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### A QUESTIONABLE PATENT BILL.

in Congress, but not as yet passed, having for their object to crush the patentees of new inventions and benefit pirates and infringers, depriving patentees of the means of enforcing their patents and securing damages in the courts. It is, therefore, refreshing now to find a bill introduced in both branches of the national legislature which, ostensibly, is intended to protect the inventor.

It is common for wealthy corporations and others, who find infringements of patents to be profitable, to and the bit of glass tube attached carefully broken off band together in supplying money and lawyers for their mutual defense. If, for example, John Doe, the inventor and patentee, finds several different parties infringing his rights, his proper course is to bring suit the air bubble left in these globes was only about twice against one of the parties first and obtain the judgment of the court; after which, if the decision is favorable, he can proceed against the other infringers more economically and with greater expedition than if all mercurial pumps only after three or four hours' time. had been separately attacked in the first instance. By the formation of a ring or combine on the part of the larger than a pinhead, and consequently a more perfect infringers they bring their united efforts to bear when- vacuum than had been obtained by any other process. ever one of their number is sued, and endeavorin every possible way to worry, harrass, and defeat the inventor, iglobes, showing the steadiness of the operation. The bill now before Congress (S. 3,347) is entitled: cerning letters patent of the United States that the where such action is pending shall, upon the affidavit pump. of the plaintiff, supported by the affidavits of two other persons filed in the court where the suit is pending, naming such combination of individuals, or combination of corporations, or both, summarily present the names of all parties so complained of to a grand jury for indictment, and upon a bill of indictment found said attorney shall criminally prosecute each and every one indicted, and upon trial and conviction the judge of the court shall impose a fine of not less than two nor more than ten thousand dollars upon each individual or corporation offender; and in the case of any association or trust composed of individuals or corporation offenders, or both, the said United States attorney shall proceed in equity immediately after such conviction to dissolve such association or trust and to confiscate its property to the use of the United States, and circuit courts of the United States shall have original jurisdiction of this offense."

There is another aspect of the subject which makes it questionable whether this proposed law ought to pass: for while it might tend to assist the honest and humble inventor plaintiff, it might also be used with disastrous effect by a rich and powerful corporation plaintiff for the purpose of distressing and compelling the surrender of innocent defendants. For instance, it might be asked why such powerful and unconscionable monopolies as the Western Union Telegraph Company or the Bell Telephone Company should need the help of a special act of Congress like this, to prevent other people and other corporations from uniting against either of them for purposes of legitimate mutual defense.

Why should the law make it a crime for a poor defendant to call in aid for his defense while it regards as thing in the prosecution? Under this law the plaintiff is at liberty to make as many combinations with individuals and corporations as he chooses, and to use this combined strength against the defendant. This law, without any regard to the merits of the cause, makes saints of plaintiffs and sinners of defendants.

#### .... A New Vacuum Pump.

Calcent to a mine deviate, wing to contract on the function of the vacuum pump of Mr. Adolp Ber-of the operations of the representative South American mining company, its ores, plant, and results attained. 4 illustrations... 11952 The duanchace Mining Company, Belvia... A full statement of the operations of the representative South American mining company, its ores, plant, and results attained. 4 illustrations... 11952 The duanchace Mining Company of Somerville, Mass., was given recently in the traction of the vacuum pump of Mr. Adolp Ber-but managed to save minisch by formisch of the vacuum by three horses arrived, and all the animals fell on coming into Boston. The pump is intended specially for use in producing the vacuum in the globes of incandescent electric lamps, and the exhibition was devoted entirely to this end, but the pump's usefulness does not stop here, since it may be applied wherever a perfect, or as nearly perfect, vacuum as it is possible to get may be required. mercury draws out the air with it. The Berrenberg pump, however, accomplishes better results without the use of mercury, and at the same time does the work very much more quickly than the best of the mercurial pumps. The principles of its operation are practically

number to handle, though it is claimed that only an Many bills have from time to time been introduced extension of the apparatus would be required for a pump of this size to do the work on 500 or 1.000 at the same time. The globes were mounted on glass tubes, so that they could be easily sealed and taken from the pump. The greater portion of the air in the globes was taken out almost immediately, probably in two or three strokes of the pump, and the time taken subsequently was in producing the almost perfect vacuum needed in electric lighting. At the end of five minutes a couple of globes were sealed and taken from the pump in avesselof mercury, the result being a vushof themercury to fill the vacuum in the globe and the consequent indication of the vacuum obtained. It was found that as large as the head of a pin, a very much better result than shown in the lamps of the companies now making them, and in which the vacuum had been obtained by Globes taken off in ten minutes showed a bubble hardly The bubbles were also uniform in size in different

The next experiment was to show how quickly the cur-"A bill to forbid maintenance and oppression in rent could be let on to a lamp after exhaustion had besuits brought upon letters patent." It provides gun without burning the carbon, it being explained 'That whenever it shall appear in any suit con-that in ordinary manufacture at least one hour was allowed to elapse. In less than 0 seconds after startdefense of the suit is interfered with or maintain- ing the pump the half dozen lamps used in the experied by a combination of individuals or by a combina- ment were lighted and burned steadily and brightly, tion of corporations, or both, or by any attorney or showing that in that short time a vacuum sufficient to officer of such combination not lawful defendants there-prevent the burning of the carbon had been formed. to, originally or by intervention, any such interference Lamps were also shown, still burning steadily, which or maintenance is hereby declared to be a public offense; had been burning for over 500 hours, this being to show and the attorney of the United States for the district; the superior durability of the lamps exhausted by the

#### ..... The World's Fair in Chicago.

The bill authorizing and indorsing on behalf of the United States the holding of a World's Fair in Chicago in 1892-93 has finally passed both houses of Congress and received the signature of the President. Rivalry between different cities as to where the fair should be held some time ago ceased to be an element in the matter, and Chicago has been the unopposed leader in this respect, but the long delay in making the final authorization by the government had begun to lead people to think that possibly we were not to have any fair at all. Now, however, it is high time for the beginning of actual work, if we are to make the fair the national success it should be, and worthily representative of our position and progress in all the arts, sciences and industries.

The possibility of a high degree of success in such endeavor is, moreover, greatly increased by the fact that Congress has virtually given another year for preparation-that is, although there will be exercises commemorative of the landing of Columbus in October, 1892, the fair proper will not be opened until the spring of 1893. There is also added to the bill a section directing the holding of a naval review in New York harbor in April, 1893, and foreign nations are to be invited to send ships of war to join the United States Navy in rendezvous at Hampton Roads, Va., and proceed thence to take part in the review.

### Electric Light Wires in Montevideo.

Early in March one of the electric wires at the corner of Calle 18 de Julio broke and fell on the road. Two horses in a market cart passing by were thrown down innocent the powerful plaintiff who does the same by the electric current the moment they touched the wire, which was giving out sparks as it lay on the ground, and the driver was thrown off his seat. A policeman attempted to clear the wire from the horses' "feet" with his sword, when he was immediately knocked down by the force of the electricity. He managed to get on his feet, but was again knocked down. Some of the lookers-on went and pulled him off the wire, and in doing so one of them was knocked down,

contact with the wire. By this time the men of the

electric light company appeared on the scene. One of

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them was for a time prevented by the police from touching the wire, but afterward one of them seized the wire with a tongs to try to cut it, and was at once Hitherto it has been impossible to get the required thrown on his back; but the tongs fell from his hands vacuum in the electric lamps without using the glass and he was able to get up again. Some more of the mercurial pumps, in which the falling of a column of company's men arrived shortly after, and the horses were rescued. The men then set about to repair the wire in order to get light in the Calle 18 de Julio and other streets that were in darkness all the time. An excellent and quick way to mend broken plaster the same as with any piston vacuum pump. Its three casts and impressions is to paint the broken surfaces exhausting cylinders are made air tight by means of over two or three times with very thick shellac varnish, 1186; liquid under heavy pressure, a refined oil being the and at each application to burn out the alcohol over a flame. When the shellac is sufficiently soft, press the

Exhibition of the power of the pump was first made parts together, and hold in position till cool. It will in exhausting about 20 globes, this being a convenient be as strong as it was before broken.