



**New Inventions.**

**New Wheel Pump.**

A new and very large wheel is now constructing at Pittsburg Pa., to be worked by a steam engine, for the purpose of draining lands. It is twenty four feet in diameter and so constructed as to sweep an immense body of water from a plantation.

**Machine for making Weaver's Heddles.**  
(Continued from first page.)

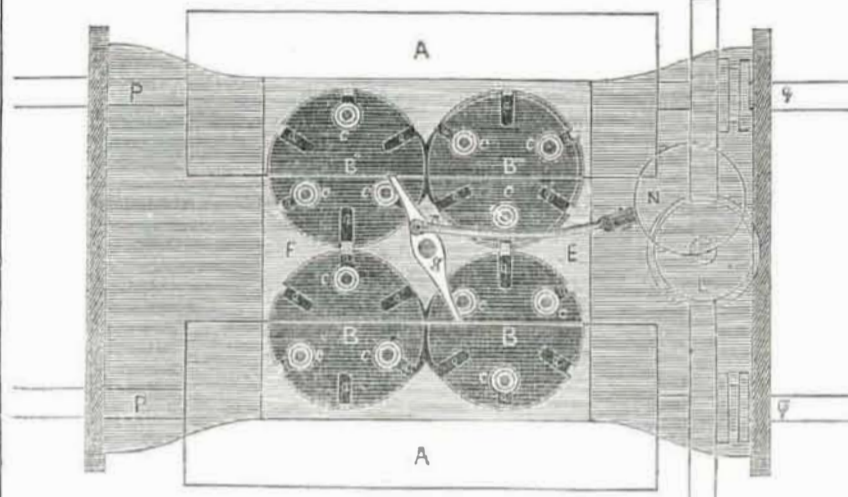
A is the heddle beam. B B B, are revolving spool frames or tables. C represents the spool spindles. *a* are slots in the spool tables. Each table has six slots or spindle recesses, but only three are occupied at once with the spindles. As the tables revolve, three slots are occupied with spindles and three are empty alternately, and an occupied slot in one, is brought opposite to an empty recess in its fellow table as seen in fig 3. The tables B B, constitute one pair and the tables B2, B3, another forming two distinct harness, one on each side on two beams but driven by the same gearing. The yarn is put on the spindles C, and passes through a hole in the top of the flyers D, or over a depression (fig. 2) to hold it in its place and then passes under *c*, a recurved wire, that has a perforated weight *d d*, at each end. The flyers pass through these holes and the legs serve as guides to the weights. This is to take up the slack of the yarn. The spindles have each a groove in their lower parts adapted to slide into the recesses of the tables when the recesses coincide. The platform E E, has circular cavities for the lower ends of the spindles. F F, (fig. 2,) are fast and loose pulleys to drive the shaft G. A bevel wheel H, on G, gives motion to the revolving spool tables by toothed wheels, as seen at fig. 5. The bevil wheel I, (fig. 2,) gives motion to the heddle beams by gearing into J, on the shaft K. This shaft carries a worm wheel which gears into M to drive A. N is an eccentric on K, to vibrate *g*, a shipper, which shifts the spindles from one table to another—the opposite ends of *g*, operate on two pair of tables. A connecting rod with N, vibrates the shippers. N, is connected with K and turns with it by clutch pins and when these are not engaged the shafts turn without N. *i i*, fig. 4 is a pin that passes through N, projecting out above and below, nearly in contact with K. There are two clutch pins on K, either of which may be brought in contact with *i*, as the eccentric wheel is made to slide up and down on the shaft. O, fig. 2 and fig. 4 is a forked lever with its fulcrum at *e*. Its fork ends *m m*, embrace N, the eccentric and raise and lower it at proper times. *n n* is a spiral spring attached to the forked lever, serving to draw it inwards, to depress the eccentric and make it clutch with the lever clutch pin. On the wheel M, are cams or lifting pieces *p p*, which when they come in contact with the end of O, force it out and raise N, the eccentric, so as to engage with the upper clutch pin at the required time, as will be understood by fig. 4. The axis of A is P, a screw, fig. 2, tapped into the frame of the machine and moves A endwise as it revolves, to wind the heddles as they are made spirally on the beams. *q*, is the smooth axis of A, on which the beam slides moved by the screw on the guide rods *r r*. Q Q, are rods that may be inserted in grooves in A. The semi-diameter of A, must be of the length of the heddles. After the number of heddles for a harness have been made, grooved pieces may be slipped over Q, and glued upon them to embrace the twisted strands, or any other mode may be adopted. The shipper connecting rod *h*, (which looks like an *n*), figs. 2 and 3, has a hinge joint *t*, to allow it to be lifted from the shipper *g*. The small bevil wheel J, on the shaft K, is one third of the diameter of the driving wheels, when there are three spindles on the table, and therefore makes the

changes of the spindles in the recesses in one revolution of the revolving spool tables. If there were four spindles in the table, the wheel J, would be one fourth the diameter of the driving wheel, &c.

We have now explained the different mechanical parts and offices of this machine as referred to in these drawings. We will now ex-

plain its operation so that all may understand it, but we will state first, that fig. 1 exhibits a different arrangement of mechanical parts from the section views, but they are just the mechanical equivalents to accomplish the same thing. Heddle or harness making is the formation of eyes by two cords being knotted together. These eyes must be formed at reg-

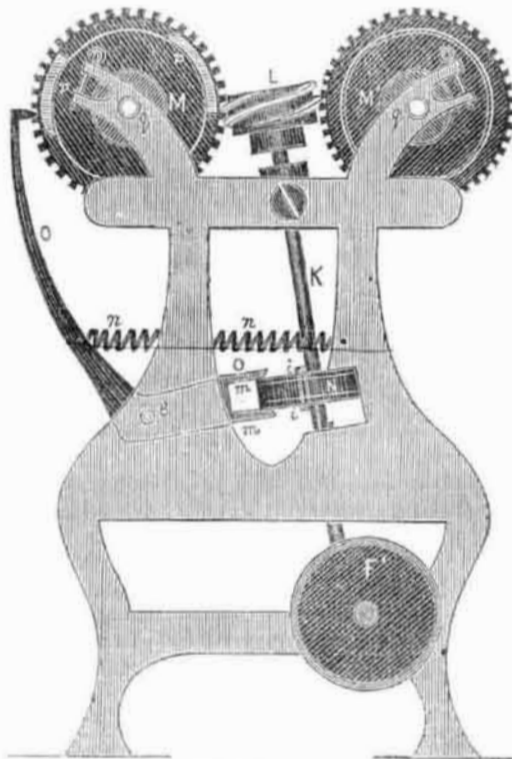
FIGURE 3.



ular distances on the harness. Well this machine forms two cords by B B, revolving and twisting the yarn on the three spindles, one by each table revolving, the cord winding at the same time as it is twisted on the beam A. Now suppose we wish to form 4 eyes on the

heddles every revolution of the beam; well look at fig. 3. We know that if the strands that make the two cords, were interlocked at certain periods, 8 times during the revolution of A, that 4 eyes would be formed by the strands of the two cords being thus at certain

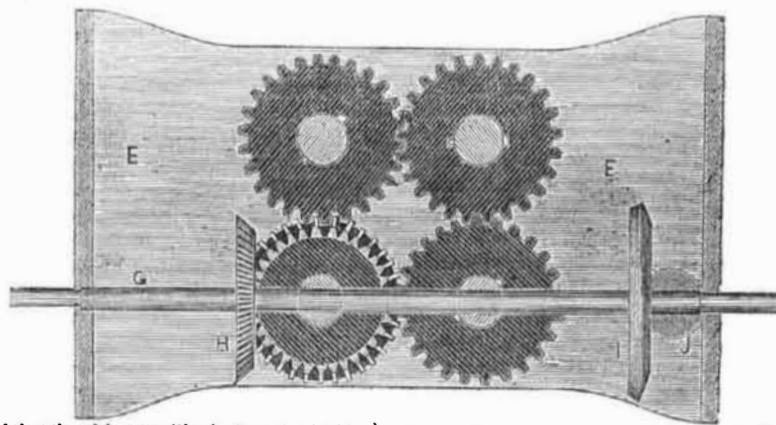
FIGURE 4.



points braided into one another. This is the way this machine does its work, and this can be done by the forked lever in fig. 4, shifting the shipper, or by cams on the inside of the upper gear wheel of fig. 1. At any rate, it is just the operation of a reversing self acting clutch, so well known to any mechanic. To

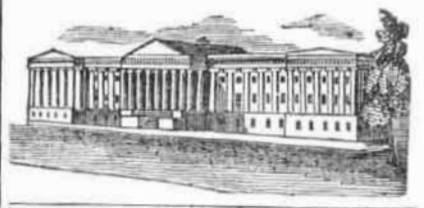
make the spindles in *c*, interlock, to braid the eyes. The cams or clutch operate the shipper *g*, so that instead of vibrating from side to side as now seen in fig. 3, touching the spindles outside, it is (the shipper) stopped by the resting of the eccentric one sixth of the revolution of the table, and then it will be easily per-

FIGURE 5.



ceived that the shipper will take into the inside of the spindle *e*, and throw it into the empty recess *a*, of the other table, which coincides thus interlocking the threads and braiding the two cords together into one, forming an eye of the heddle by braiding instead of knotting. It will be observed too, that the clutch can be changed by cams, to operate the shipper, to

make as large, or as many eyes in a foot as may be desired, but the changing or passing of the spindles from one table to another, must be performed by the shipper twice for one eye, according to the length of the eye, and then they are not shifted again until A has revolved the distance wanted to form the base of a new eye for the harness.



**LIST OF PATENTS**

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending Oct. 17, 1848.

- To Thomas Lyle, of Collinsville, Pa., for improvement in machinery for doubling and twisting Yarn. Patented Oct. 17, 1848.
- To Stephen Parks, jr. of Brooklyn, N. Y. for improvement in Archimedeian Lead Pipe Machine. Patented Oct. 17, 1848.
- To Charles J. Richards, of New York City, for improved Cylindrical Wrought Nail Machine. Patented Oct. 17, 1848.
- To John P. Taylor, of Little Compton, R. I., for Floating Battery. Patented Oct. 17, 1848.
- To W. W. Metcalf, of York Springs, Pa., for improvement in Ploughs. Patented Oct. 17, 1848.
- To David Dick, of Meadville, Pa., for improvement in Presses. Patented Oct. 17, 1848.
- To John A. Swope, of Germany, Pa., for improved Flood Fence. Patented Oct. 17, 1848.
- To A. B. Earle, of Colesville, N. Y. for improvement in Planting Ploughs. Patented Oct. 17, 1848.
- To George Beeching, of Augusta, N. Y. for improvement in Cultivators. Patented Oct. 17, 1848.
- To John J. Carré, of Petersburg, Va., for improvement in Harness Saddle Mounting.— Patented Oct. 17, 1848.
- To George F. Southwick, of Somerset, Mass., for improvement for Locking Umbrellas and Parasols. Patented Oct. 17, 1848.
- To John Russell, of New York City, for improved Domestic Telegraph. Patented Oct. 17, 1848.
- To M. P. Coons, of Lansingburg, N. Y. for Iron Hurdle Fence. Patented Oct. 17, 1848.
- To Thomas Peck, of Syracuse, N. Y. for improved Door Spring. Patented Oct. 17, 1848.
- To Charles H. Dubbs, of Natchez, Miss. for improvement in Dentist's Instruments. Patented Oct. 17, 1848.
- To Kirby Spencer, of Athens, Geo., for improvement in Dentist's Instruments. Patented Oct. 17, 1848.
- To Caroline C. Nichols, of Providence, R. I., for improvement in manufacture of Artificial Flowers. Patented Oct. 17, 1848.
- To George H. Marsden, of Charlestown, Mass., for improved Engine for Cutting Files. Patented Oct. 17, 1848.
- To Samuel Rodman, of New Bedford Mass. for improvement in Scoups. Patented Oct. 17, 1848.

**INVENTOR'S CLAIMS.**

**Improved Turn Tables.**

George Dryden, Worcester, Mass., for improved turn table. Patented August 29th, 1848. What he claims is the combination of circular bearing rails, the wheels cogged, pinion or gear applied to the cogged wheel either applied to the platform or between the rails as arranged and applied to the turning table and made to operate together.

**Pen Holders.**

A. S. Lyman and M. W. Baldwin, Phila., Pa., for improvement in fountain pen holders and nibs. Patented Sept. 19, 1848. Claims, first the method of supplying ink to pens from a reservoir in the handle by means of a bag or chamber, the whole or part of which is made of gum elastic or other yielding substance, substantially as herein described, whereby the writer can by the pressure of the finger or thumb supply the nib with ink while writing and thus avoid the necessity of dipping the pen. Also the method substantially as described of preventing the escape of ink from the fountain, by combining the spring plug attached to the cap as described.

An English aeronaut, Mrs. George Batty, now ascends from the Cremorne Gardens in company with a real lion!