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No. 102.

For the Week ending December 15, 1877.

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AMENDING THE PATENT LAWS.

Senator Wadleigh's bill providing for amendments in the United States Patent Laws has been read twice and is now under the consideration of the Senate Committee on Patents. An abstract of the provisions is given elsewhere in this issue, and the bill in its entirety is published in the current number (No. 102) of the SCIENTIFIC AMERICAN SUPPLEMENT, in order that our readers may be enabled to give it thorough and critical examination. Its effect is upon future patentees, and not upon those already in possession of patents.

Our objections to this measure are founded, first, upon certain broad general principles which courts have held to be, and which plainly are, the true basis of our patent system; and second, upon certain specific reasons noted hereafter. The object of our patent laws is to benefit the community. They induce people to invent, so that the inventions produced may, by ultimately becoming public property, add to the knowledge, welfare, and comfort of the nation. The inducement offered is the securing to the inventor of an exclusive privilege in and to his production for seventeen years. While this privilege is a species of indefensible monopoly per se, it is nevertheless just and expedient in view of the ends accomplished, and this more especially as the period over which the inventor enjoys it is wholly inconsiderable in view of the advantages which it confers upon the public foreverafterward. Now, if this privilege is to be reduced in value, through becoming hampered with unwise restrictions as to how the inventor shall enjoy it, then, the stimulus to invention being lessened, it follows that new and useful ideas will be more rarely produced, and thus the community will be the loser.

Our more specific objections to the bill are that is framed in the interest of a combination of railroad companies. About a hundred and thirty of these corporations some time ago organized an association for mutual protection and combined action in patent matters, and this is now devoting its energies to pushing through Congress the Wadleigh bill. As it is at present, the railway companies are ready enough to use good patented inventions, but about the only good reason which they recognize for paying an inventor royalty or damages is a certificate from their counsel to the effect that they cannot avoid doing so. It is almost needless to add that in the maintenance of protracted suits, etc., wealthy associations already have great advantages over the individual inventor; and if the latter is still further to be hampered, it may soon come to be said that his right is a deception and resides not in him, but virtually in any powerful combination which chooses to pirate it; and this is precisely the state of affairs which the railway companies are seeking to bring about.

The bill being before the Committee on Patents in the Senate, that body is hearing argument concerning it. Inventors should oppose it with all their influence, and we counsel them to go, or send representatives, or even lay protests or letters before the Committee, setting forth the disadvantages. Nor should the active opposition be restricted only to inventors. We have shown how the measure is likely to affect the whole country. It is therefore to the interest of every one who has the progress of the nation, in invention, discovery and science, at heart to lend his aid to prevent its becoming law.

CURIOSITIES OF SUICIDE.

The latest report of the Criminal Administration of France contains a very curious series of statistics relative to the suicides committed in that country in the year 1874. It appears that during that period 5,617 persons killed themselves, and that this total is greater than had ever before been reported. Of these unfortunates 79 per cent were men and 21 per cent women. Of 105 suicides the ages could not be determined, but of the remaining 5,512, 29 were under sixteen years of age, 193 between sixteen and twenty-one, 1,477 between twenty-one and forty, 2,214 between forty and sixty, and 1,590 over the last mentioned age. Leaving out those who committed the fatal act while laboring under mental disorders, in all 1,622, it is interesting to compare the condition of the suicides with the cause which impelled them to make away with themselves. How prolific a source of suicide unhappiness in the marriage relation is, is indicated by the fact that 48 per cent of the total were married people, and that out of 5,136 suicides, regarding which authentic particulars were obtained, 701 killed themselves because of family troubles. It will also be noted that the greater number of suicides were people past the prime of life, indicating that dissatisfaction with a wasted or unsuccessful existence determined their putting an end to it. This is further substantiated by the fact that out of the 5,136, 652 are known to have killed themselves because of reverses in fortune.

Seven hundred and ninety-eight people died to avoid physical suffering, and 489 because of various unclassified troubles. The fact that out of the 815 who were brought to self-destruction by dissipation, 572 owed their misery to drunkenness, is in itself a powerful temperance lecture. It is not easy to understand why spring and summer were the seasons in which most suicides occurred. The percentages are 23 for winter, 19 for autumn, 31 for spring, and 27 for summer. This would seem to negative the statement which has been made that most cases of self-murder occur during gloomy weather, which aids in depressing the spirits, for certainly there are more dark days in winter than in summer and fall. Again, it might be supposed that the privations incident to winter would lend an especial impulse toward the crime. As

to the mode of death chosen, more than seven tenths preferred either strangulation (2,472) or drowning (1,514), showing that, while the suicides were willing to throw away their lives, they probably shrank from any mode of so doing which involved mutilation of their bodies.

A COMMON AILMENT.—MALARIAL POISONING.

We give in our this week's SUPPLEMENT—number 102—a full report of a very interesting clinical lecture, lately delivered by Professor Alfred L. Loomis, M.D., before the class of the University Medical College, this city, on Malarial Poisoning. According to Professor Loomis the effects of malarial poison are manifested in a surprising variety of forms and symptoms; so numerous and various, in fact, that they cannot be tabulated. They embrace enlargement of the spleen, neuralgias of different forms, that may or may not be periodic; dyspeptic troubles which cannot be relieved by dyspeptic remedies; headaches that are often treated as cerebral diseases; confusions of mind; staggering gait; loss of power in portions of the body; impairment of mental faculties; inability to do work of any kind; not sick enough to go to bed, but too ill and habitually too tired to perform anything that requires the least exertion; shortness of breath; rapid, weak, irregular pulse; sleepless nights, etc. The first step toward cure is removal from the malarial locality; then only may the proper medicines be expected to prove beneficial. The infection appears to be far more widely spread than is commonly supposed; and all who have ailments that fall within the category here mentioned, will do well to read the excellent lecture.

NOTES OF PATENT DECISIONS OF THE COURTS.

Eppinger brought suit against Richey et al., to restrain the infringement of his letters patent of June 17, 1873, for bunch or plug tobacco. The defendants answered, admitting the infringement but denying novelty and patentability of the claimed invention. In order that our readers may understand the case, it is necessary for them to bear in mind that licorice or some other moist and sweet substance is used in the manufacture of plug or bunch chewing tobacco, in order to impart moisture and sweetness to the manufactured article. The preservation of these two qualities is greatly desired by the consumer. When tobacco is thus prepared there is danger that the moist tobacco, if exposed to the air, will ferment, or will mould and "dry-rot." It is, therefore, important to make the plug or bunch as compact as possible, in order to preserve moisture and prevent mould. Before the date of Eppinger's invention, this kind of chewing tobacco was made by enclosing strands of sweetened "filler" tobacco in a binder. The wrapped tobacco was then spun upon a wheel, or twirled or rolled by hand into a roll, and, after being incased in a wrapper, was coiled and packed for market; or was subjected to extreme heat, and afterwards to pressure, before being put up in packages. Moisture was removed by this "hot-house" process, and thus danger of fermentation was obviated, but the quality of the tobacco was made inferior. Another method of manufacture was by incasing the sweetened filler strands in an unsweetened binder, and also in a wrapper. The rope was then bent and braided, and the two ends of the braid were fastened by a cap of wrapper tobacco. The braids were subjected to side-wise pressure, but could not be subjected to pressure end-wise, in consequence of their shape, and therefore were not compressed sufficiently to exclude the air, and the tobacco was liable to become mouldy. Each braid soon became quite dry in the pocket of the consumer, and lost its flavor.

Eppinger's method is to envelope the "filler" tobacco, treated in the usual way, in a "binder," which is a brighter and larger leaf, and around the binder he wraps what is called a "bright wrapper leaf," which is used in its natural condition without treatment. The rope thus formed is, in fact, a long flexible cigar, with a sweetened filler. This rope or strand is then coiled into a bunch around a central core, one end of the rope, either single or doubled, serving for the core. Several of these bunches are placed on their ends in a strong receptacle, of suitable shape, and a follower is then forced down with great pressure upon them. After about twenty minutes the follower is removed and the bunches are taken out and replaced in the same receptacle on their sides, and side by side, and pressed again in like manner. The claim of Eppinger's patent is for: "Plug or bunch tobacco made as herein described, the same consisting of a rope or strand composed of a sweetened or prepared filler inclosed in a binder, in turn enveloped in a wrapper, the said rope being coiled around a central core, forming a continuous part of the rope, and the bunch thus made being subjected to a pressure, as and for the purposes set forth."

The advantages of Eppinger's method are very marked. The moisture of the tobacco is preserved. Air and dampness are excluded by the compactness into which the tobacco is pressed. The tobacco, so put up, can be shipped to warm or damp climates without liability to deteriorate by mould, and a single coil can be carried in the pocket of the consumer without becoming dry or friable.

The utility of the patented article was clearly proved. The evidence showed that it had had a very large sale, and had commanded a much higher price than the same quality of tobacco when put up in any other form.

The novelty of the invention was also clearly proved. The patented article manifestly differed from the ordinary spun or rolled plug tobacco, in this, that in such tobacco the filler and binder were rolled together, while in the patented article the binder simply encircled the filler. "Twist"