

**Woodworth Patent Monopoly.**

Charles M. Keller, Esq., the agent who got the re-issue of the Woodworth patent, and who has been, and still is, in the employ of the heirs and assignees of the said patent, has presented to the Committees of Patents in both Houses of Congress, arguments in favor of extending, by special Act of Congress, the said patent for fourteen years. This argument was published as an advertisement in the Philadelphia Ledger of the 23rd Feb., ult. This argument demands our attention, because it presents views wrong in principle we believe, from those we advocate, and statements are made which deserve the censure of all upright men. We have no personal interest to subserve in speaking for or against the extension of this patent, we keep ourselves from entangling alliances, so that we are able always to speak those sentiments freely which, in our opinion, are just in the sight of God and man.

The paper of Mr. Keller sets out with asserting, as broadly as it possibly can, that William Woodworth was the first man that planned and matched plank by machinery—that he was the first man who did away with planing, tonguing, and grooving by hand labor. This is not correct. Let any of the members of the Committees on Patents read Reese's Encyclopædia (article Planing Machines) and he will discover that old Gen. Bentham, in 1791, took out a patent for planing boards by machinery. He did not use a cylinder with cutters, but he did use pressure rollers in his plane, as near as possible to the cutting edges, and "these rollers," the patent says, "were employed to keep the board from springing." The combination was not the same as that of the Woodworth patent, but the idea—the evil to be overcome in planing the boards by pressure, belongs to Bentham, there can be no doubt of that, and it is now public property by the divine right of justice. In 1802 Bramah took out a patent for placing his cutters on a revolving vertical, and also on a revolving horizontal shaft. (Seesame work.) In 1803 (same authority) Mr. Bevans obtained a patent for planing all kinds of mouldings, plowing grooves, &c., by machinery. It would be wrong for us to endeavor to speak evil of William Woodworth, we esteem his memory as much as we do that of any other good inventor, and that is a great deal, but at the same time to give him the credit which belongs to other inventors, is very wrong.

Mr. Keller's paper pays a high compliment to William Woodworth; it speaks sympathizingly of his sufferings, and proudly of his achievements. We have never said a word against the memory of William Woodworth; the upright, generous, and unselfish, will always tread softly on the graves of the departed. We are sorry to say that when Mr. Keller gives vent to the gushings of his sympathy for the sufferings of the deceased William Woodworth, he makes a most brutal attack upon the deceased Emmons, a contemporary inventor with Woodworth, and one who disputed successfully with him for priority of his invention. He spares not the dead, but calls Emmons a tool, and his efforts a fraud, thus stabbing his memory and outraging the feelings of an old man—the father of the deceased—now fast approaching the end of life. Oh, this is wrong, inhuman. Mr. Keller charges Emmons with fraud—the same charge has been brought against the re-issue of the Woodworth patent. A jury in Baltimore decided, that the re-issue was not the same as that of the original patent. It is well known that the original drawings and specification did not describe nor illustrate the claims of the re-issued patent. The Hon. Edmund Burke has admitted this, but it is said that, in 1829 (this was after the patent was granted) a model was deposited in the Franklin Institute, and Judge Harris, or Albany, has testified that Emmons declared, before he died, that he acted fraudulently. Very little confidence should be placed in testimony against any deceased person, for the dead cannot confront the living. Why did Judge Harris not bring out the truth when Emmons was living?

Mr. Keller presents part of the address of Judge Kane, delivered before the Franklin Institute. We have a few words to say about that address; some of the remarks are altogether unworthy of a man of his education

fame, and position. We consider that the rights of one inventor are just as sacred as those of another, and although the address of Judge Kane exhibits a great sympathy for inventors, no Judge, and we say it with all respect, has done more injustice to some inventors, by his decisions, than he. It is well known that if a thing has been in use for a number of years without being claimed, it becomes public property. Now, if William Woodworth did not claim what his heirs have claimed, for 14 years after it was in use, it surely becomes public property, yet Judge Kane has decided, in the Woodworth case, that it did not; and then, again, in the Batten case (see the last number of the Franklin Journal for his charge), he did. In the Bain case, he also, we believe, did great injury to a meritorious inventor and patentee.

There are some men who make a great noise about the rights of inventors, in speaking about such a case as the Woodworth patent. We oppose it, because that patent, in the hands of a monopoly, has been used to injure poor and worthy inventors. It is quite a common thing, when a poor man gets out a good improvement, for an old patentee in the same line, if he be rich (although the improvement is as different an invention from his old patent as the engine of Watt to that of Hero), to give notice that if he does not stop running it he will be sued. The great majority of the law suits, in connection with the Woodworth patent, have been brought against inventors—men who received patents for improved planing machines, which we believe, and which they believed, were entirely different in principle from Woodworth's. The address of Judge Kane was delivered shortly after a trial of Wilson against Barnum. The latter got a patent: he used no pressure roller nor cylinder, and yet an action was brought against him for infringement of the Woodworth patent. We published an engraving of this machine in Vol. 4; we took the ground that it was a different machine—no infringement. Judge Kane said it was; but a jury trial was the means of lifting Judge Kane's injunction; (the jury disagreed—one being in favor of Woodworth).

Monopoly grants impede the progress of improvement. The Woodworth Monopoly is so powerful that every inventor is afraid of it, because he knows that if he should invent a planing machine, altogether different and better than the Woodworth one, he would not dare to run it: he would be threatened with a law suit at once. We state a positive fact—we speak for inventors, their rights, and those of Society. Does anybody hear of the Barnum Planing Machine now? No. It was found that no good and just mechanic could testify to a similarity between it and Woodworth's, and an arrangement was effected with the patentee,—yes, an arrangement. This monopoly has been able either to frown down or buy up the interests of nearly all opponents. In speaking thus, we state only a public fact: it is certainly no good sign to see this.

**Recent Foreign Inventions.**

**BITUMEN FOR PIPES AND WATER WAYS.**—Thomas, Earl of Dundonald, (Admiral Cochran, so famous in story as a hero and inventor), has taken out a patent in England for the following applications of bitumen:—

"The new material proposed to be employed for the various purposes enumerated in the title, is the bitumen, petroleum, or the natural pitch of Trinidad and the British North American Colonies. Of this substance there are several different varieties, it being found more or less indurate and elastic in different situations. According to the character of the article to be produced, and the nature of the use to which it is to be applied, so must a hard or soft, elastic or non-elastic bitumen be selected. The articles are formed by running the bitumen in a melted state into suitable moulds, using a core as may be required, and care must be taken that the mould and core are covered with clay, black lead, or some other substance, which is capable of preventing the bitumen from adhering to the same. When casting pipes for the conveyance of liquids, it is preferred that they should be flattened on one side, to enable them to remain firm and steady in the position they may be intended to occupy. Instead of casting pipes they may be manufactured by bending strips of sheet bitu-

men around a core, and then melting together the abutting edges, or running liquid bitumen in between them. For the purpose of lining cisterns or such like receptacles, sheets of bitumen are prepared by rolling or pressing out lumps of that substance, and the meeting edges of the sheets are to be united together by melting or by the use of liquefied bitumen. Sheets of textile fabrics of a loose and open texture may be also coated, on one or both sides, with bitumen; to facilitate which operation, they should be previously saturated or paid over with liquid bitumen, or bitumen dissolved in naphtha. These sheets are very suitable for being used to cover ships' bottoms, between the planking and the metallic sheeting; and they are also adapted for other uses where substances impervious to wet, and almost indestructible are required.

Another application of bitumen is for the purpose of covering electric telegraph wires. The wires may be either covered separately (and when this is done, it is preferred to enclose the wire previously with some filamentous material saturated with liquefied bitumen), or a rope having been covered with bitumen, and longitudinal grooves left in the coating for the wires to fall into, they are laid in the grooves, and the whole covered with another coating of bituminous material.

The inferior descriptions of the same material may be also employed for consolidating rolling gravel, forming foundations, or supporting those in a falling condition, lining sewers, water-ways, &c.; and its application is suggested in the colonies for lining the beds of copious streams which flow from the mountainous districts during certain seasons, for the purpose of conducting the water, which otherwise generally runs to waste, or is absorbed in the bed of the river, to situations where its fertilizing influences will be most beneficially applicable. The bitumen lining may be applied by covering the surface of the bed of the river with the material, and then fusing it by burning brushwood, which is to be spread over for that purpose.—[London Mechanics' Magazine.

[For the Scientific American.]

**Brick Machines.**

Some months ago I was on the point of addressing you a letter suggesting "Something to be Invented," as I have seen occasionally in your paper, and call your attention to that which heads this article. The Patent Office has a case full of models for this purpose, but they all deal in the two extremes: either to work the dry clay or the soft mud. With the first I have had two years' experience, and have furnished several millions of brick to the Government at Norfolk, Pensacola, Washington, and Annapolis; besides supplying some of the finest buildings in this city. If made of the proper material, and well burned, the bricks are stronger and better than those made in the ordinary way; but it requires an immense pressure, mine is estimated at 100 tons to the brick, and consequently demands heavy and expensive machinery.

The soft mud is limited as to the season of operation, is subject to the vicissitudes of weather, and unless moulded with care by an experienced hand, is rough and misshapen; the stiffer and more tenacious the clay is prepared, the better the brick; but a man has not sufficient strength to fill the mould, and if he had, the brick will not slip. Therefore the front brick mould is made to open with a latch,—hence the name, and thus frees the brick.

It occurred to me that if the clay could be worked as stiff as it is upon a potter's wheel, it would be the perfection of the art. I have recently directed my attention to the subject, and accomplished what I think has never yet been attempted, that is, moulding bricks of potter's clay by machinery. Those of the profession here who have examined the model say they have no doubt of its success.

The clay is taken from the bank, passed through the pulverizer, which converts it into dust, thence into the temperer, where it receives a jet of water from a pipe, and a rill of coal dust from a shoe and hopper—the whole thus incorporated into the proper consistence passes into a box or receptacle, beneath which a train of moulds are filled, six in one frame, moving on a rail-way. As these appear in

front (a copper strike planishes the surface) the bricks are lifted out of the moulds, each on a separate iron plate, on which it is borne to the floor, and there set on edge to dry. It is evident that by this process the bricks must necessarily be as square in the corners and edges and otherwise as true as the latch brick. There being no cold clay to handle, operations can begin two or three weeks earlier in the Spring and continue as much later in the Fall. In five minutes the machine can be set for front bricks, by introducing another set of moulds made a quarter of an inch deeper;—from these the bricks, being first rubbed in dust, are taken to the ordinary hand-press and thence to the shelves, until they are ready for the kiln.

The cost, including the right, will not exceed \$500,—it will mould 15,000 per day, and a six-horse engine will drive two of them.

FRANCIS H. SMITH.

**Statistics of Coffee.**

The coffee of Arabia is a native of Abyssinia, where it is found both in a wild and cultivated state. It was brought from thence to Arabia in 1450. In a century its use extended throughout the Turkish empire, and soon found its way into Europe. The coffee produced in every part of the world at the present time is as follows:—

Brazil	-	-	-	176,000,000 lbs.
Java	-	-	-	124,000,000 "
The Philippines	-	-	-	3,000,000 "
Arabia	-	-	-	3,000,000 "
Celebes	-	-	-	1,000,000 "
Cuba and Porto Rico	-	-	-	30,000,000 "
Laquira and Porto Cabello	-	-	-	35,000,000 "
British West Indies	-	-	-	8,000,000 "
French and Dutch West Indies	-	-	-	2,000,000 "
Malabar and Mysore	-	-	-	5,000,000 "
St. Domingo	-	-	-	35,000,000 "
Ceylon	-	-	-	40,000,000 "
Costa Rico	-	-	-	9,000,000 "
Sumatra	-	-	-	5,000,000 "

Showing a total of 476,000,000 lbs.

**New Method of Preparing Negative Photographic Paper.**

M. Gustave Legray, in the "Moniteur Industriel," describes, a new process for preparing negative photographic paper. He takes virgin wax, and keeps it in a large flat vessel at 100°, centigrade, and immerses the paper in this until it is well saturated. The sheet of paper is then withdrawn, and laid between several pieces of blotting paper, over which a moderately heated iron is passed, which causes the paper to absorb the superfluous wax. If the paper were properly prepared, there will be no gloss whatever on the surface, and it will be perfectly transparent. The waxed paper is then immersed in a warm solution composed as follows:—1,000 parts of rice water; 40 parts of sugar of milk; 15 parts iodide of potassium; 0.80 of cyanide of potassium, and 0.50 of fluoride of potassium. The sheet of paper should be laid in this solution for half an hour, and it may then be withdrawn and hung up to dry. It is then immersed in a clean solution of acito-nitrate of silver, which is thus formed:—300 parts distilled water, 20 parts azote of silver, 24 of crystallizable acetic acid, and 5 of animal charcoal. The animal charcoal serves to render the paper more susceptible to receive impressions. The paper remains three minutes in this solution in order to insure contact with the solution; the two sides of the sheet should be rubbed over with a brush. The paper is then washed several times with distilled water, and then well dried between pieces of blotting paper. This paper may be kept in a dark place for more than a fortnight, without undergoing any alteration. After this paper is subjected to action in the camera, it is run through a solution of 1 part gallic acid, 0.5 of azote of silver, and 200 parts of distilled water, and the image is fixed by the hydrosulphite of soda.

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