

NEW INVENTIONS.

Improved Steam Gun.

Measures to secure a patent for the above have been taken by F. Wellhouse of Copley, Ohio. This invention relates to an improvement in Steam Guns and consists in the combination of a sliding tube and piston so constructed and arranged that the piston drives or forces the shot or ball from the larger into the smaller bore of the gun, and is afterwards drawn back. A sliding tube is then moved forward and forms a communication between the steam pipe and larger bore by which the steam is admitted, and the shot or ball discharged from the gun. This sliding tube is connected with another tube, so that when drawn back it cuts off the steam and thus allows the piston to be moved forward. The ball or shot is fed into the gun from a hopper, and the sliding tube having been drawn back, it passes into a chamber in the back part of the gun, and from thence into the larger part of the bore, which is directly underneath. The piston is then moved forward and forces the ball from the larger into the smaller part of the bore, the space between them being of a conical shape corresponding to the head of the piston. The piston is then drawn back, and the sliding tube moved forward, when the steam is admitted by an opening that communicates with the other tube, and rushing through the gun, expels the ball in its passage.

Improved Straw Cutter.

Measures to secure a patent for the above have been taken by Hiram Haight, of Nassau, N. Y. The improvements consist in the employment of an adjustable feed gearing, by which the quantity of straw for the cutter can be supplied with greater or less speed, as required, and using, in connection therewith, an elastic pressure bar for holding firmly the stalks of straw at the edge of the feeding trough when about to be cut. The adaptation for feeding consists of two corrugated rollers placed one above the other, passing transversely through the feeding trough and furnished with pinions that gear into each other. The pinion of the upper roller is moved by a pawl and spring, which are actuated by a rod connected to the treadle of the machine the lower roller of course revolving in an opposite direction to the upper. Another pawl prevents any backward motion of the pinion. The velocity of the rollers and consequent rapidity of the feed are regulated by an adjustable pin, which, projecting from the rod, receives the up stroke of the treadle. The pressure bar is connected with the treadle by means of a rod, and the force exerted by it in keeping the straw in its position before the cutter is modified by a spiral spring underneath.

Percussion Cap Primer.

A neat portable apparatus, that can be carried in the pocket, for placing caps on gun nipples, has been invented by Russel Frisbee, of Middletown, Conn., who has taken measures to secure a patent. It consists of an oblong metal case, containing a grooved recess in which the caps are placed, and having at the end, two springs so arranged as to prevent the caps from escaping from the case unless when required. On each spring, at the outer end is a concave-shaped lip, which works through a small opening in the case, and is operated by the thumb, this is done by pressing against a button which forces down the springs, and permits the insertion of the cap on the nipple of the gun. The grooved recess or chamber already mentioned is supplied with caps between the upper and lower lip, and they are prevented from escaping into the other part of the case by a stop on the upper part of the chamber.

Cards for Hooks and Eyes.

The common way of attaching hooks and eyes to cards, is by laying them upon a flat sheet of card board and sticking each hook and eye separately on it; this method requires the needle and thread to be passed several times through the card board for each. An improvement on the above has been invented by Thaddeus Fowler, of Northfield, Ct., who has taken measures to secure a patent. By this

new method the card board is perforated at regular distances apart, and bent in parallel rows, forming ridges, so that when the hooks and eyes are laid upon its surface in the proper order, they are looped securely to the card by one thread, which is long enough to pass through the entire ridge.

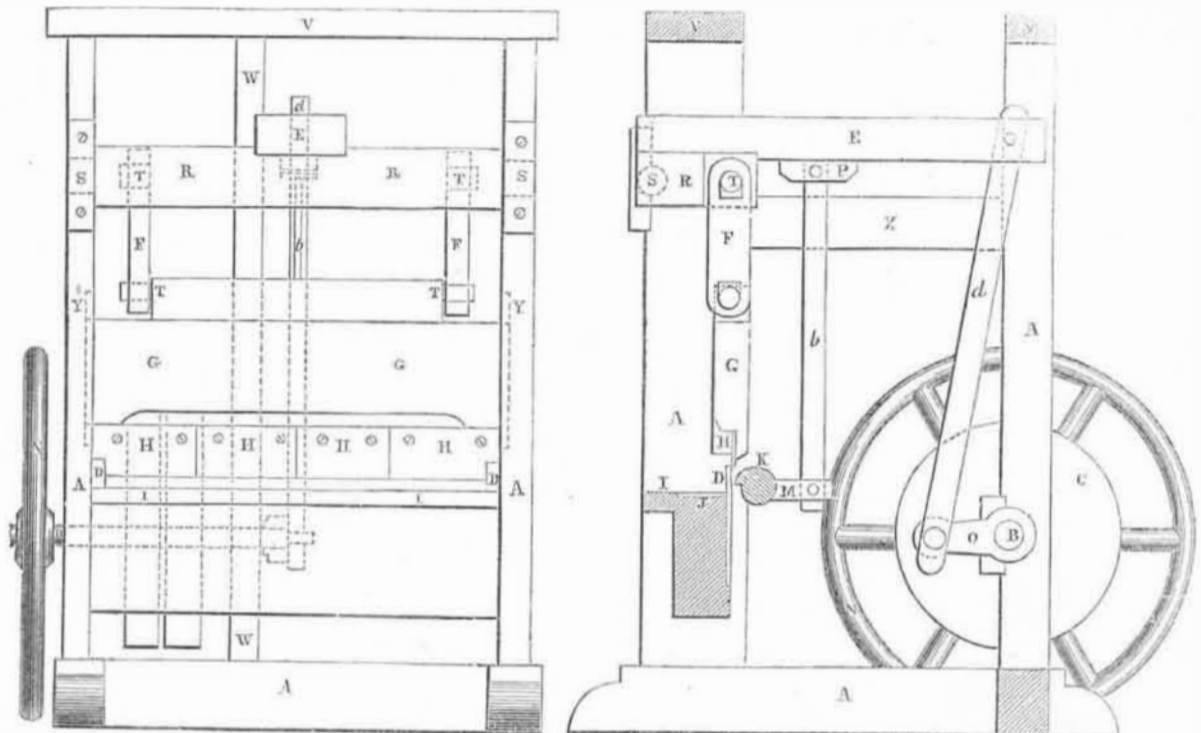
Mill Stone Pick.

An improved description of Pick, in which the blade is removable from the handle, has

been invented by Anson L. McIntyre, of Norwalk, Ohio, who has taken measures to secure a patent. The blade is grasped by a taper clamp, which is made to press tightly on it by a socket likewise taper, which latter fits in a loop at the end of the handle. Both ends of the clamp are taper, and it has a longitudinal groove to receive the blade, and is tightened as before described, the thickest part being at the points. The blade is of equal thick-

ness throughout, and the advantage proposed by this improvement is the facility of sharpening the pick when blunted, grinding only being required, whereas, when the ordinary picks become much worn, they require to be repaired, and lengthened or drawn out. As the blade wears by use it is not placed so far in the clamp, but is tightened by means of wedges placed in the slot at the back of the blade.

Figure 1. SHANK'S IMPROVED LATH MACHINE. Figure 2.



The accompanying engravings are views of an improved lath machine, invented by Isaac R. Shank, of Buffalo, Putnam Co., Va., who has taken measures to secure a patent. Figure 1 is a front view of the machine; figure 2 is a transverse sectional elevation, and figure 3 is a top view. The same letters refer to like parts.

A A is the general framing; V V, and X X, and W, are the connecting pieces of the frame; B is a shaft provided with pulleys, C—one a driving and the other a loose pulley;—O is a crank; N a fly wheel; d is a connecting bar, attached to beam, E, which is connected at S, to the broad bar, R R, which receives a vibratory motion and works the

cutter stock, G, to which the cutters, H H, are attached by means of screws. The beam or stock, G, slides in grooves, Y Y; F F are links attached to G G and R R, at T T, thus uniting the knife stock to the beam which gives it motion.

The knives are divided into four pieces, and they are therefore much easier tempered, and should one become dull or break it can be repaired at but a small expense; I is the table on which the lumber is placed to be worked; J is an iron plate screwed down on the back part of the table to serve as the under knife; D D are guide pieces in front of the knife to prevent it from coming on the table; K is the gauge for gauging the thickness of the bolt,

any person to comprehend the mode of its operation.

More information may be obtained by letter addressed to the inventor.

Improvement in Joining Stones.

An improved method of uniting or locking stones together in building light-houses, and for other like purposes, by which the necessity of using mortar is entirely superseded, has been invented by John P. Avery, of Stonington, Ct., who has taken measures to secure a patent. The method consists in dovetailing together the sides of the stones used for the foundation, and joining them again in a similar manner with others, so that it is impossible to separate them without first breaking the stones in pieces. In order to unite them more firmly, a bolt or key is employed for pressing the dovetails firmly in their corresponding slots, or pieces of stone or other material may be employed for this purpose, and the crevices filled up with mortar.

Improved Let-off Motion.

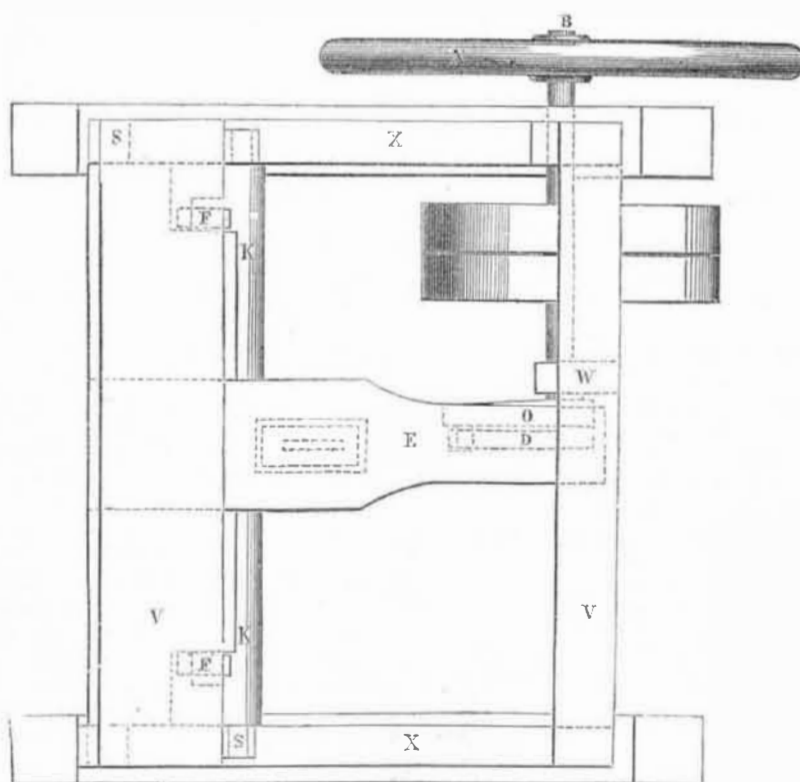
Stephen A. Greene and Israel Greene, of Westerly, R. I., have taken measures to secure a patent for the above. In order to preserve a uniform "let-off," it is necessary that the movement of the yarn beam upon its axis increase in the same ratio with the decrease of its operative diameter, caused by the decrease in the quantity of yarn. For this purpose the above invention consists in communicating the necessary intermittent motion to the yarn beam by a train of mechanism which is actuated by a constantly revolving cam or eccentric operating on a lever whose position is so controlled by a shoe or bearing piece, which always presses against the yarn on the beam, that when the latter is full the action of the cam on the lever is such as to move it slightly, but that as the quantity decreases, the action of the cam gives a proper increase to the motion of the lever, and consequently to the motion imparted by it to the beam.

Modellers Clay.

Sculptors and modellers are frequently exposed to inconvenience if obliged to leave their work for a time, by the rapid desiccation of the clay which they employ. This evil may be obviated by moistening the clay with the concentrated solution of glycerine.

Mr. Howland, the American merchant, who died recently in Italy, has left \$20,000 to the charitable institutions of New York city.

Figure 3.



which has a vibratory motion through the arm M, on the gauge, and the connecting bar, b, and block, P, which is attached to beam, E. When the lumber is pushed forward on the table, it goes below the notch in the gauge, K, and when cut off the said gauge swings and carries the cut lath down, and thus frees

it from the knives, and at the same time the gauge is thereby also employed in its vibration for gauging the next lath. The lumber is fed in by hand. There is but little metal in this machine, so that it is very cheap of construction. Figure 2 exhibits the operation of the machine with sufficient clearness to enable