



New Inventions.

Improved Water Wheel.

Mr. Caleb Rider, of Plymouth, Mass., has recently made some valuable improvements on Horizontal Water Wheels. From experiments made before a great number of competent witnesses, the wheel gave a percentage of 13½ over a good breast wheel. Good mechanics and millwrights were witnesses to the trial and they were exceedingly pleased with the results. One of Mr. Rider's wheels is in successful operation in Middleboro, and two of his wheels 5 feet in diameter have been set in operation at Plymouth. They are capable of running well under water and by the favorable practical results exhibited they will no doubt soon be extensively introduced and adopted. Mr. Rider manufactures the wheels himself and can furnish different sizes at a very short notice.

New Loom Picker.

Mr. Geo. W. Perry, of Fall River, Mass. has invented a new mode of combining and operating a Picker for Power Looms, which we consider to be a valuable improvement in the weaving art. The picker is made to move continually in a straight line in the raceway of the lathe, obviating the use of the common horizontal spindle on which the picker runs and at the same time it is much easier taken out and put in—more simple and can be constructed at less expense than any contrivance of the same nature for driving the shuttle, that we have seen.

The picker is made of a rectangular form to slide on the raceway freely in the shuttle box. It has an opening through the middle of it through which passes the picker staff, driving the picker by moving reciprocally in a longitudinal slot cut in the raceway of the shuttle box. The picker staff is not secured to the picker, but merely having its upper end pass freely through it. A flange is secured on the top of the shuttle box projecting inwards, which prevents the picker from being raised up. The picker staff has a reciprocating motion from a pivot axis below at its bottom, by which it is secured to a vertical standard attached to the shuttle box. The top of the picker staff therefore describes considerable arcs, but as it passes freely through the picker it moves it in a straight line with but very little friction, especially as the ends of the opening of the picker are made of a curved form, which allows the picker staff to roll in it, yet move the picker according to the parallel motion of Watt. The picker staff may also be dispensed with, owing to the form of the picker, and a simple tennon secured to the same by passing down and being connected to a central wag staff by a cord, may answer every purpose in a more simple manner, with but a little more friction. Mr. Perry has taken measures to secure a patent. One has been in operation at Fall River for some time and has given great satisfaction.

Machine to Measure a Ship's Velocity.

Mr. Arthur Hoston, of Bristol, Maine, has invented a very simple machine which on deck or cabin, or any convenient place points to a register marked with degrees to indicate the number of knots the vessel is making per hour or half hour. The principle of it consists in a lever with a blade on its lower end, passing down on both sides of the keel as a resisting medium to the water, which by a graduated spring on the upper end of the lever moves the lever backwards and forwards according to the pressure of the water and by having the pointer on the upper end, the velocity of the vessel is thus indicated on the dial. Two or more pointers may be placed in different parts of the vessel, connected to the top of the lever by wires to register the velocity in different parts of the vessel at the same time. Measures have been taken to secure a patent.

Portable Tonguing and Grooving Machine.

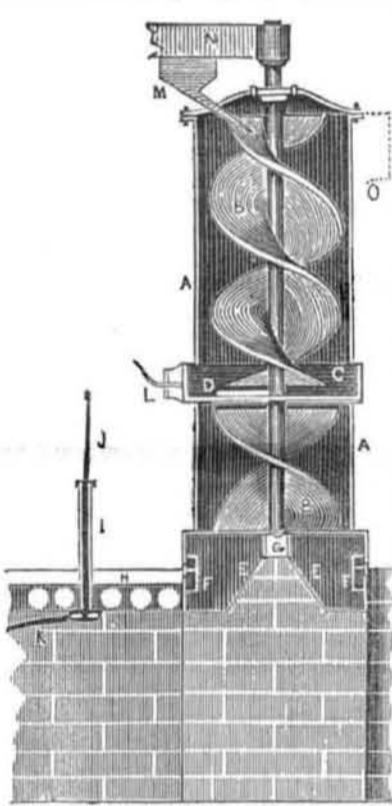
Messrs. Hiram Rousseau and D. M. P. Haines, of Richmond, Wayne Co., Ia., have invented a very convenient portable tonguing and grooving machine for small work in joiner shops, to be operated by hand.

The cutters are set upon vertical wheels and the beam is secured in the frame, the cutter wheels moving on the frame from one end to the other. Two smoothing chisels on the frame finishes the matching of the board in a complete manner, and the action of the knives on the edge of the board moves the centre frame along its whole length as if biting their way and doing their work by the same motion. Measures have been taken to secure a patent.

New Fountain Pen.

Mr. E. Jordan, of West Cummington, Mass., has made an improvement on the Fountain Pen, whereby the ink is supplied continually in the same quantity from the fountain independent of the quantity in the fountain, for, if there is any ink in the fountain at all, it will be transmitted to the pen in a gradual even stream. The fountain is contained in the case and there is a small conveyer communicating with it to the pen trickling the ink in a fine, constant even thread.

Screw Brick Machine.



This mode of making brick is the invention of Henry Franklin of the county of Bedford, England; by it bricks, tiles and other like articles may be made. The machine consists of a cylindrical pugging and discharging screw, together with screening frames, and moulds or dies and a cutting apparatus, all performed nearly at one operation. A, is the screw chamber which is divided near the centre by a rectangular case. B B, is the screw revolving on a vertical shaft, in a proper bearing G, at the foot of the chamber, and is protected by an outside collar. C, is a screen or division plate through which the clay is forced by the downward pressure of the screw. D, is an eccentric cam revolving with the screw on the same shaft, causing stones, straws, &c. to be cleared away, at each revolution of the shaft, into the angular corners of the case C, and from thence by two side doors at L, carried away into very suitable receptacles for the same. E E, is the moulding or die chamber with slanting step backs or inclines. F F, are moulding dies of the common construction, and may be of many forms. H, is an endless web supported on a series of rollers, upon which the moulder's clay as it leaves the die is carried forward to be cut into given lengths. I, is the cutting apparatus consisting of an upright standard with sliding frames J, across which are stretched two or more strong wires, for cutting the pressed and moulded sheets of bricks into their proper lengths.

These cutters are worked by the hand lever

K. M, above is a cistern or trunk for supplying water to the screw, to prevent the clay from sticking to it. N, is the section of the driving lever, for a horse to turn the screw, in the usual pugging or tempering process, for the moulds. This lever is keyed to the screw shaft. O, is an opening at top by which the clay is fed into the screw. The operation of this machine must be obvious to all, the clay is forced down and pugged by the screw B, and screened by the plate C, the screw forces the clay down and out through the stationary dies with a great pressure, and it is then received on the revolving endless web and cut into proper lengths.

Improved Self-acting Jaw Temples for Power Looms.

FIG. 1.



This is a self-acting Hinge Jaw Temple for Looms, invented by Messrs. Lippett & Jilison of Woonsocket, R. I. who have taken measures to secure a patent for the same. We here present three views of it. Fig. 1 is a vertical view, fig. 2 a horizontal view, and fig. 3 a section showing the Jaw of the Temple thrown open. The use of Temples in power looms, is to keep the woven cloth stretched to its full width to the action of the slay or reed. The old Temples are a pair of bars joined together at the middle by a button, which has to be turned from time to time, and the Temples shifted forward, spreading out the woven cloth by pins on the end of each bar which are inserted inside of the selvage. It is surely economy to have Temples that shift themselves. Self-acting Temples are not new, but so far as we know, there has been no lifting Jaw Temple used before.

FIG. 2.

Fig. 1 shows the form of the Temple bar B, attached by a pivot C, to vibrate on the bar A, which is secured on the beam. D, is the jaw of the temple. It is secured by a pivot to a small upraised bent arm F, fig. 3, and receives a slight touch on the flange E, which projects below it. The web passes through the jaw in the position as represented by fig. 2. This temple is for the right hand side of the web, and as the reed is driven up, the jaw D, by the vi-

FIG. 3.

bration and the spreading out of the warp, opens up and allows the cloth to be slightly moved upon the web beam. Whenever the reed begins to recede the jaw by its own gravity drops down and keeps the cloth spread out to its fullest extent. The jaw is made of metal and is serrated on its face to hold the cloth out towards the selvage. This temple makes a beautiful selvage, and it is very simple. It is certainly far superior to another that we have seen, which has a wedge spring on it to open up the jaws.

Improvement on Apparatus for Hoisting Brick and other loads on Buildings.

Mr. G. W. Warner, of Springfield Mass., has made some very valuable improvements on apparatus which is specially adapted for builders in the erection of houses. It is altogether superior to the clumsy apparatus now in use for that purpose. It has double arms and is capable of raising a full bucket on one side while the empty one is descending on the other. It is erected on the street and occupies but little room.

The arms can be raised or elevated on the main pole, to dump the buckets on the first, second, or third stories or to any point on the scaffold. Three men to attend it would do more than ten laborers climbing up the ladder with hods, one of the most severe and grinding kinds of labor to which men can be subjected. One man to turn the crank, one

to fill the buckets below, and another to dump them above are all the hands that are required. This is a valuable improvement and Mr. Warner has taken measures to secure it by Patent.

Discovery in Preserving Butter.

In No. 32 we stated in reference to a new mode of making butter, said to have been discovered by Mr. E. H. Merryman, of Springfield, Ill., "that there was no other way to do this than by hermetically sealing it in an air tight vessel or using some chemical preserving agent."

Mr. Merryman has wrote us a letter stating that his discovery is entirely new, and that it will make butter which will keep fresh exposed for a long time to the atmosphere. Mr. Merryman's invention consists in separating the casein formed in butter (by mechanical means,) and remove the prime cause of rancidity or decomposition.

This is certainly a very important and valuable invention to our whole country—and one which we had thought morally impossible, and never looked to a chemical separation by mechanical means.

The Tartars of the Crimea separate the casein by melting the butter over a slow fire and removing the scum as it rises, and by keeping butter in a melted state in a water bath at 180° until the caseous matter subsides to the bottom, a butter will be produced that will keep sweet for two years. But these processes are tedious and unless carefully performed butter will be spoiled. The invention referred to obviates all these objections in a very simple manner, and we hope to be able to present an illustration of it at some future period.

New Churn Dasher, and Ice Cream Freezer.

Mr. M. M. Boyes, of Jersey City, N. J., has invented a churn dasher, which answers the purpose of an Ice-cream Freezer also. The dashers are triangular, forming a series of six angular, but three triangular paddles. These are hollow and form a case open at one end to receive ice cream to be frozen therein, when required. A tight cap secures the cream inside. When desired to be used as a churn the hollow case is quite light and the arm or paddle throws the cream from one to the other, agitating it in the most complete manner, and it produces butter in as short if not shorter period than any rotary churn that we have ever seen.

The hollow triangular dasher for the purpose we have stated, is a new feature in this apparatus, for which Mr. Boyes has adopted measures to secure by patent.

New Nail Feeder.

Mr. John Sheets, of Harrisburg, Pa., has invented improved machinery for turning and feeding the nail plates into the nail machines in a manner never before attempted. He has taken measures to secure a patent for his invention.

Mr. J. E. Smith of this city, (says the Railroad Journal) proposes a new plan of lessening the friction on Railroads by placing vulcanized india rubber under the rail.

Patent Swindling.

The Muscogee Democrat, Columbus, Geo. alluding to our Prize Essay on the Patent Laws says: "We would have been pleased had it gone a step further, and shown the best plan by which the Patent Office shall be prevented from issuing patents for things of no value, and how the public can be protected from the extensive game of swindling which has of late been carried on in patent 'humbugs!'" For an Essay that had exposed all the tricks of patentees, and thus guarded purchasers from imposition, we could ourselves have paid \$500, and made money by the operation!"

[It is something inexplicable to us how any poor patent article should deceive people. It is not the name of patent that should give any thing its value, but the real worth of the article or machine itself. We do not believe that the inhabitants of Georgia are less clear sighted in making bargains than any other people.]

By an oversight, we forgot to mention in No. 35, that Woodbury's Grain Separators and Horse Powers were manufactured by J. & D. Woodbury, Rochester, N. Y.