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The Patent Laws—Their Defects and Remedies.

The "Washington Union" of the 3rd inst. discusses the defects of our present patent laws, and makes some very just observations upon them, but the remedies proposed in our opinion, will only aggravate the evils instead of curing them. Respecting the old Patent Act of 1793, it says, "it is believed by many to be the best ever passed," and it characterizes the Acts of 1836 and 1839, as ambiguous, and in many respects incomprehensible." It says:—
 "The rays of judicial light, usually so clear and powerful, have scarcely been able to penetrate them. Although included in a few printed pages, there is more to bewilder those most interested in them, and to puzzle the courts, than in any hundred pages of law to be found in statute books. They bid fair to out-rival the celebrated English statute of frauds in creating labors for the judiciary, and in confounding the common understanding. Good laws define the rights of those subject to their operation, in a manner easily understood by the public at large, and protect the rights which they create. The present patent laws almost wholly fail to accomplish either. They nowhere clearly and fully define what is patentable, or what constitutes an invention. They leave the public and the courts substantially in the dark on these points. This occasions innumerable controversies."

We in a measure agree with what is here said respecting the obscurity of some portions of our patent laws, but not respecting "what is patentable and what constitutes an invention." If the present patent laws are obscure in many points, they are very clear on the point of what is patentable, and the courts, so far as our experience goes, never found any difficulty in defining what constitutes an invention; these are not dark but luminous points. Section 6 of the Act 1836, says: "Any person or persons having discovered or invented any new and useful art, machine, manufacture, or composition of matter, not known and used by others before his or their invention or discovery thereof, upon due and proper action may have a patent for the same." This is very precise language; what better language can be used for judging of an invention than "new and useful?" No law can be framed to define the question more clearly. When a patentee sues for an infringement, if the defendant proves that the invention claimed is not new, the patent then becomes null and void; if the defendant pleads that "it is not useful," this is easily settled, by making him pay for confessing to the use of that which he asserts is not useful—for he thereby convicts himself of tergiversation.—The "Union" also says:—

"A good and valid patent may be fought from its birth to its death, often costing in litigation more than it produces, while an invalid one may be the basis of endless legal controversies, without the possibility of being vacated, either by the Commissioner who issued it, the judiciary, or Congress. Where a large amount of capital has been invested, and time has shed its mists upon disputed facts, the interest of the parties often induce them to scruple at nothing which promises success in litigation. Perjuries but too often contribute to the result. The talents, dexterity, and skill of those who are witnesses by trade, in giving their own and combating the opinions of others, not unfrequently turn the scale of victory. Neither the patentee nor the contestant has a fair chance. So great is the evil of this endless and expensive litigation, that many now refuse to take out patents at all, but use their improvements as well as they can in secret. Professor Morse has advised inventors to do so."

There can be no doubt but all stated in this extract is true, except the two last paragraphs, and the last is true as a statement, but is not as a sentiment. We believe that Prof. Morse has, in one case, given such advice, while he himself is a living example of the benefits of our Patent Laws. At the present time, we are in-

formed, he is comparatively wealthy, by the profits of his patent; had he kept it secret, we have no doubt but he would be as poor to-day as when the first idea of it flashed across his mind. Prof. Morse must have given bad advice. There are very few, not many, as we have very good opportunities of knowing, who keep their inventions secret. Those who do so are liable to have their improvements stolen. The following are the remedies proposed by the Union:—

"First, divest the patent laws of their obscurities, uncertainties, and catalogue of discretions, whether developed upon the Patent Office or the courts. Second, when patents are applied for, notify the public to show cause, if any they have, why they should not be issued. Third, make ample provision for hearing and trying the objections raised, if any. Fourth, when granted, make the patent conclusive, as extensions now are, against all the world, so that on a trial the infringement and the damages will be the only questions to be considered. Fifth, to protect the public, authorize parties interested to take direct proceedings, to set aside and annul the patent. If the patentee is beat, cancel the patent and let that end the matter. If the Commissioner of Patents has not time to hear these preliminary questions, clothe some court or judicial officer with power to do so. If justice requires it, send an issue of facts to a circuit or district court to be tried. Have all questions preliminary to issuing the patent determined before the interests involved become large, and while the facts are recent and easily proved. By this course, the courts and juries will be relieved, and the patentee's rights protected—"secured."

With the first remedy we entirely agree.—The second and third may be embraced in one, and excepting "notifying the public" (which would do no good) is fully embraced in the present Patent Laws. The fourth and the fifth remedies contradict one another, for the fourth makes the patent conclusive, and the fifth provides the means to make it inconclusive. With the fifth remedy, by itself, we agree; it simply provides for a writ of *scire facias*—it belonged to the old Act.

It would be impossible to notify the public intelligently of the application for a patent; because it would require the publication of a particular description, with drawings of the invention claimed. Who would pay for this? "The inventor," the proposer may say; this would prevent all men in moderate circumstances, and especially poor inventors, from applying for patents, and would thus be the means of injuring the inherent rights of the great majority of American inventors. It would also be undemocratic for Congress to make patents final, it would convert that body into a huge monopoly grantor, and violate the principles of the Constitution. Extensions, are not final against the world. The "Washington Union" is mistaken about this; they come under the same laws and rules as they did during their first terms. All questions preliminary to issuing the patent can never be tried, for all questions cannot be raised until the interests involved are understood; the majority of these never arise, until the patent is in operation for some time.

It requires very few improvements in our Patent Laws to make them as perfect as any laws can be. The present laws in fact are no worse than most other laws. No law can be framed where great interests are involved that will provide against litigation. Look at the "Gaine's case," the one of the "Methodist Book Concern," and many others we might mention.—The "Union" has no interests at stake, but that of the welfare of inventors, and it is no doubt sincere in the remedies pointed out.—The discussion of this question at this time is appropriate; we present our objections to the propositions advanced, and next week will point out some remedies which we think, if acted upon, would be beneficial to inventors and the public at large.

Railroad Association.

We would like to suggest to our friends, the Directors of the various Railroad Companies in our country, the propriety of forming an association for the purpose of test-

ing many of the numerous railroad inventions which are continually being presented to the public. In this way a small amount contributed annually by each, would amount to an aggregate of which all would reap the benefit, and if judiciously expended by suitable persons, appointed by the association, it would enable all the improvements promising to be of any value, to be fully and fairly tested. We are confident that it would be the means of saving hundreds of thousands of dollars every year. Any other business which could as well be done by an association of this kind as by the separate companies, might be confided to them. Whoever will take the initiative in this matter will confer a benefit upon inventors, and we will gladly give the use of our columns to any person who can present a well-devised scheme for this purpose.

Patent Office Report for 1852—No. 8.

EXAMINER F. S. SMITH'S REPORT (Continued.) One of the seven patents granted on sewing machines, in 1852, was that of Wilson's, which was illustrated in our last volume. In this machine the lock stitch is formed with two threads, but no shuttle is used, as is stated in this Report. There is a revolving hook and spool on it, but no shuttle; it would be just as correct to call the hook a needle as a shuttle. It is entirely different from the needle and shuttle machines, and embraces the most ingenious device for locking the stitch ever invented.

Four patents were granted for knitting machines. For spinning machines seven patents were passed; one was for the self-acting mule, in which the machinery is greatly simplified. One long irregular cam regulates the motion of the spindle, the backing off, and formation of the cop.

Three patents were issued for improvements in making batting, and we understand that a very powerful company has been formed in this city, combining a number of cotton batting patents, and embracing the patent of Col. Robinson (our acting Consul at Havana), for making cotton mattresses.

No less than twenty patents were granted for power looms; three of these were for pincers and pile wires, for pile fabrics, such as the printed warp tapestry carpet. A foreign loom patented for weaving Brussels carpets without the use of pile wires, is thus described:—"Certain picks of the weft thread are partially beat up, as they are woven into the warps; that is, leaving a space between two of the picks of weft, and then throwing in a number of close shots; after this is done, the whole of these successive picks or shots of weft are driven firmly up on the foundation warps, by which means the terraced work, occupying the space between the open pick, will be packed into loops on the surface of the fabric, and form the raised portion of the warp. In effecting this object, it is necessary to loosen such portions of the warp as are necessary to form the loops, and also to tighten the ground warp threads whilst the lay is beating up the weft to make the loop first."

This ends our brief review of Examiner Smith's interesting Report.

EXAMINER SCHAEFFER'S REPORT.—This Examiner fills the situation formerly occupied by S. Cooper, a faithful officer, who was connected with the Patent Office for about ten years. Examiner Schaeffer has charge of the engineering class of inventions; he pays a compliment to his assistant, Dr. D. Breed, who has labored faithfully with him to extricate his desk from an accumulation of applications. The number of applications passed was 141, the number rejected 268—less in proportion to the number of patents granted than by any other Examiner. The majority of the examinations were made by Mr. Cooper before he retired. Thirty eight patents were issued for improvements in civil engineering and architecture. In respect to railroad inventions, the Report states that owing to their recent rapid development in the Western States, applications for patents were made by residents in those districts, which were but revivals of old inventions. "Still," says the Report, "amidst such a large amount of ingenuity, many very happy hits are sometimes made, and for the sake of these it is desirable

to encourage invention." For increasing the safety of railroad travel, it says, "the records of the Patent Office, for the last few years, show some very beautiful inventions, which afford a promise of better things yet to come." Four patents were granted for railroad switches; one for making wrought-iron railroad chairs from plate iron. A large hearing ear trumpet for engineers on locomotives, was patented, and the improved safety car for inclined planes, illustrated on page 180, Vol. 8, "Scientific American," is favorably noticed. It speaks approvingly of the patent granted to M. Maillefert, for blasting rocks under water; which was illustrated on page 8, Vol. 8; how this patent came to be granted has always puzzled us, for the invention is an old one and should be public property.

The tubular wooden bridge, illustrated on page 24, Vol. 7, "Scientific American," is also favorably noticed. Ten patents were granted for car wheels; in respect to this class of inventions, it is stated that the Office has been exceedingly liberal in granting such patents. About 80 forms of car wheels have been patented in our country, and as many in England, but this should not lead any person to suppose that every design and form of car wheel can be patented.

Thirty-six patents were granted on mills, of which 8 were for grinding and crushing ores; these were called forth by the great amount of gold quartz found in California, which it is hoped, can be ground, and the gold extracted at such a small expense, as to make this metal at some future day, as cheap as lead. In itself gold has no positive natural value, excepting as it is useful in the arts. We believe that if it were as cheap as lead, many operations in the useful arts would be greatly improved.

Thus ends our brief reviews of the Reports of the Commissioner and Examiners of the Patent Office for 1852. As we remarked in our first article, we are glad that the Reports of the Examiners have been presented. We took occasion, in reviewing the Report of 1851, to condemn the action of the Patent Office in not presenting the usual brief and interesting abstract of inventions patented: our remarks have not returned void, for we assure the Commissioner and the Examiners, that the condensed reviews of their reports, which have been presented to the public through the "Scientific American," have been read with great interest by tens of thousands, and have been the means of showing to our people the importance of the Patent Office, and the benefits which are being conferred annually, by our inventors, upon the general interests of the country.

Testing Bridges.

MESSRS. EDITORS.—As I anticipated another and more general trial of models of bridges is to come off here, and as it is a matter of great importance that the most scientific—because the surest—construction of bridges should be generally known, I would respectfully submit the propriety of calling the attention of the public through your paper to the coming test.

The trial will come off during the present winter, and all interested in the various plans of railroad bridges should be represented, and the earliest notice of the time when they will be ready, addressed to me.

Required Materials and Dimensions of model.

Length 16 ft. 2 in.
 Span between bearings 14 ft. 9 in.
 Height (greatest) 1 ft. 2½ in.
 Width 9 in.

Weight (as near as may be) 64½ pounds.
 Materials—White pine with brass bolts.

JOSEPH E. HOLMES, Director of Machinery.
 Crystal Palace, Dec. 9, 1853.

PRIZES!! PRIZES!!

The following Splendid Prizes will be given or the largest list of mail subscribers to the Scientific American, sent in by the first of January next:

\$100 for the largest list.	\$80 for the 7th largest list.
\$75 for the 2d largest list.	\$25 for the 8th ditto
\$50 for the 3d ditto	\$20 for the 9th ditto
\$45 for the 4th ditto	\$15 for the 10th ditto
\$40 for the 5th ditto	\$10 for the 11th ditto
\$35 for the 6th ditto	\$5 for the 12th ditto

The cash will be paid to the order of the successful competitors immediately after January 1st, 1854.

These prizes are worthy of an honorable and energetic competition, and we hope our readers will not let an opportunity so favorable pass without attention.

For Terms see Prospectus on the last Page.