New Inventions.

Lost Inventions.

It will be well for those who are revising the Patent Laws, to furnish some provisions applicable to the important question touching the re-discovery of lost or abandoned inventions.

What are the rights of him who re-invents a lost or abandoned art, machine or composition? Can he, for example, obtain a valid patent under our law, who shall re-invent the ancient mode of painting on glass?

The statute requires that the applicant for a patent should be "the *original and first* inventor" of the thing for which the patent is solicited.

Mr. Curtis, in his treatise on patents, discusses this question, but not very satisfactorily to me. He inclines to decide that a valid patent may be issued for the re-discovery of a lost art, on the ground that the *process*, (as in the case of glass-painting for example,) not the *thing produced*, is the essential portion of the thing patented. That in a case like that supposed, the *process* would be the principal element of the invention, is undeniable. Still, if the applicant's painted glass exactly resembles that of the ancients, would it not be a fair inference that it was manufactured by the *same process?* If so, how can the applicant be deemed "the first" inventor?

The law should be so framed as to protect the rights of re-inventors, without the aid of legal subtlety and hair splitting. O.

Interesting to Manufacturers.

MESSRS. EDITORS,—I have just returned from a visit to the York Manufacturing Co.'s establishmeni at Saco, Me., where I spent several days, highly gratifying to my mechanical taste. Among many pieces of machinery which I had the pleasure of inspecting and seeing operate, was a loom invented and patented by Gen. A. H. Boyd, the agent, with which I was particularly delighted. It is simple, in its construction and runs with admirable ease and smoothness, at the speed of 150 picks per minute. In all my acquaintance with looms (which has been by no means inconsiderable) I can truly say, that this loom runs with greater ease, both with respect to its own movable parts and to the web, at 150 picks than any loom I ever saw, at 110. This is, doubtless, the result of the peculiar manner in which the shuttle is thrown, and a provision for relieving the web of any increased tension by the springing of the harness, or the beat of the lay. Such is the construction of the shuttle motion, that a variation of 40 picks per inch produces no inconvenience respecting the regular boxing of the shuttle. But the peculiar excellency of this loom consists in its putting in precisely the same number of picks per inch throughout the web. This is the grand desideratum of the manufacturer to be able to produce a fabric, precisely to order, avoiding on the one hand the putting in more stock than is requisite, and on the other, of falling short of the stipulated number of picks in some few pieces of the order, and thus subjecting the whole lot to a discount. This is accomplished by a positive connection between the cloth beam and the yarn beam, so arranged as to be set to put in any given number of picks to the inch without the possibility of deviating, until changed by the operator. I watched the performance of this loom occasionally, day by day, for several days. The web was No. 16, 34 picks to the inch. The day before I left the loom turned out 70 yards during regular mill hours.

Yours respectfully, E. BURT.

Manchester, Conn., June 12, 1850.

[Mr. Burt is one of our oldest inventors in the power loom line, and is capable of judging correctly about the merits and demerits of any improvement, and like the Rev. Dr. Cartwright, the inventor of the power loom, belongs to the same profession.—ED.]

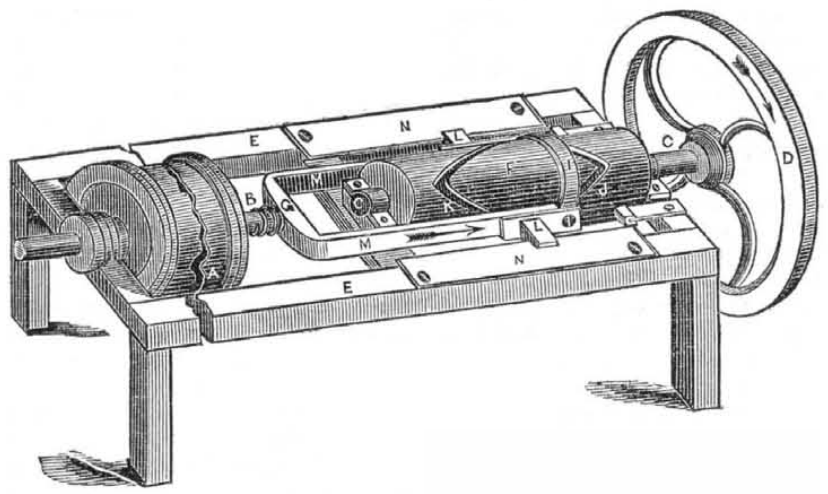
A Valuable Invention for Carding Wool.

The Bangor Whig says that a Mr. Charles T. Judkins, formely of that city, now resident in England, has succeeded in inventing a machine for cleansing wool, cotton, and other fibrous substances, which is said to be superior to anything of the kind heretofore invented, as it effectually separates the wool from all its connections and entanglements, and purifies it ready for working. All the factories in England and Scotland will soon be supplied with it, to the decided advantage of manufacturers, and to the advantage also of the wool growers in South America and elsewhere, particularly when liable to be mixed with dirt and filth, the market value of whose wool will be considerably enhanced.

Water Wheels.

We have received quite a number of communications on this subject, lately. One is published this week, containing views on the extension of Parker's patent. We will publish one next week favorable to Parker's wheel. It is a singular thing for us to perceive so many different and opposing opinions among practical millwrights, respecting the very nature of a water wheel, and above all, its mechanical principle.

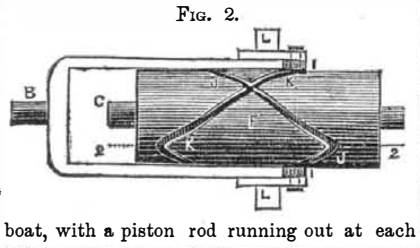
BROWN'S ANTI-CRANK ENGINE.---Figure 1.



This is the invention of Capt. C. F. Brown, of Warren, R. I., for which he has applied for a patent. The object of it is a simple substitute for the crank, whereby the reciprocating motion of the piston rod gives rotary motion to the driving shaft by means of two arms on the end of the piston rod, with friction rollers on their extremities, embracing a drum on the shaft, which has winding grooves around it, in which the friction rollers move and give rotary motion to the shaft, as the reciprocating rod moves backwards and forwards.

Figure 1 is a perspective view of this principle applied to a horizontal engine. Figure 2 is a top view of the drum, with the curved grooves and the arms of the piston rod. This engraving represents the cylinder of a steam engine placed horizontally athwart a steam-

FIG. 2.



boat, with a piston rod running out at each end, giving direct rotary motion, without cranks, to the paddle wheels. The cylinder, A, is represented broken to shorten the view. B is the piston rod; M M are two arms joined to the piston rod by a cross head. C C is the driving shaft with the wheel, D, on it, which will convey the idea of a paddle wheel; E E are the side bearings of the frame; N N are two metal bed plates, which act as guides to the slides, L L, on the arms of the piston rod. There are friction rolls on the extremity of the arms, which fit into the curved angulated grooves, J J and K K, made on the drum, F, which is secured on the shaft, C; I is a band which unites the arms together at the outer end. The dotted lines, 2 2, represent the points for reversing the motion—the return stroke from the one point giving motion in the one direction, the forward stroke giving motion to the shaft in the contrary direction. This will be understood by any person after a little reflection.

We believe this substitute for the crank to be far superior to many others, not even excepting "Pulley's" and a host of other devices, which have been employed for the same purpose.

Pocket Cooking Stove.

Mr. Soyer, late presiding genius over the cookeries of the far-famed Reformed Club, London, has just brought forward an invention—a cooking stove, with all its belongings, sufficently small to be carried in the pocket; a first-rate thing for a pic-nic party.—[London Times.

[We have seen such things before. It is to such improvements that we must look for a great increase of domestic comfort and consequently "social happiness." Too little attention is paid to small inventions.

Improvement in Printing.

The Boston Bee mentions an invention in printing by Mr. Josiah Warren, of Indiana, which more immediately concerns stereotyping and engraving, but which can be applied to all branches of the printing business. The metal used in this art costs about one tenth of the ordinary type metal; and in the process of stereotyping, it makes no difference, as regards the spaces, whether they are high or low. The art is very appropriately styled "Utopian Typography." And appears to be fixed in some typographical error.

A New Bridge.

Three weeks ago there appeared a claim on our list for a patent granted to Mr. J. Bevan, of this city, for an improvement on bridges. We had the pleasure, a few days ago of seeing a model of this bridge and have no hesitation in saying, that it is one of the best inventions of the day. Mr. Bevan was assistant engineer, under Mr. Jervis, on the Hudson River Rail Road, and while in that situation, F. Campbell, Esq., President of the Sectional Dock Co., saw the model and has become one of the proprietors of the patent. We intend to publish an engraving and full description of this bridge, either next week or the one after, and it will then speak for itself.

Chrome.

THE MINING OF CHROME.—A GROWING TRADE.—We are gratified to learn that the diggers of chrome, in Delaware county, are as busy as the gold diggers in California. One firm has upwards of one hundred hands employed, and are daily shipping the mineral to Baltimore. The proprietors of farms upon which it is found, receive three dollars per ton for washed chrome—and in the rock state it is sometimes worth five dollars per ton. The mineral is found in great abundance, at various points east of the Mine Ridge, in Lancashire, Chester and Delaware counties, and is all, or nearly all, shipped to Baltimore.

Chrome is not found in the metallic state; its oxyde is a green ochry substance which is generally intermixed with siliceous minerals. Chromic iron (which is the kind above alluded to) is sought after to obtain from it the chromic acid, for the preparation of the beautiful chrome yellow used in painting and dying. It is found in the Shetland Islands, in Styria, in some part of France, and elsewhere; but it is more plentiful in the region above mentioned than in any other place we have ever heard of.

Chromate of lead is the same substance as the chrome yellow artificially prepared. When crystalized, its color is of a deep red orange, and when powdered, orange yellow.

[The above is from the Miners' Journal, Pottsville. It is not over thirty years ago, we believe, since a vessel from Baltimore arrived in the river Clyde with a considerable quantity of chrome ore for ballast, which was considered of no more use than common cobble stones. At that time there was only one man in the city of Glasgow who knew its value, and he immediately bought up the ballast for a small consideration, made it into the bichromate of potash, and introduced the beautiful chrome yellow into the cotton printing and dying. The discovery was first made in France, and introduced by the same gentleman, himself a Frenchman, into Scotland. We will now describe some of the applications of chrome, as employed in the arts:

Chrome Paint.—To make chrome paint, the bichromate of potash is dissolved in water, at the rate of four parts, (ounces or pounds,) and to that is added three parts by weight of the acetate of lead. This makes a beautiful light yellow precipitate, as the chromic acid leaves the potash and combines with the lead. This is left to settle for some time, when the clear is poured off, and some clean water poured in, then left to settle, and the residue dried. It is afterwards ground and kept in tin vessels to be mixed with oil for house painting, or made into cakes with glue for draughtsmen. It is never used by skilful portrait painters, as it acquires a greenish hue by age. This is a very beautiful yellow for house and coach painting.

Chrome Yellow Dye.—Chrome is now used in the woolen dyeing very extensively, for coloring black. It is only a few years since its qualities for this purpose were discovered. We will however only describe its application to cotton. To ten pounds of yarn or cloth, which must be clean and have been boiled, 3 ounces of the bichromate of potash is dissolved and put in one vessel, and 9 ounces of sugar of lead in another—these vessels having as much water in them as will allow the cotton goods to be handled freely therein. They are first well handled in the lead solution for about eight minutes, then squeezed, shaken well out, and handled in the chrome liquor for about the same length of time. They are then squeezed out, dried, and run through the first lead solution, then washed in water and dried. With a greater amount of stuff, and handling the goods so as to give them two or three courses, a deeper color will be produced. If the nitrate of lead is used in the place of acetate, a redish yellow is produced. This is a most beautiful yellow. If lime is used along with the lead, a faster color is the result; but great care must be exercised to finish it in clean water, in which is some weak muriatic acid, and then wash it well.

Chrome Orange.—For 10 pounds of cotton, use 1 lb. 2 oz. of chrome, 2 lbs. brown sugar of lead, and 1 lb. of litharge. Boil the lead, and use a little lime amongst it; then dye in the same way as the yellow, only giving two dips, and using the stuff up at the two separate handlings. The goods should always be well aired out of the chrome; and for the orange, at the last dip, after the cotton has got the chrome, a vessel of clean lime water heated to 206° is kept ready, and the goods run through it, when they at once assume a beautiful orange color. Before they get the lime liquor, they look bad, striped, and brownish; but no sooner do they get the hot lime, than they look rich and evenly. These colors are easily dyed, and these receipts may be of use to many in the cotton region, who do considerable at domestic dying.

Green in cotton is also dyed, by first dyeing it blue with indigo, washing it, and then dyeing it a chrome yellow on the top of the blue.

The lucifer match trade of the United States is said to amount to more than $2,000,000 a year.

This is a great deal, but it is nothing to the "*locos.*"

Some sets of harness lately ordered in Paris for the Pacha of Egypt's state carriage, are covered with diamonds to the value of some hundred thousand francs.