He obtained a patent on the 19th Aug. last, for some devices in its construction, but Dr. Page is the first person who made such an engine (condensing the currents into one) in 1838. Water can be decomposed by such a current, and electroplating has been performed by such machines.

This machine was operated very seldom during the Fair, and public expectation was disappointed by both of these engines.

**Carriage Springs.**

D. M. Grant, 239 Broadway, New York, exhibits vehicles furnished with *Murgatroyd's* patent springs. Their elasticity is greater than ordinary springs: they are cheaper, it is said, only half the usual quantity of steel being used; they permit the vehicle to be made one-third lighter, render it more durable and much more easy for both passenger and horse. A practical trial of a vehicle fitted with these springs, satisfies us that the improvement is a valuable one.

**Oscillating Engines.**

*Tousley & Reed*, of this city, exhibit one of their patent Oscillating Engines, with boiler combined. The compactness and simplicity of this invention form noticeable features. The steam fire engine of Lee & Learned, which took the prize at the late test trial, at the Crystal Palace, is driven by *Tousley & Reed's* engines.

*Booth & Canfield* exhibit a Governor Cutoff Oscillating Engine, which is simple and said to work well.

**Atmospheric Forge and Trip Hammer.**

Ezra Jones, of Rochester, N. Y., exhibits *Hughes' patent Trip Hammer*. It is simple, compact, and the force of its blows are regulated with great precision, at the will of the operator. See engraving and description in the SCIENTIFIC AMERICAN, Vol. 10, page 65.

**Water Filter.**

James H. Wright, of this city, exhibits his newly patented water filter, for family use, and other purposes. The case of the filter is divided into two chambers, from one of which the filtered water issues. The other chamber gives a more rapid supply, but the water is