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Opponents of the Woodworth Patent Extension.

Are you really aware of the fact that no effort is to be left unaccomplished to get this odious monopoly extended by an act of Congress within the next three or four weeks? Yet such is the fact, and it will surely be done if influence, money, and unscrupulous intrigue can do it. Silently and yet powerfully are these schemers at work, infusing their unholy desires into the minds of Members of Congress. This needs to be counteracted at once, and to do it with success a good and reliable man should be stationed at Washington to watch every movement of the extensionists, and ready, with reasons of justice and sound argument, to meet and expose their progress. This can and should be done without a moment's delay. A few hundred dollars, judiciously used, will secure the outside influence of some ex-Member who understands all the ropes in this Congressional ship, and could pull them with great service at this particular juncture.

This we consider a hateful business, but parties who oppose the extension upon principle, without pecuniary interest in it either way, cannot afford to spend their time and money to the neglect of other duties, in attending to this needful work. If there was ever a work in which we feel a pride to cooperate, it is in opposing this extension. We feel that our consciences are thoroughly enlightened upon this subject, and if there is any honesty in the professions of public men, this foul blot can never stain the annals of our legislation.

The dominant party in Congress professes to be antagonistic to special legislation for the benefit of monopolies that crush, or in any way interfere with the true interests of the people. Now if there ever was a case which comes properly under this head, it is the Woodworth Patent Monopoly. It has been held up as a terrifying ogre to every inventor who has succeeded in inventing a planing machine, and by a most studied system of ruinous litigation to individuals—no one has been able to withstand the desperate assaults of the monopolists. With Letters Patent in hand, twice extended, and once re-issued, with no credit to those who participated in it, and with a monopoly yielding hundreds of thousands every year—it requires no great keenness of perception to see exactly how inventors of planing machines, and small manufacturers of lumber, are made to succumb. It is like one man, with a single blunderbuss, undertaking to rout a whole regiment of well drilled troops, supplied with all needful munitions.

We feel, now, that something earnest should be done, and if done, done quickly, to prevent the extension—if possible before the patent expires on the 26th of this month.

We are totally averse to any active participation in schemes to defeat it at Washington, and should prefer that some other person would undertake the job; but if there is no other way, we will not only contribute fifty dollars in money, but will also go on to Washington and work personally, if other parties will come forward, and aid by their contributions.

Not a moment must be lost. Shall we have any responses to this appeal?

Since the above was in type we have received a letter from a correspondent in the interior of the State, from which we extract the following—

"My object in writing you now, is to advise you of a deep laid plot for the extension of the Woodworth Planer. There has been a Convention held of the owners and users of these machines, and I am creditably informed that they have signed a petition asking for its extension, and as a consideration, they are to have the exclusive right or monopoly in the county, town, or village where they are located. It is intended that if \$100,000 will get the extension, the trap will be sprung when Congress meets. That's the game."

Our correspondent has hit it exactly. Should this diabolical scheme succeed, hundreds will be ruined for the benefit of a few—then there will be no peace from litigation to those who now, or may hereafter, run planing and wood molding machines, unless tribute is paid to the monopolists. Let every opponent of the extension lose no time in getting a letter of warning into the hands of the Member of Congress from his respective district.

Ancient and Modern Water Works and Tunnels.

We are liable to forget the great works of past in our admiration of those of the present age, hence it is a good thing sometimes to recall what the old engineers have accomplished, as a healthful stimulant to excite our modern engineers to greater efforts.

The old Roman aqueducts for supplying that city with water in the days of its glory, when compared with the greatest of modern works of this kind, dwarf them into insignificance. Rome had one aqueduct—Aqua Apia—ten miles long, all underground; another—Anio Vetus—forty-three miles, and nearly all underground also; another—Aqua Marcia—fifty miles long, and the Anio Nevus fifty-nine miles long, with arches 109 feet high. There were also four other aqueducts, amounting to nine altogether, for supplying Rome with water by gravitation, for there were no steam engines in those days to pump it up from the adjacent river Tiber for city use, as is now done at Philadelphia, Chicago, Cleveland, and others of our cities.

The noblest work of modern engineering for supplying any city with water is, undoubtedly, the Croton Water Works of New York. Its artificial tunnel is carried over valleys, through hills, and over rivers a distance of forty miles. The work is stupendous, to be sure, for it carries a condensed river from the mountains into the city, but compared to the old Roman water tunnels it is not so much to boast of.

The city of Montreal has recently finished some great works of engineering for supplying itself with water in the same manner as the city of Philadelphia, by employing the water power of the river to pump itself up to an elevated reservoir. The water from the St. Lawrence, immediately above the rapids, is conducted by a canal five miles long to a basin, where two large wheels, 36 feet in diameter, work force pumps, which drive the water through iron pipes for about three miles to a double reservoir situated on the mountain behind the city, at a height of 200 feet above the river level. These reservoirs contain 20,000,000 gallons, and were cut out of the solid rock. Thus from the elevation of 200 feet the water is conducted through the whole city. Next to the Croton Water Works, the Water Works of Montreal, we understand, are the greatest of the kind on our continent.

From present indications there are a number of cities in the United States which will yet surpass Old Rome in extent and population, and which must be supplied with water from distant sources. As no city can be kept clean and healthy without a good supply of water, we tell them to look to old Rome for encouragement and an example.

Some great works of tunneling, or boring through mountains, have, within a few years, been executed in Europe and in our own country, for carrying railroads through them, and the tunnel now boring through the Green Mountains, three miles long, is considered to be the most expensive work of the kind ever attempted by our engineers; but we have only begun to execute works of this kind, and we require to be stimulated. The Alleghanies, the Rocky Mountains, and other mountains have yet to be tunneled to make pathways through them for the "iron steed." Look at what the old Romans did. They cut a tunnel as part of a drain for Lake Fucinus, and it was bored one mile through a mountain of hard cornelian. It was in the form of an arch nine feet wide and nineteen feet high. There was no gunpowder then, to assist the miners in blasting; all the work of cutting was executed inch by inch by steady labor with the pick, wedge and chisel. Considering the amount of labor required for this work, our engineers have much to incite them, for if the Romans

did accomplish such works with their defective tools and means, what great works of tunneling should not our engineers be able to execute with gunpowder for blasting and the steam engine for cutting.

The Days before Coal.

There can be no doubt, for it is an unquestionable fact, that the coal beds of England are the real natural source of its physical wealth. Without coal, it never would have been a manufacturing country; without it no cotton factories would ever have been erected, and no steamships would ever have floated on its waters. It is simply because it has the largest coal fields in Europe, that it is the greatest manufacturing nation in that quarter of the world. But it was very difficult to introduce the use of coal among the old English people.

It was first used in that country about six centuries ago, and at that time Englishmen would not use the sooty fuel in their houses. It did not suit the fire-places or the domestic habits of the people; but it was found well adapted for the blacksmith and the lime-burner. Only the layers near the surface and in coal fields adjacent to rivers or seas, were first opened; but when the demand increased, the miners dived more deeply into the bowels of the earth, and boldly worked the coal wherever it was to be found. When the mines became deep, the miners were sadly perplexed how to get rid of the water; and it was not till the steam engine came to their aid that they fully mastered this difficulty. But the prejudices of the users were as difficult to surmount as the perils of the miners. A citizen of London was once tried and executed for burning sea coal, in opposition to a stringent law passed in respect to that subject; but even long after such intolerance as this had passed away, coal was tabooed in good society. Ladies had a theory that the black abomination spoiled their complexion; and it was for a long time a point of etiquette not to sit in a room warmed by a coal fire, or to eat meat roasted by such means. Prejudice unquestionably had much to do with these objections; but it was not all prejudice, for the almost total absence of proper arrangements for supplying fresh air, and removing smoke and foul air, rendered the burning coal a very dirty and disagreeable companion in a room.

Wood was then the principal fuel used in England, and the forests but scantily supplied the wants of the people. Turf or peat was also employed in some districts as it still is in Ireland and in the Highlands of Scotland; but in all England wood is at present unknown as a domestic fuel—coal has entirely superseded it.

Time, Space, and Power.

Persons who have not studied the principles of mechanics, often deceive themselves with regard to the power of levers and wheels; and many men of an ingenious turn of mind have spent time, money, and labor, in designing and constructing machines, to gain power by levers, wheels, and pulleys. No power can be gained by any arrangement of such devices. The power of any machine is the force which sets and keeps it in motion; the levers, wheels, and pulleys are only mechanical devices for transmitting the power to some other point, whether it be for the hoisting of barrels or boxes, by block and tackle, the turning of a locomotive driving wheel, or the paddles of a steamship. By the use of a lever a man can raise a greater weight than he can by hand, but he could raise this weight in the same time, by hand, if it were divided into two or more parcels. This is an immutable law of mechanics. No man who understands it will ever engage in the futile search for a perpetual motion.

The Construction of Chimneys.

We often receive communications requesting information as to the best mode of building chimneys. A few simple rules are sufficient to guide any person in the construction of a chimney. The higher the chimney the better its draft. It should be made of good non-conducting materials like brick, because the warmer it can be kept from the base to the top, the better will be the draft, as it is

the heat of the gases which causes them to ascend. If the gases were condensed in the inside of a chimney its draft would be destroyed. The flue of a chimney from an engine boiler, should never be run underground unless it is drained beneath, because it is liable to absorb moisture from the ground, and thus absorb the heat, and injure the draft. As it is convenient in some instances, thus to construct the flues of furnace at some distance from the chimney,—this information will be useful to those who require such arrangements. The inside of a chimney should be made as smooth as possible, so as to offer little resistance to the ascent of the heated gases, and also for the purpose of having few projecting surfaces for the adherence of soot.

Mechanical Clarinet Player.

One of the most ingenious pieces of mechanism which we have ever witnessed, is the invention of a Belgian, by the name of Van Oeckelen, who is exhibiting his wonderful novelty at the Chinese Museum, Broadway, this city.

A fine proportioned human figure, dressed as a Troubadour, stands erect in the center of a room, holding in his hand a clarinet of ordinary appearance and construction. The operator of the Automaton raises the skirts of the wax gentleman's coat, and applies a key to wind up the magician, whose nerves, cords, and whole vitality, in fact, consists of two sets of mechanism, one of which performs the respiratory or blowing feature, and the other operates the figure, and controls the action of the fingers on the keys of the instrument. The grace and ease with which the "machine man" moves his body from one side to another and bows to his admiring audience, is remarkable, and the dexterity with which he fingers the keys in quick music, is not surpassed by any human player we ever saw perform.

We were permitted to witness the movements of the mechanism as the automaton was playing, and the perfection with which it is constructed, and the diversity of its complicated movements, show the inventor to be a most skillful mechanic, as well as possessed of wonderful originality as an inventor.

For ten years Mr. Van Oeckelen labored incessantly in the construction of this piece of mechanism, spending a fortune of \$60,000 in conducting his experiments and producing his automaton. While we deprecate as folly the waste of such skill and so much time and money on a mere toy, we cannot but admire the patience with which Mr. Van Oeckelen prosecuted his labors till the end he sought had been accomplished.

At some future time we may give a description of the mechanical construction of the Automatic Clarinet Player; but to our city readers who have a taste for beholding wonderful mechanical contrivances—and who of them has not?—we would recommend to call and see the "Machine Man," and the man who made the machine, both of which are subjects of interest.

An Ether Steamship Burned.

News from Bahia, (South America,) give an account of the burning of one of the French combined steam and ether ships, named *La France*, in that harbor in the month of October last. The ether could not be kept in the liquid state in that warm climate; it escaped in great quantities from the tanks in which it was contained, caught fire, and burned up the entire vessel.

Ether boils at 96° Fab., therefore it was exceedingly stupid for those who had charge of that vessel to carry ether with them into such a climate, where the water in the bay often ranges at a temperature of 100°. In such a climate ether would boil in casks in the hold of any vessel. And in this steamer it could not be employed as a motive agent at all, because it had to be condensed at every stroke of the engine, requiring for this object water as low as 48° to produce an economical result.

The American pistol with which Col. Hay of the British Army executed such accurate shooting at 300 yards distance, as noticed by us last week, is that of Smith & Wesson, of Hartford, Conn.