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Harbor Improvements.

We have been told in private—and statements have been made in public—that New York is now the most extensive shipping port on the globe. We think it probable, that both London and Liverpool, still surpass it, but they cannot do so long, for the increase of its shipping is so rapid, in comparison with that of any other city, that it must soon become the shipping Metropolis of the world. And yet, with its rapid rise and progress, and with the many brilliant hopes of its future greatness and grandeur, a dull cloud sits brooding over its waters, warning us, that if measures are not adopted for the improvement of its harbor, the time will yet arrive when no tall ships or mammoth steamers will be seen at its wharves, but instead thereof, only flat bottomed lighters, or contemptible fishing yawls.

On some parts of our coasts, the sea is continually making encroachments on the land, while on other parts, the land is continually making encroachments on the sea. Around New York harbor, the land has been steadily creeping out into the sea circumscribing the domain of its proud waves, and the channel of our harbor is daily becoming more precarious. Within a very short period, two of our Ocean Mail Steamers have grounded while coming up to their docks, and one of them was seriously detained for nearly a week in her dangerous position. The news of such accidents carried abroad, tends to detract from the character of our harbor, and as a natural consequence, acts unfavorably upon the interests of our city. Large deposits of mud have for years been accumulating in its waters without any sensible or energetic efforts being made to prevent or remove them. This is a public fact, "known and read of all men." The "Board of Commerce," in this city, have frequently directed attention to the subject, and have made some efforts to induce the proper authorities to remedy the evils. It does not appear, however, that there is any prospect of such Powers doing anything effectual for their permanent relief. Our city authorities—who should be selected from our principal merchants, manufacturers, and mechanics—have never, as a body, been the right class of men for such offices,—they have neither exhibited a sensible patriotism nor even an enlightened selfishness, for the prosperity and welfare of the city. They have generally been characterised by an intense personal selfishness, commingled with a deep ignorance of the true interests of the community. If tried by an intelligent jury, they would be found guilty of obstructing the navigation and injuring the city's commercial interests: they have suffered millions of tons of sand and dirt to be washed from our streets into our docks, and out into the channel, as if they were elected and paid for the very purpose of destroying its commerce.

A most reprehensible custom has been practiced in the covering up of newly paved streets, with a thick stratum of sand, apparently to conceal defective workmanship, increase filth and dust, and at last to fill up our harbor through the agency of those public scavengers—heavy rain showers.

Why our merchants have suffered such nuisances to exist so long, puzzles us to conjecture. Why have they been so long callous to their own interests as to allow such quantities of mud to be carried into our harbor and docks to ground steamships and imbed large clippers—like the "Great Republic," which was burned to a crisp for want of water to float her out from danger?

Those who have the shipping interests of the city at heart, must not trust to General, State, or City Governments for the improvement of the harbor,—they must rely more upon themselves. The deposits from our streets can be prevented by keeping them clean, and this will also tend to increase the general health and comfort. The channel can be kept free and open by dredging machines—not those mud-hogs that are now employed at the docks, but

large steamboats, with powerful engines and proper excavating apparatus attached to them. One million expended for this object, every year, would be money well and prudently invested. If the General Government does not appropriate enough for the improvement of the harbor, our merchants should do it themselves—they should act with a generous and an enlightened spirit in this all-interesting matter. The merchants of New York can command any amount of means to accomplish any object for the good of the city; ignorance of their true interests they cannot plead, let them not subject themselves to the charge of stupidity.

The Great Telegraph Case.

We have at last received a printed copy of the decision of the Supreme Court of the U. S. on the patent of Prof. Morse, as has already been noticed and commented on by us.—It differs in no leading feature from the facts we have already presented. It was delivered by Chief Justice Taney, and is exceedingly clear and forcible. The reasoning is incontrovertible, and it surprises us that there should have been a single dissenting voice on the Bench, but there were three, Justices Nelson, Grier, and Wayne, whose opinions are also before us. It is a fact highly creditable to one of Prof. Morse's own counsel, George Gifford, Esq. of this city, that this decision is exactly in accordance with his views of the whole matter, as we judge from his printed arguments set forth on the questions at issue; this shows us that he has a profound appreciation of the principles of our Patent Laws.

The report of the minority takes the ground that an art is patentable independent of the means of executing it, but the quotations given from English decisions, such as that of James Watt, for condensing steam in a vessel separate from the cylinder, is a very unfortunate one; for if an art were patentable independent of the means, then James Watt's patent must have been void, as his great improvement was for a means—his separate interior condenser in combination with the steam cylinder. To condense the steam in the cylinder was an old and well known practice, and a surface condenser never was considered an infringement. The reasoning of the minority report is very vague in comparison with that of the supreme decision.

It would be superfluous in us to say any more upon the subject now, but we cannot help presenting the following extract from the opinion of the court on the provisions of the acts of Congress in relations to patents. It is the clearest exposition, in the fewest words, of the principles of law on which the validity of patents is based, we have ever read.

"Whoever discovers that a certain useful result will be produced in any art, machine, manufacture or composition of matter, by the use of certain means, is entitled to a patent for it; provided he specifies the means he uses in a manner so full and exact, that any one skilled in the science to which it appertains can, by using the means he specifies, without any addition to, or subtraction from, them, produce precisely the result he describes. And if this cannot be done by the means he describes, the patent is void. And if it can be done, then the patent confers on him the exclusive right to use the means he specifies to produce the result or effect he describes, and nothing more. And it makes no difference in this respect whether the effect is produced by chemical agency or combination; or by the application of discoveries or principles in natural philosophy, known or unknown before his invention; or by machinery acting altogether upon the mechanical principles. In either case, he must describe the manner and process as above mentioned, and the end it accomplishes. And any one may lawfully accomplish the same end without infringing the patent, if he uses means substantially different from those described."

Barrows Rotary Engine.

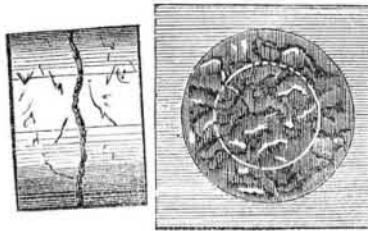
We understand that Mr. Barrows, of this city, the inventor of the rotary engine, which bears his name, and for which he received a patent, a few weeks since, is about to form a joint stock company with a large capital to carry out his invention. We have also been informed that he will soon visit the cities of Cin-

cinnati, Louisville, St. Louis, &c., for the purpose of endeavoring to get his engine introduced upon our western waters; no inventor has exhibited more determination and energy in prosecuting his experiments, than Mr. Barrows.—His confidence in what his rotary engine has done, and what it can do is unbounded and unflinching. Our western engineers will no doubt give him a fair hearing.

Bank Note Paper.

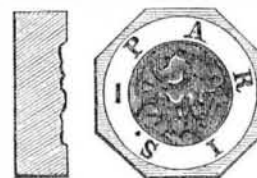
The annexed figures are views of recent improvements in paper for bank notes to prevent counterfeiting, by M. Millet, of Paris. The object of the invention, is the production of irregular marks upon the paper, for as the inventor justly observes, "Distinguished artists and engravers have produced remarkable results, as well with regard to complexures of design as

FIG. 1. FIG. 2.



to precision and beauty of workmanship, yet it has always been possible to imitate the marks, in spite of their multiplicity of lines, because, inasmuch as the devices were produced by the hand of man, they must necessarily admit of imitation in artistic hands." Reasoning on this point, it occurred to him, that in order to manufacture a paper which would be impossible to counterfeit, no mechanical means, nor yet any direct handiwork, should be employed in producing the distinguishing figures, as such work must always be more or less regular and geometrical, and, therefore, susceptible of imitation in the hands of a clever artist." M. Millet, therefore, employs what may be called, "chance" figures—such, for example, as the chance irregularities of surface consequent upon the fracture of a piece of metal. In carrying out this idea, he obtains the nucleus of his design from the transverse fracture of a block metal, wood, or coal, fig. 1; and then, placing between the corresponding irregular surfaces of such fracture a piece of lead, gutta percha, or other impressionable substance, he obviously produces

FIG. 3. FIG. 4.



corresponding irregular marks on each side of such soft material, as at fig. 2. Then supposing a portion only of such fractured surface to be made use of in the intended design, certain ciphers or devices, moulded in wax, are added to the primary figure, forming a matrix or mould, from which a reverse impression is obtainable in plaster, or any soft plastic substance, as in fig. 3—fig. 4 being the transverse section. From this again, any required number of metal or composition moulds may be made for actual use, in impressing their advice upon the wire-cloth of the frame in which this paper is made, and thus each sheet of paper is indelibly marked with the figure of the original fracture, and the word "New York," or whatever word or cipher, may be added to it. Should a clever artist succeed in imitating the irregularities of the mark, he would still be very far from producing an accurate copy, inasmuch as he has to follow, not only the various outlines, but also the light and shade effect.

Hobbs' Lock Picked.

There can be no doubt of the fact that "Day & Newell's American Lock," under the care of Mr. Hobbs, now in London, has been successfully picked by Mr. Goater, foreman of Chubb's establishment. A long correspondence has in consequence taken place between Mr. Hobbs and the successful picker of his lock. The "London Mechanics' Magazine" is very severe upon our countryman, for endeavoring to bring English locks and lockmakers into disrepute. It accuses him of asserting in one lecture that

his lock could not be picked, and again (after he heard it had been picked) making the statement that it could be picked. It therefore endeavors to fasten the charge of tergiversation upon him. The following is Mr. Goater's reply to Mr. Hobbs; it presents the English side of the question:—

The question is, did I or did I not fairly pick, last week, four of Hobbs' new American locks, each lock when sold by Mr. Hobbs being accompanied by his printed guarantee that it was 'secure against picking'?

"An objection is taken by Mr. Hobbs, that I have only operated on one sized lock, and that a small one. To this I reply, the size or shape of the lock makes no difference to me, except that the larger the lock, the easier it is picked, and it can be opened as easily, fixed as unfixed.

Mr. Hobbs says he had some locks at the second meeting, with improvements in them to baffle my operations. After he had explained these, I told him plainly, before all the civil engineers present, that they would not stop me, and I could pick them as readily as I had done the others.

In conclusion, Mr. Hobbs really has no right to complain of this exposure; he began the war against the English locksmiths in 1851."

There is no necessity for any controversy on the subject. The simple question is, "has Hobbs' lock been picked?" If it has, and that fairly, it settles the whole matter. There does not seem to be any doubt of the fact, and this shows us the unpickable lock has yet to be invented.

Ventilating Car.

We were present a few days since at the trial trip of a new Ventilating Car, invented and patented by H. Ruttan, of Coburg, C. W. The car is now running on the New York and Erie Railroad. The plan of construction is to take a supply of fresh air from the top or sides of the car by a funnel-shaped opening, pass it down to the bottom of the car over a water tank to free it from dust and cinders, and introduce it to the inside through a double stove in winter, and a pedestal in summer. The current of warm air in going out of the car passes its whole length beneath the passenger's feet, and is discharged at the rear.

The experiment was highly satisfactory, every conductor on the route spoke highly in its favor, and said that passengers were unanimous in their approval. The only complaint we heard was from a single individual, who complained that the air was too fresh, but as the temperature was pretty constant at about 65°, there could be no just cause of complaint on this score. There was a singular equality of temperature throughout the car. Indeed, at one time the thermometer indicated the coldest portion to be the part nearest the stove. We noticed during the latter part of the trip a fact which spoke volumes in its favor. Every seat in the car was occupied, and there were even several standing in the passage. On going to the other car, which was one of the ordinary construction, there were only about a dozen passengers, yet even with this difference in the consumption of oxygen, the change in the smell of the air was decidedly disagreeable.

We are acquainted with no plan of car ventilation which we consider as good as Mr. Ruttan's, and we are disposed to think that when he shall have made some contemplated alterations, rendering it more simple and at the same time more thoroughly efficient in freeing the air from dust, his plan will be nearly all that can be desired. We can only say in conclusion that railroad companies deserve and will certainly receive the censure of the public unless they adopt this or some better plan, (if a better one is to be had,) of car ventilation. Railroad travelling as at present conducted is often little better than slow torture. That route between New York and the west, which will adopt early this summer some good ventilator like Mr. Ruttan's, will receive three-fourths of the travel.

Some of the pianoforte makers in New York City have struck against an innovation of old rules,—a change from piece-work to day's wages.