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Miscellany about Inventors.—Patents.

A respected correspondent writes us, saying: "Have you not a word to say about patent assignees as well as inventors, as many of them purchase patent rights at a great pecuniary loss."

In speaking of inventors, we hold their rights to be those of the patentee. We often speak of patent speculators, meaning by that term, those who care not a snuff for their assignees—those who try to make money by hook or by crook. There are some men who are always scheming to make money, by inventing some new and wonderful improvements for the purpose of getting men to advance them money. A company once paid an inventor, in New York, \$40,000 for his patent, from which they never realized a shilling. He is now in Europe. On the other hand, we know an inventor, a simple honest man, who two years ago made a valuable improvement in a certain manufacture, and assigned it to his employer, for which he was paid the liberal sum of, not one dollar. The assignee now draws a liberal revenue for his patent—the inventor can scarce support his family. Laws cannot make men honest, but their object is to prevent injustice done by one to another.—Last week, we commented upon a Bill which had been introduced into Congress; it has been amended by striking out any foreign State or Territory. It now applies only to Canada and the British Provinces and in all likelihood will become a Law. It will be found on another page.

Some people honestly believe that inventors should receive "the same legal protection as authors in their copyrights, because the right derived is from the same clause in the Constitution." The right of book property is very different from machines. The works of Irving cannot be counterfeited by any other. A change in phraseology would destroy the whole value of *Sleepy Hollow*. The modifications of a patented machine; does not destroy the claims of the patent, whereas, the ideas of an author, if presented in a new dress by another person, could not be construed as an infringement of a copyright. There is no inventor of a machine who would be willing to come under the copyright law, in preference to the Patent Law. Let any man reflect upon this question as we have done, and his opinions, will not be far apart from ours. On last Thursday, the 21st, the application for an injunction against the House's Telegraph by the Assignees of Prof. Morse, F. O. J. Smith and others, before Judge Woodbury, in Boston, was denied. The case is to be tested at common law—the best way we believe. In this opinion we differ somewhat with a correspondent on another column. No judge should grant an injunction against one patentee, on complaint of another, before the case has been tested by a trial at common law. The patent of a defendant is just as sacred as that of a complainant, until the question of infringement is proven and decided by trial.

Uses and Abuses of Air.

By John H. Griscom, M. D., published by J. S. Redfield: New York.

HEALTH RECREATION.—We have often called the attention of our readers to the subject of "good ventilation and free respiration—breathing the brave fresh air." It affords us pleasure to take up the work of an author who loves to inhale the heaven-born fluid, pure as the God of Heaven designed it should be inhaled by all men. The Doctor is evidently at home with his subject, and we are with his book. "Health," he says, "is the greatest terrestrial aim of both rich and poor—the climax of all earthly blessings, and when lost, no earthly reward seems too high for its restoration." How true—how forcibly true. What would the blind not give to be restored to sight, and the lame to walk. And above all, what would that man give who is bowed down with asthma, and trembling on the confines of the tomb, to drink in a draught of pure ruby health? Aye, what would all of them not

give for such blessings? That man who has nothing but a crust of bread, a pitcher of water and health for his repast, is richer by far than him who pines in sickness on a silken couch, and whose table groans with beef, bread and wine. Wealth and fame are no equivalents for health.

One great cause of disease is the inhaling of impure air. The atmosphere is an ocean, in which we live, and if the God of Heaven was to lift it up above the highest mountain on our globe, for one short ten minutes, the whole human race would cover its surface "like leaves of the forest by wintry winds strewn." When the atmosphere is mixed with any other gas whatever, it becomes unfit for the purpose of respiration. How necessary is it, then, that great attention should be paid by every person, to obtain, always, a plentiful supply of pure air, yet the great majority of mankind appear to act upon the supposition, that food, drink, and raiment constitute the whole essentials of life. What man is there who would drink of the reedy pool in preference to the crystal fountain, and yet there are thousands who appear to be content to quaff twenty draughts every minute out of an impure atmosphere. It is a terrible thing to see men, day after day, toiling and plodding for life (rather death) in the dark, damp cellars of our cities, and it is dreadful to behold women and little children crooning and stifling in ill-ventilated apartments. Great Reforms are yet to be made in our dwelling houses, schools, workshops, &c. The Christian civilizer must devote more sermons to physical ethics than he has done, for the temple of the Spirit is greater than a temple reared with hands. Those engaged in sedentary occupations, should force themselves often to active exercise in the open air. It is a fact, that the closer a person is confined, his occupation becomes to him like Bunyan's enchanted ground—his desire to stir abroad becomes weaker and weaker. What a glorious thing it is to shake the dust of the city from the feet, and mount for a space the neighboring heights. Crowded into narrow apartments and abiding in step-across-streets,—health soon flags, the shoulders bend, and the mind loses its power. How exhilarating to drink in the fresh breeze—to feel the shoulders erecting themselves like pillars, and the chest swelling to its natural form like a graceful quill; then the foot "becomes like bended bow, the mind like arrow free." Not a philippic of Demosthenes would ever have descended upon the tide of time, had he not often bared his bosom to the breeze, and on the Athenian Cliffs mingled his voice with the winds and waves of the "Great Sea."

Railway Errors.

It is a matter of surprise to many, to see how often exploded theories are revived, and how many inventions are re-invented. Old things are continually floated up on the tide of time, like corks that have been swept for a time beneath the waters of an eddy. How many rotary engines have been invented since the days of Hero. How many improvements in propellers, have come and gone. In every department of Science and Art, we can witness the repeated attempts at supposed improvements, and repeated failures. In the construction of machines, the ingenious theorist is too apt to make but a bungling affair of it,—but when combined with practical skill, the scientific theorizer is sure to be the most successful man. The man who is merely practical is limited in the range of objects, for want of a knowledge of what others have done and what others are doing. He often expends years of labor upon some invention which he supposes will astonish the world, when lo! after it is fully completed, he finds to his loss and chagrin, that the same thing has been previously invented by some other person. It is, therefore, positively necessary that every inventor, or any man who has an idea of inventing, should be an extensive reader and acquainted both with the past and present of physical science.

We have lately seen a number of paragraphs commenting upon "the errors of the present railway system. One capital error," it is stated, "is the immense weight of engines and

tenders, that the power expended is employed in moving continually to and fro to the great destruction of the rail;" to remedy this evil, one proposes lighter engines with some new way to give them greater adhesion on the rail; another believes that "the true economy of railway conveyance will never be attained, until the moving power is stationary, and the rail shall bear only the goods to be carried."

It is neither by the weight of the locomotive being reduced, nor by stabling the iron horse, that improvements are to be made in the Railway System. Why? Because no general plan can be laid down suitable for every line of railroad. It would not be profitable to have heavy engines on one line, and it would not be economical to have light ones on another. If the useful effects of a locomotive is  $W \times V = R$ , (weight, velocity=resistance) then the economical weight of the locomotive will depend on the work it has to perform. Experience is the true monitor, and it has decided for the heavy locomotives for a great velocity. On short lines, with light trains, and a moderate velocity—the economy of the light engine is self-evident—but how light? that is the question. Some people have an idea, that it would be profitable to have locomotives that would mount up hills, and gently slide down into the valleys. Many plans have been invented to accomplish this object, but none of them for passenger lines, have been successful. Neither have stationary engines been successful for inclines on passenger lines. The Mohawk and Hudson Railroad, employed a stationary engine on the incline at Albany, but the Road never paid until the line was changed in direction, by a detour, to avoid the incline. On lines to carry loads of mineral, (coal, &c.) inclines and stationary engines may be most profitable, especially where the heavy train is employed when descending, to carry up or assist the empty wagons on another track. We know a coal railroad which is an incline from the mine, whereby the heavy trains, by descending to the depot, carry up the empty ones on the other track—no engine being used at all—nothing can be more economical than this.

For long lines and passenger trains, the most economical system to be pursued, is to make the road to the nearest possible level—not to be stingy in levelling the mountains and filling up the valleys; lay down heavy rails, and employ locomotives of about 20 or 24 tons, constructed of the best materials and made in the most skillful manner. Inclines cause a continual tear and wear—therefore they must be set down as a constant disintegrating cause, whereas to level the mountain and fill up the valley, amounts only to a single expense, and great though it may be, it is not so great, in our opinion, as to have steep grades. The great evils of our present railway system, is a false economy of using too much miserable metal in the rails, wheels, axles, &c.; but a better spirit is abroad—a more enlightened economy is now beginning to rule our railway councils by the employment of wrought instead of cast iron in those parts subject to concussions and torsion. We may therefore expect to hear of fewer accidents than formerly, especially since the laws so effectually reaches the hearts of stockholders through their pockets.

Reform of the Patent Laws.\*

It is a mistaken idea, to suppose that the inventor will be more faithfully protected in his rights by any reform of the Patent Laws which does not reach the practice of our United States Courts, and there does not appear to be any provision made for this in any reform yet presented. While there exists unjust men in the world, unjust acts will be done by them, whether those acts be fraud or infringement of Patented Rights. The greatest boon to inventors and the owners of Patent property, would be a cheap method of deciding their cases by law. This, however, would not suit the gentlemen of the bar, and I say, that until such a reform accompanies others in our Patent codes, little good will be done for the benefit of the class spoken of. At the present moment, the fees of counsel to pursue patent cases in our United States Courts, are so high, that unless a patentee is rich, or has good

friends, there is scarce a possibility of him troubling the court with his case—his rights will be trampled with impunity by those who have the means to "pay the greatest lawyer's fees." And rich patentees are perfect lords and despots, ruling it over poor patentees in the same line. For example, a rich man gets a patent, or a rich man owns one, and a poor man gets a patent for something in the same line, but entirely different; the first thing that he knows of his difficulties, is a notice to "stop using his invention, or an action for damages will be instituted against him." Having some American grit, he snaps his finger at the summons, and goes to an attorney—one who has been admitted to practice in the U. S. Courts. He tells his case, his lawyer gives it a thorough examination—then advises to employ some great patent agent, also, as adviser, and tells his client that with such an array of ability, he will come off with flying colors. The threatener, in the meanwhile, applies for an injunction, and gives due notice to the poor patentee. His counsel collects facts, gets old specifications, drawings, affidavits, and what not, to rebut all the complainants allegations, when what should the complainant do but withdraw his application, and by this trick lead the poor defendant into two or three hundred dollars expense. This trick may be repeated in other District Courts, until the poor patentee is crushed with despair, gives up the contest, and the rich man will soon, some way, not fail to get an injunction. This is a mean and contemptible way of acting—but there are some patentees at work upon this very system at the present moment. By this very same process many people are frightened from using things that in no part belong to the persons who claim them, and in this manner, it may truly be said, "the terrors of the law are as great for evil, in many cases, as for good in others." It may be said "he is a poor jurist who only can tear down, and knows not how to build up." There is some truth in this, but evils have first to be discovered and pointed out, before the mind can or will look for a remedy. A Bastile may be overthrown without rearing up a substitute. Some propose to have a Court or Assembly of *Wise Scientific Men*, who shall sit in Washington and try all Patent Cases. This might be a good plan, but as long as there are so many disciples of Cicero in both Houses of Congress, no change may be expected from Common to Civil Law, in the cases of patents. As long as our people are pleased to support as many lawyers in New York as there are in all England, they will not, in all likelihood, move in the matter with force and sincerity.

New York.

JUNIOR REVIVUES.

\* The views herein presented are held by many, and I have presented them in the strongest light. I will show an opposite view next week. J. R.

Sheathing Ships with Zinc.

In answer to a note in the Scientific American of last week, the Vieille Montagne Zinc Mining Company, No. 25 William street, this city, has sent us a pamphlet relating to the uses of Zinc, and especially respecting its employment as sheathing for ships. It appears that no less than 1400 French vessels are sheathed with zinc, and 101 English, and since the first of January 40 American vessels have been sheathed, and the orders are increasing in a triple ratio weekly. The zinc, it is stated, will last six years, and sometimes nine, while copper is asserted to last only four and yellow metal three years. Zinc is 6½ cents per lb., copper 22, yellow metal 17½.

Use of Chloroform in Scotland.

In an article in one of the London Journals, it is stated that during the last two years, it has been calculated that chloroform has been used in from 80,000 to 100,000 cases in the city of Edinburgh, and without an accident or bad effect of any kind whatever traceable to its use.

The boiler of the steamboat Troy, exploded at Buffalo, on last Saturday. A great number were killed and injured. When will there be an end to such wholesale slaughter?