

MISCELLANEOUS.

The Extension of Patents by Congress.

The extension of patents by special acts of Congress, however republican it may appear to some people, as being acts of the immediate representatives of the people, is a wrong principle of legislation, and the acts springing from it, instead of being republican often partake of a most despotic character. What value would any man put upon legislative republic, assemblies, universal suffrage, and vote by ballot, if trial by jury and the law of habeas corpus were obliterated from our institutions? Very little indeed. When a patentee has not been able to obtain full remuneration for his invention during the first fourteen years of its existence, the patent law provides for the extension of the same for seven years. To do this, a fair trial is had upon the merits of the case; the patentee, and those who may be honestly opposed to the extension of the patent, are obliged to produce evidence for and against the extension. There is a trial of the case on its merits, and a decision rendered according to the testimony adduced. There is something fair in this, but it is otherwise with the application for the extension of a patent by Congress. The applicant may manage things with so much plausibility, and concoct measures so secretly and discreetly for his own benefit, as to get a patent extended before the people are aware of any attempts having been made to get it. What would the public have known about the application for the extension of the Woodworth Patent, or the Patent for Parker's Water Wheel, but for the *Scientific American*? Nothing at all. Petitions for the extension of patents, by interested parties, have been exceedingly voluminous during the present Session of Congress. There are no less than four applications for the extension of patents, now before Congress, viz., the famous Woodworth Patent (the present patent has nearly five years yet to run, and the attempt to get the extension now, was intended, no doubt, to be silent, deep, and irresistible—a *dark transaction*); the patent for Hotchkiss's Water Wheel; Parker's Water Wheel, and McCormick's Reaper. I would rejoice to see all the inventors of useful improvements amply rewarded for their inventions; and I am glad to see pirates of patent rights punished for their cupidity and dishonesty; still, it is no more than just and right that those who are interested in opposing certain patents should be heard, but for this no provision is made in respect to the extension of patents by special Act of Congress. A few years ago petitions were presented to Congress for the extension of a patent for "Wood's Plow," which, if it had passed by a special act, every American farmer would have had to pay 50 cents as a tax, if he used a cast-iron mould board. Wood was not the original inventor, neither, it seemed, but at one time it appeared as if the Bill would be passed by Congress. The people have to watch the actions of Congress like hawks, for fear that some mine, like that of the "Wood Patent," is not sprung upon them before they are aware of it.

JUNIUS REDIVIVUS.

[I shall show, next week, that great injustice is often done by one inventor to another, by the mode which some patentees pursue to make money.

J. R.

Fat People.

Dr. Chambers, of London, in a recent lecture before the Royal College of Physicians, on the subject of corpulency, considered it in the light of a hereditary disease, and endemic in several countries. The Anglo Saxon race, since the days of Erasmus, has exhibited a tendency to fatness, and it has often been remarked that, in London, there were more than one corpulent person in every hundred. The Irish and Scotch had few corpulent persons among them; the Americans are lean—so are the French and Italians. Fatness generally displays itself in well-fed persons, who indulge in ease and luxury. In the case of Mary, Queen of Scots, and Napoleon, fatness was brought on by confinement and grief. In nearly all cases, mental anxiety, or activity, has a thinning effect on the human system. In a healthy state, all human beings contain a portion of fat and in an adult person, it

forms about one-twentieth of the whole weight. Without it, we would appear scraggy, like a withered apple. It fills up the interstices between the muscles, and gives a pleasing contour to the body. It facilitates motion, and acts as an external defence from the cold, and it performs the chemical office of supplying carbon for the system. It is the fat of hibernating animals which enables them to subsist during the long winter months. Liebig says, "the proximate condition of forming fat, is a deficiency of oxygen." The way to consume fat, is to increase the quantity of

oxygen inspired by active physical exercise. No hunter, hard-working man, nor private soldier, is ever found in a fat state. If idle people wish to reduce their fat, they should reduce the quantity of this food. Dr. Chambers believes that the middle and upper classes of England eat a great deal too much food, and their moral and mental health is affected thereby, and the doctors do not insist enough on this branch of hygiene, for, knowing the weak points of their rich patients—their stomachs—they let the cook alone, and this gives them—the doctors—more work.

machine to the rock. The fragments broken away, by the blast will then be loaded and drawn back to the mouth of the tunnel. The machine is again fed forward, and its successive operations will be the same as already described.

It will weigh, with its frame, from eighty to ninety tons. It is intended to work it with two stationary engines of forty horse-power each.

Galvanic Batteries.

We are requested by Prof. Mathiot, of Washington, whose name appears in the notice of a voltaic battery by Prof. Page, in *Silliman's Journal*, and copied by us in our last number, to state that Prof. Page is quite in error in supposing that the instruments which Prof. Mathiot exhibited to him in use, are the same in construction and purpose with the apparatus figured and described by Prof. Page, in *Silliman's Journal*, and in this paper last week, and that Mr. Mathiot, instead of thinking highly of Prof. Page's apparatus, is at a loss to conceive of any use it might be for, much less can he conceive how the learned professor can expect his instruments to possess the qualities and uses he claims for them, while they exhibit in their construction such gross disregard for the first principles of electro-chemistry. Prof. Mathiot further states that Mr. James Green, of 442 Broadway, New York, in conjunction with himself, effected a combination of the batteries of Smee and Kemp, in which improved battery nothing is consumed for which equivalent work is not obtained—which delivers its sulphate of zinc in the solid form, instead of in solution, gives a stronger current of quantity than any other battery of equal surface, will maintain a constant action for any desired time, and suffers no deterioration when not in use. These batteries were made of silvered and platinized wire-gauze, of perforated and platinized plates of silver and platinum, and of metal-lace or open-work plates made by electro-deposition. And all this was done in 1845-47, and Mr. Green has now in his store at 442 Broadway, some of the batteries then made; no other person ever had any.

He also says that no description of any battery answering to the above was ever published by any person in any journal prior to the present year, except by himself in the *Scientific American* for 1850.

Also he says that if any professor of science will controvert the above, that then he will, in the columns of this paper, by quotations from the scientific journals, and by mathematical and by chemical principles and reasons, prove that the above is entirely correct—and gives useful modes of constructing and using batteries never yet published.

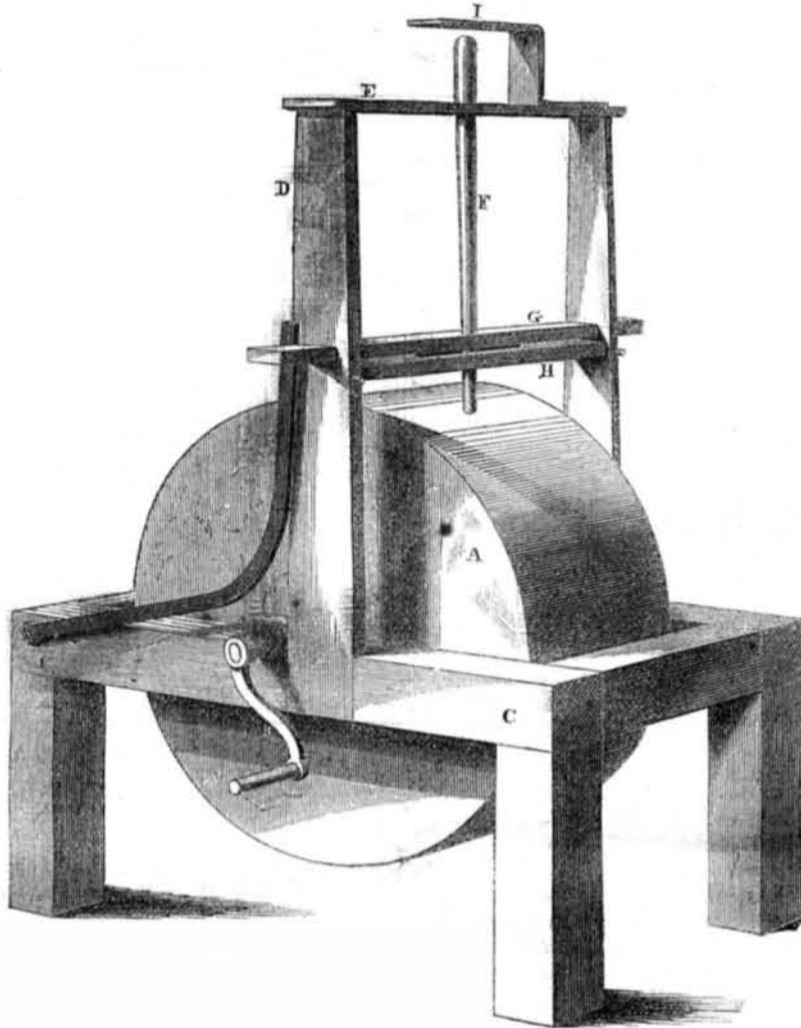
Law of Patents.

We learn from the *Herald*, of Thursday week, that George Gifford, Esq., of this city, delivered a lecture in the Circuit Court, new City Hall, Wednesday evening, on the law of patents for new inventions. "The attendance was very small, there not being more than thirty persons present, and amongst them there were but few members, whether owing to the notorious fact that gentlemen of the profession are not fond of attending the court without the *quid pro quo*, or the equally well-known fact that this particular subject is exceedingly dry and that the machinery, even though patent, does not work well unless copiously lubricated by the liquid eloquence of extraordinary oratory, we cannot pretend to say. The subject, however, is a very important one, and the lecture was worthy of a larger audience. It was well studied, and though somewhat elaborate, Mr. Gifford manifested an intimate knowledge of this branch of legal jurisprudence, which could not have been tedious to those who felt an interest in the subject."

Mr. Gifford is one of the most able patent attorneys in the country, and is fully competent to enlighten the legal profession upon all subjects connected with the law of patents.

Lake Superior Rising.

The water level in Lake Superior is higher this winter than it has been for a long period. At the mouth of Ontonagon river it is sweeping over the marks of its ancient boundaries, and uprooting trees of twenty or thirty years growth.

IMPROVED SELF-SHARPENING GRINDSTONE.

The accompanying engraving is a perspective view of an improved Self-Sharpening Grindstone, invented by Mr. Jesse Pannabecker, of Elizabeth Township, Lancaster Co., Pa.

A is the grindstone; B is the crank; C is the bed frame; D is the upright frame; E is the head-piece of the upright frame; F is the picker,—an iron rod passing through the head-piece, E, the circular aperture of the sliding cross-piece, G, the oblong aperture of the stationary brace or cross-piece, H, and resting upon the grindstone, A. By the operation of the grindstone the picker, F, is raised and thrown upwards against a cross-piece, I, which causes it to recoil upon the grindstone, A, thus keeping up a continual picking motion, sharpening the stone as required, and by the sliding cross-piece, G, the picker is moved to either side of the grindstone, and the sharpening process continued. If the grindstone should, in some parts, be softer than others, the soft parts or the parts most worn, are not operated on by the picker, because the lever, cam J, being then lowered, and resting upon the or eccentric, K, at each revolution of which it is raised against the sliding cross-piece, G, which raises the cross-piece and picker at the same time, and thus the picker is prevented from touching or striking the broken or soft parts of the grindstone.

The object of this invention is to use a hard grindstone, and wear it evenly at the same time. The greater number of stones are generally too hard, and get smooth and become useless, but by this mode every stone is useful. The stone being kept in continuous motion, according to the speed of the machinery of the factory, is, at the same time, regularly sharpened. And, again, by a high speed, stones are sometimes burst asunder, because they are too soft; but the great advan-

tage now gained is to use the best of hard stone, which can, by this improvement, be kept all the while sharp, even during high speed, and the grain kept open, and no danger of the stone bursting. More work can be performed in grinding, and every stone that heretofore had to be thrown aside as useless, can now be made of value.

For more information address Mr. Pannabecker, of Durlack P. O., Pa.

A Great Drill.

There is now constructing at Souther's Globe Works, South Boston, a most stupendous drill for boring the tunnel through the Hoosac Mountain. The tunnel is to be 24 feet in diameter. The drill has a large wheel with a thin rim placed upon a revolving shaft. The rim is mounted with steam cutters, which are of such size, and so arranged, as to cut, when in motion, a circular trench or groove in the face of the rock, one foot in width, and of the diameter of the tunnel. The shaft is led forward with the sliding frame, by means of a powerful screw. The distance through which the shaft, with its wheel and cutters, is made to pass, is five feet for each adjustment of the machine, this distance being the depth of the rim upon the main wheel. Upon the end of the shaft, and in the centre of the circle described by the motion of the cutters, a drill of six inches diameter is attached. This drill enters with the cutters, and to the same distance in the rock. On the rim of the main wheel are buckets to conduct the rock cut away.

When the rim of the wheel has entered the rock to its full extent, the machine will be drawn back, a charge of powder placed in the central hole, and the rock within the circular trench will be removed at one blast. One of the arms of the main wheel is made removable, so as to allow a car to pass under the