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Patent Monopolies in Olden Times.

In conversation with one of our oldest and most distinguished American inventors, a few days since, he, by a few brief remarks, forcibly directed our attention to the great difference between the present and past times, in relation to the value of patents. About forty years ago, he obtained a patent for a very useful and valuable invention; but this, instead of advancing his interests and establishing his reputation, seemed to produce quite the opposite results. On account of his having secured the invention by a "patent," he was regarded with suspicion, there existing, at that time, a strong prejudice in the community against all patentees. This he found to operate so injuriously against him, that when he was—from the force of circumstances—compelled to offer his patent for sale, (which he thinks would easily have brought \$300,000 at the present day,) he found it difficult to obtain a purchaser for \$3,000. The person that finally bought it was a very shrewd man, who esteemed its value, and afterwards reaped great advantages from it, as a manufacturer.

Prior to the reign of James the First, in England, it was quite customary to grant monopolies for the manufacture and sale of certain articles, without the least reference to invention. These patents were exclusive grants, which oftentimes stopped old manufacturers from pursuing their established callings; and they were frequently bestowed upon court favorites, or other individuals who had sufficient means, or other equally attractive peculiarities, to bribe the monarch or his ministers. For instance, one person or company got a patent for the manufacture of beer, another for hats, &c., thus monopolizing the trade in their lines of business.

Such exclusive privileges were violations of the peoples' rights, and were, of course, generally detested. The practice of granting such privileges was abolished in the reign of the king referred to; and the law of patents, which recognized only inventors and introducers of new manufactures, was enacted. Prejudices, however, are not easily rooted out; and no doubt they reigned in the minds of many of our early settlers, long after the English practice of granting unjust monopolies had been abolished. Some of our colonies, also, did many things to create and foster such prejudices. Under the mistaken but laudable desire to introduce new manufactures, various monopoly patent grants were made to persons who did nothing to deserve them; but this practice was swept away at the establishment of the Federal Union. The central government early enacted a patent law, on the basis of the English code, under which no one could secure a patent but for some new and useful invention. This law possessed none of the features of a monopoly, because no established right was taken away, or destroyed by it; but it did not immediately eradicate the prejudices which had existed against patents, and those to whom they were granted. This is the reason why patents—many of them for most useful inventions—were, at one time, of so little value in our country. We mean to be understood that these patents, even in the limited extent of our manufacturing operations then, were depreciated below their real value, owing to the public prejudice which existed against them. These prejudices, we are happy to say, are nearly all abraded from the minds of the people; and the respected old inventor to whom we have referred, in alluding to this, warmly remarked "inventors do, indeed, live in better times now."

There is no property which is more valuable or respected than patents at the present time, or more justly deserving protection and favor. A new patent destroys no old right belonging to a single individual; it is a certificate from

the government, signed by officers appointed for that purpose, that the person to whom it is granted has discovered something useful which is not known to have been in existence previously. This is the principle upon which patents are granted under the existing laws. The inventor to whom we have referred, has, to use a common but trite expression, become "well to do in the world," and he deserves this, because he has enriched it by the treasure of his genius. As every new improvement adds something to the solid wealth of the community, it is a good thing for us that the rights of inventors are more respected, by the public, and their inventions better protected by our courts than formerly.

The prejudices to which we have referred once found a place even in the United States Patent Office. At one time its policy seems to have been strenuously exerted to find arguments on which to refuse patents, when evidence, as well as duty, should have counseled a different course of conduct. Instead of assisting inventors by candidly examining their claims, and deciding upon them with a liberal spirit, as the law contemplates, their claims were examined with prejudice, and oftentimes rejected upon the most frivolous pretexts, comparisons and references. A different spirit now reigns in the national councils, and more ample and equitable provisions have been made for securing the rights of inventors. Although patentees live in better times now than then, we are confident that still better times are yet in store for them.

Protection of Wood from Fire.

This is a subject of much consequence on account of the great number of wooden structures in our country, and the serious accidents from the conflagration of steamboats and buildings which take place so frequently. Various substances have been employed to coat wood so as to render it incombustible. Alum, lime and clay, in solutions, have been the most common and the cheapest substances applied to such purposes, but not with that success which is desirable. The attention of our steamboat inspectors has often been directed to this question, but, so far as we have been informed, no experiments have either been devised or conducted by them for shedding light upon it. In recent numbers of the *London Mechanics' Magazine*, we find some very useful information connected with this subject, which we know will be very useful and interesting to our readers. It was proposed by Mr. Abel to pay the timber beams and bulkheads of ships with a solution of the silicate of soda to render them partially, at least, if not perfectly incombustible, to check the progress of fire in cases of conflagration in vessels. Specimens of wood thus prepared at Portsmouth, England, were submitted to the action of fire conjointly with unprepared timber, and it was found that while unprepared wood of the same dimensions and character burned rapidly away under intense heat, that prepared with the silicate solution smoldered very slowly. The silicate seemed to fuse and cling to the surface of the wood under fire, and thus protect it. Those who conducted these experiments were satisfied that wood coated with the silicate of soda, and used for beams, bulkheads, or the undersides of decks and sides of vessels, would not be liable to take fire; and if the cargoes of vessels, with timbers so prepared, should take fire, it would be easy to confine the conflagration to the spot where it commenced, and secure time for efforts to suppress it. A slight application of lime-wash to wood affords some protection from fire, so does a coating of clay, but these are liable to scale off, and are therefore not suitable.

A process was lately patented in England, by E. Maughann, for securing this object. It consists in saturating dried wood with an aqueous solution of the phosphate of soda and muriate, or sulphate of ammonia. The patentee thinks that when wood prepared with these substances is submitted to the action of fire, such a quantity of vapor will be generated by the ammoniacal salts as will extinguish the fire. Another patent process was that of

Lieut. Jackson, and consisted in impregnating the wood with solutions of the salts of zinc and ammonia. The wood was prepared by these solutions in large cylinders, the air exhausted, and the liquid forced in under a pressure of 150 pounds on the square inch, which was maintained for two hours before the timber was ready to be taken out. Brunel, the designer of the *Leviathan*, tested seventeen different kinds of wood prepared by Lieut. Jackson's process, and it was found that they all withstood the action of fire in a superior manner to unprepared or painted wood. Both of these processes are expensive, however, and when the solutions are strong, they tend to injure the strength of the timber.

A wooden hut having been erected in the Woolwich Marshes to test the value of Philip's fire annihilator, it occurred to Mr. Abel to test the value of the silicate of soda; also, a solution of lime and alum, as fire protectives, and some of the timbers of the hut were therefore washed on the surface with these solutions. The alum and lime solution was of little avail, and the annihilators failed to extinguish the fire, but the planks treated with the silicate of soda greatly retarded the fire, as they did not blaze, and presented merely a charred appearance by the intense heat. After this experiment, it was suggested that, in order to render the application of the silicate of soda less expensive, the wood should receive a primary coating of the silicate applied with a brush; then, when dried, a coating of common lime whitewash and dried, and afterwards a finishing coating of the silicate of soda, somewhat stronger than the first one. Wood thus prepared was submitted to a great variety of tests with decided success. The protective coating resisted the action of fire to a remarkable degree, and did not scale off; and when exposed to the action of a stream of water, it could not be washed off. Upon the result of these tests being reported, an order was issued by Lord Panmure to make further and more perfect experiments at Chatham, under the direction of Col. Sandham and Mr. Abel, to determine practically and fully the value of the silicate of potash and lime wash, as described, to protect wood from fire.

The experiments were made, and Col. Sandham and Mr. Abel conducted them, and they have reported the results. That report, in substance, states that the silicate of soda, in conjunction with lime wash, applied to the surface of wood with a brush, affords great safety to wooden structures in cases of fire. It is not a perfect protective, as this result cannot be expected, but it is a cheap and good safeguard, and they recommend its use by government. The cost of the silicate for the purpose described was only about four cents for coating a surface of ten square feet. It was applied in the form of thick sirup, the lime-wash was about the thickness of cream, and the last coat of the silicate was a little stronger than the first. The surface of the wood to which it is applied must be free from paint or grease, and care must be exercised not to put on the lime too thick, because it will then be liable to crack off.

This is a subject to which we wish to direct the special attention of our engineers and architects. Very frequent conflagrations take place on the Mississippi river steamers, many of which may be prevented, or at least saved from the disastrous results generally attending them, by the use of this method of coating the inside of their timbers.

Fossilization.

The division of the crust of the earth into three great orders or epochs of time, in which a peculiar class of rock was formed or deposited, is a natural as well as proper distinction. The primary, secondary and tertiary rocks are distinguished from each other, not so much by the physical characteristics of the stone composing them as by the genus and species, and, in some cases, the totally different forms of life which inhabited the world at the time of the deposition of these rocks. These relics of past life—these monuments of extinct existence, found by the mason in the

stone and by the child in the pebble of the brook, looking sometimes like a shell carved in stone, or a footmark that has suddenly become petrified—these relics are called "fossils;" the process by which they have been formed is very simple, and is going on all around us at the present day. Those animals and insects of whose outer form we have such perfect imprints, those leaves and branches that are now found in the coal fields of our country, once lived, as do the animals of the passing hour, and the ferns and mosses of familiar glens. They died; and the shell left upon the sea-shore became gradually covered with mud, the mud hardened, the bed of the ocean was gradually upheaved, and the shell remained encased in its hard tomb. The home of the fern and moss, gigantic as cedars and spreading out like vines, became a swamp, was inundated with water, the mud rose, a process of carbonization was gradually, but surely and minutely carried on; and we now discover their shapes and forms in the coal that gives us warmth and light, and by the destruction of which we create a gas which will effect the same purpose as was effected when the coal was made. Fossilization is going on now as surely as ever before; and though historians may prejudice our age, and novelists wrap around it a mantle of romance, yet the forms of life which now exist will tell a tale to future generations—a tale cut by Nature's hand in her own monumental marbles, and so full of truth that none can gainsay it. Civilization leaves her mark even on the shape and size of animals; her magic touch will be retained long after the recipients have sunk into oblivion.

Patent Extensions and Lobbyists in Congress.

We would call the attention of our readers to an article on another page, copied from the *New York Herald* of the 23d inst., concerning the movements of some of our wealthiest patentees to get their patents extended by Congress. Most of the applicants were refused extensions on application at the Patent Office, for the reason that they could not show that they had not already reaped a rich reward from their patents. Others have unsuccessfully besieged Congress, session after session, until their patents have long since expired, and now they have the audacity to ask Congress to renew them. Where are the Woodworth assignees? Why are they not on hand to see if they cannot get Congress to revive the Planing Machine monopoly? We shall watch these Congress vampires and the lobbyists they employ to operate the wires for them, and shall make a note from time to time of what is going on at the Capitol.

We shall also have something to say on the new Patent bill, just presented by Mr. Taylor, M. C. of Brooklyn, N. Y., as soon as it is printed, giving an account of its origin, and pointing out some of its peculiarities.

Hughes' Telegraph.

This telegraph is now in successful operation at No. 10 Wall street, where we had an opportunity of witnessing the simultaneous sending and receiving of a message to and from Philadelphia, one day last week. It is operated by keys, and prints despatches in Roman characters from a revolving type wheel, like the House telegraph. The two messages referred to were sent on a one-wire line—the one from New York passed on the wire, the return message on the ground part of the circuit. It is more simple than the House telegraph, but far more complex than the Morse telegraph—the latter is our favorite on account of its simplicity.

Curious Discovery.

"Mr. Pagdaroff, of St. Petersburg, announces that, by a new method, he has succeeded in extracting from birds' feathers the pigments which color them."

[The above paragraph appears in a cotemporary journal, and, to our ideas, is rather doubtful. We should not be more surprised if this Russian gentleman were to extract the notes from bird's throats and lungs, and thus supply bottled music.—Eds.]