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For the Week ending February 22, 1879.


THE NEW PATENT BILL.-SHALL IT PASS THE HOUSE ?
In our last issue we recorded the fact of the passage by the Senate of the new patent bill (Senate Bill 300), which is now before the House of Representatives.
This bill, as we have on several occasions tried to show, is likely, if it becomes a law, to impair the future value of property in patents; and therefore it behooves all who wish to preserve the existing privileges of inventors to use their best influence with their Congressional representatives to defeat or set aside the measure. Whatever is done in this direction mustbe done quickly. Congress is to adjourn finally on the 4thof March, and t
An esteemed correspondent writes us that he thinks it would not be difficult to defeat the bill if we would formu late specific instructions addressed to inventors and patentecs, telling them how to band together to oppose the passage of the bill, specifying exactly what they ought to say to their representatives in Congress in order to induce them to give it their adverse votes.
Inventors, says our correspondent, are generally unlettered men, and although they fecl strongly opposed to this attack on their interests, many of them do not know how to give proper expression to their views
We suppose that what our correspondent desires is that now, in this closing hour of the contest, we shall briefly re capitulate the status of the present law and point out the scope of the intended substitute.
The present law, substantially, hits been in operation for some forty years. It secures to the inventor an exclusive property in his own invention for the small period of seventeen years, at an official cost of thirty-five dollars. During this term no person may interfere with the patent without liability for infringement
The existing practice of the United States Courts is to construe the present patent laws liberally in favor of the in ventor and against the infringer. But on the other hand, the courts are careful to guard the interests of the public against the claims of unauthorized or pretended patentees; and the more widely a new device is wanted for public use, the more particular are the judges to require the clearest evi tent.

Thelaw, as it stands, as shown by the practice of the courts, provides ample safeguards for the public interests, as against untenable or wrongfully granted patents. The courts also regulate the measure of damages, so that even infringers are never overmuch punished.
At the same time it must be confessed that a patent as now granted means something. It means that a man shall any other property fro his patent, in seanten years. It means that his patent shall not be taxed out of existence after it is once granted. It means that a poorman who owns a patent shall enjoy the protection of the courts, and that rich and grasping corporations or combinations of interests shall not have power to harass, annoy, and altogether rob him of the fruits of his toil and ingenuity.
The amazing progress of the country during the past forty years is undeniably due to the fostering influence of the present patent laws. They have given impetus to manufactures, supplicd thousands of new industries, and rend
the American name famous for industry and progress.
The present laws and practices of the courts have worked and are still working so well that it seems a great pity to change them, except as to such minor particulars where obvious corrections may require.
To boldly overthrow them and reverse, by legislation, the accustomed practice of the courts, seems to be suicidal. But this is what Senate Bill 300 seems designed to accom plish. It is the offspring of the combined efforts of the wealthy railway companies and other interests, who have become impatient to seize and appropriate to their own use every really valualle and important invention, without the customary formalitics of payment or the
now by the 300 provides
Senate Bill 300 provides substantially, by section 2, that the patentee shall not for the future enjoy the fuil and ex clusive right to control his patent; but anybody who desire may, by legal procecdings, which the inventor must defend, take the right from him.
It provides, by sections $3,4,5,10,11$, that infringers may call the patentec into court and subject him to heavy cost and vexatious legal proceedings, so as practically to compel the inventor to deliver over his invention for the use of the infringers, thus reversing the present practice.
In short, the new law aims to punish the inventor and protect the infringer; whereas the present law aims to protect the inventor and punish the infringer.
Section 12 of the new law aims to tax the majority of pat ents out of existence after they have been issued, by requiring the inventor to pay a tax of $\$ 50$ at the end of four ycars and $\$ 100$ more in nine years, or in all $\$ 185$ for the patent, instead of $\$ 35$, as at present.
In our last number we gave a brief summary of the de signs of all the sections of the bill, of which there are twentyfive; to which, and also to the several interesting discussions given by us week by week for a long time past, our readers are respectfully referred. We hope that cvery inventor and patentee who wishes to defeat this bill will make energetic use of the short time now remaining to assist members of the House in reaching the truth on the subject. and thus enable them to cast their votes intelligently.

CREOSOTED WOOD AS A PROTECTION AGAINST TEREDOES. A series of experiments of great interest was some time ago undertaken by the Royal Academy of Sciences, of Amsterdam, to determine the best means of preserving wood from destruction by the teredo (Teredo navalis). The exami nation made by Mr. Harting (one of the commission of in vestigation), embodied in a recently issued report, is very in tructive. It is ascertained that the mechanism of the mol usk is of a twofold nature. Those animals which are found in calcareous rocks make their excavations chemically through the agency of a dissolving acid sccretion; but the teredo that perforates wood employs mechanical means only. The teredo appears to have existed at a geological period carlier than our own; this view being confirmed by the dis covery of fossil wood perforated by a species of this mollusk in the Eocene formations. It has been discovered also that certain circumstances favor the increase and ravages of the nimal; these being a moderate rainfall, an increase of the saltness of the water, and an increase of temperaturc. The experiments of the commission included processes that had been recommended to the government to protect marine works; and the pieces of wood experimented upon were allowed to be prepared by the inventors themselves. The ports of Flessingue, Harlingen, Stavoren, and Nicuwendam were selected first for the trials, the woods used being oak, red fir, common fir, and pine, in picces about 3 fect long by about 12 inches square. By the side of these blocks other blocks of the same kind of wood were placed without an preparation, as counterproofs. The trials consisted (1) of coatings applied to the surface; (2) impregnation with different substances which modify the interior and exterior of the wood; (3) use of exotic woods.
All exterior applications-such as coal tar, paraffine varnish ad Claasen's mixturc of coal tar, resin, sulphur, and pow dered glass-absolutely failed. A coat of mail consisting of nails is costly, and an examination of some piles proved that the coating of iron and rust was not proof against the rav ages of the teredo in the interior. Sheets of iron, copper, or zinc are found effectual only as the surfaces remain intact and undamaged. Nature itself often affords a better protection than this in covering marine timber with barnacles or other shell fish. As to the sccond remedy-impregnationthe following substances all proved inefficacious and worth less: Sulphate of copper, copperas, actate of lead, and mer curial and arsenical salts. The soluble glass and chloride of calcium process also proved powerless. Oil of paraffinc injected into the blocks proved of no avail, as in about two years fully developed teredocs were found in all the pieces. Of the oil of creosote process, however, more favorable results are recorded-all of the woods prepared with this substance having been found intact.
The conclusions drawn by the commission are that the only effectual prescrvative is crcosote, though in using it care should be taken that the oil is of good quality, the impregnation thorough, and that woods be used that will absorb the oil readily, as fir and other resinous woods. These conclusions are confirmed by the experiments of Mr. E. R. Andrews, of this country, whe also has made interesting experiment with creosoted wood. A pine slab was taken, half of it wa thoroughly impr nated with the oil, the other half being left untreated. It was then exposed during the season of 1877 in the waters of the Gulf of Mexico. When it was removed it was found that the creosoted portion was clearly and sharply defined by its darker color, and that it was per. fectly sound, while the untreated half was riddled by tere does, which had perforated it quite close to the edge of tho croosote.

## SKATING ON ARTIFICIAL ICE

A skating rink, offering 16,000 square feet of artificial ic in one sheet, is in successful operation in this city. The projector, Mr. Rankin, is widely known in connection with the ice trade, particularly in the West and South, where his machines for producing ice are largely used. His presen enterprise is notable chiefly for its marnitude, the area of ice produced being very many times larger than anything of the sort previously attempted. Something like nine miles of gas piping are required for the circulation of the refrig erating liquid, which is pumped through the pipes after having bad its temperature sufficiently reduced in a freezing chamber some two hundred and fifty feet long, in which ice is liquefied by means of salt and other solids. The principle involved is simply that of the ice cream freczer. A tight fioor was laid over a surface 200 feet by 80 fect; on this floor a network of pipes was laid, and the whole flooded by two or three inches of water. On pumping the refrigerating fluid through the pipes, the water is frozen and kept so cold that the surface of the ice remains dry, though the atmo sphere of the rink is warmed by half a dozen large furnaces. The project might have been carricd out equally well and much more profitably at midsummer, when a skating rink would have been more of a novelty. Mr. Rankin informs us that the temperature of the refrigerating liquid is raised but ten degrees while on its ninc mile journey.

A New composition of iron and steel is described. A cast iron monld is divided into two sections by means of a trans verse plate of thin shect iron. The two metals are then pourcd into the respective compartments. The sheet iron partition prevents the mixtnre of the metals and facilitates the welding by itself being brought into a statc of fusion It is said that the product is well adapted for safes, and that it resists drills.

