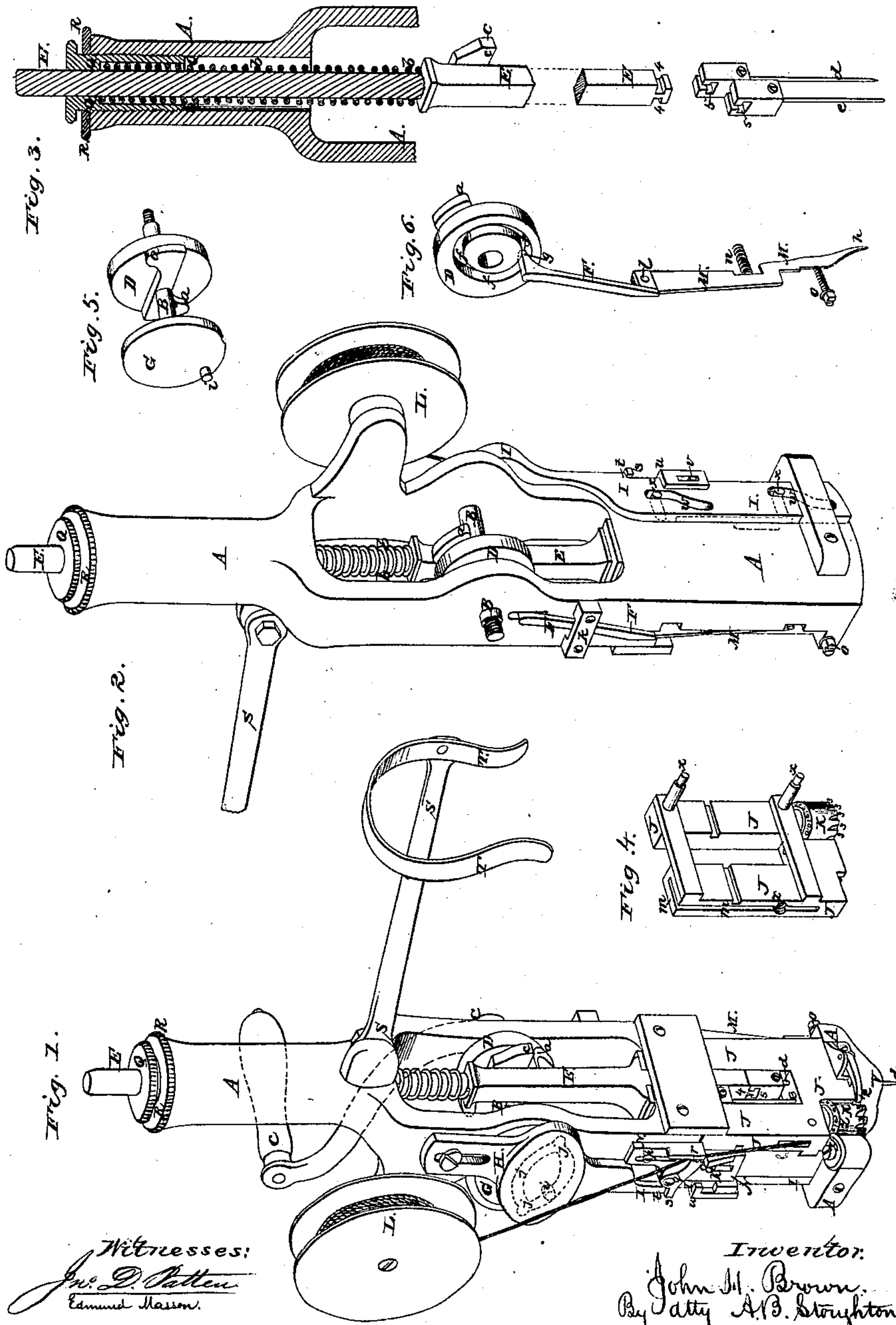


J. H. Brown

Pegging Machine.

N^o 85206.

Patented Dec. 22, 1868.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN H. BROWN, OF WATERTOWN, MASSACHUSETTS, ASSIGNOR TO MOSES K. MOODY, OF NEW YORK CITY.

IMPROVED MACHINE FOR PEGGING SHOES.

Specification forming part of Letters Patent No. 85,206, dated December 22, 1868.

To all whom it may concern:

Be it known that I, JOHN H. BROWN, of Watertown, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Pegging Shoes; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of the front of the machine and one of its sides. Fig. 2 represents a perspective view taken from the rear of the machine. Figs. 3, 4, 5, and 6 represent views of detached portions of the machine to better represent their detail.

Similar letters of reference, where they occur in the separate figures, denote like parts of the machine in all of the drawings.

My invention relates to a machine more peculiarly adapted to what is termed "screw-pegging," though, in its operation, it performs all the automatic movements that power machines for this purpose perform, and only differs from this latter class of machines in being supported by one hand and arm of the operator, while it is operated by the other hand, the power machines being supported on a table, frame, or stand, and driven by steam, water, or other first-moving power; and

My invention consists, first, in a traversing head, that carries both the awl and the driver, so that one piston or plunger shall drive both as they alternate under it; and

My invention further consists in combining, with a traversing head carrying both the awl and driver, and with the piston or plunger for alternately driving them, a mechanism that will attach the awl and driver to said plunger, and detach them alternately from the plunger, as the case may be, so that the plunger shall raise them up, as well as drive them down.

My invention further consists in a mechanism for feeding, controlling, and clamping the wire or strip from which the pegs are cut off, in combination with a shearing or cutting mechanism for cutting the pegs in proper lengths to be driven.

My invention further consists in a revolving

cylinder for receiving, in separate chambers therein, the cut pegs or screws and carrying them under the driver, so that they shall be driven through their special chambers in succession.

My invention further consists in feeding the shoe or other thing being pegged along by a point that has a vertical and lateral motion, is adjustable, and is forced into the leather by the drawing out of the awl.

My invention further consists in an adjustment for the spring that drives the piston, in the head or stock of the machine, so that pegs of different lengths may be driven without changing the mainspring, as heretofore done.

My invention further consists in the use of a support for sustaining the machine partially by the arm above the wrist, while it is also grasped by the hand of the operator.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A represents the stock or frame for carrying and supporting all the parts of the machine. In this stock or frame is arranged a shaft, B, which is turned by a crank, C; and through or by means of this shaft motion is communicated to the moving parts of the machine. Upon the shaft B there is a cam, D, which has two tappets or beats, *a a*, upon one of its faces, for raising up the piston or plunger E twice for every rotation of said cam, the plunger being raised up against the action of the spring *b*, coiled around its upper end; and, when the tappets *a* pass the shoulder *c* on the piston, the reaction of the thus coiled-up spring throws it down with force enough to work the awl *d* or driver *e*, as the case may be. On the other face of the cam D there is a groove, *f*, into which the bent end *g* of the bar F works, and by which said bar is operated, and, through it, the feeding-point *h*, as will be explained.

Upon the shaft B there is also a disk or head, G, in which a stud or pin, *i*, is fixed, said pin working in a cam-groove (shown in dotted lines at *j* in Fig. 1) in the head H of the bar I, and by which said bar I receives a vertical reciprocating movement on the stock or frame; and this movement of the bar I is used for three purposes—viz., to feed along and hold at the proper times the wire from which the pegs

are cut, to traverse the head J, and to cut off the wire after the end has entered one of the chambers of the revolving cylinder K.

I have shown twisted wire as wound upon the spool L, from which the pegs are cut; but I do not confine myself to the use of such wire strictly, though I prefer it, as I can use other wire, threaded or plain, or make my pegs from strips or ribbons of wood instead of from metal.

The bar F is guided in its vertical movements by a guide, *k*, on the frame A; and to the lower end of said bar, as at *l*, is pivoted the bar M, which terminates in the feeding-point *h*, above mentioned.

The bar M passes through or lies in a groove, *m*, Fig. 4, of the traversing head, and moves with said head laterally while it is drawn up and forced down by the cam-slot *f*; and the said bar M is, moreover, pressed outward by a spring, *n*, so that it will come against the set-screw *o*, which defines its extent of motion laterally, and its lateral motion defines the extent of the feeding along of the boot, shoe, or thing being sewed, by the point *h*, which penetrates the sole or leather, so that, in fact, the screw *o* regulates and defines the space between the screws or pegs driven.

Upon the side of the frame A there is a sliding shouldered piece, N, controlled in its movements by the slots and set-screws *p p*. Upon this sliding piece is pivoted a dog, *q*, the head of which is roughened, so as to seize and hold between itself and the projection *r* on the piece N the wire from which the pegs or screws are cut; and the tail *s* of this dog projects, so as to be struck by the shoulders *t u* on the sliding bar I, one of said shoulders, as at *v*, being capable of adjustment, so as to time the feeding, seizing, and releasing of the wire.

On the back of the vertically-reciprocating bar I there are two cam-slots, *w*, through or into which studs *x x* on the horizontally-traversing head J project, and by which said head is moved back and forth, and as the bar I rises up its shoulder *u* strikes the tail *s* of the dog, and, moving it up, releases the jaw from the wire. As the bar I again descends, its shoulder *t* strikes the tail *s*, and causes the other end of the dog to gripe the wire, and as the bar continues to descend it carries down the plate or piece N and the wire with it, and feeds it into one of the chambers 1 of the cylinder K, the upper movement again releasing the jaw from the wire, carrying up the piece N preparatory to the succeeding gripping and feeding operation.

On a permanent portion of the frame is fixed a shear or cutting-disk, *y*, which can be turned to bring a fresh cutting part or edge into action, and which is otherwise stationary; and the edge *z* of the revolving cylinder, when it moves with the traversing head J forms, with the other shearing-edge, *y*, a pair of cutting or severing edges, which cuts off the screw or peg

from the wire, leaving it in one of the receptacles 1.

The cylinder K is revolved as follows: Upon the frame A there is a dog, 2, which is held up against ratchet-teeth 3 on the cylinder K by a spring. As the head moves from the point of the dog, the latter slips over the ratchet-teeth without engaging with them; but when the head J moves toward the dog, then the point of the dog takes one of the ratchet-teeth of the cylinder, and as the cylinder traverses with the head J the dog, holding against one of the ratchet-teeth, causes the cylinder to turn on its journal or axle, and, in turning, it brings one of the chambers containing a peg immediately under the driver *e*, and the plunger E being at this moment tripped it causes the driver to drive the peg or screw through its chamber into the hole in the boot or shoe previously made for it by the awl *d*.

The awl *d* and driver *e* move with the traversing head J, while the plunger E moves up and down, in a uniform line or plane, in the frame A; and these two instruments are brought alternately under the plunger, so as to be struck by them; but it is necessary, in these rapid movements, that the plunger should not only drive the awl and the peg into the boot and shoe, but that it should also draw the awl out of the leather or sole, and raise it, as well as the driver, high enough to get sufficient force and momentum by the reaction of the plunger-spring to make them work efficiently. For this purpose, I make a T-shaped terminus, 4, to the plunger; and in the stocks O P, respectively, of the awl and driver is formed a T-shaped way or mortise, 5, so that these stocks can move laterally with the head J, and onto or away from the terminus of the plunger; but whichever one of said stocks the plunger is connected with when it ascends must go up with it and descend with it; but the instant it is down the head shifts and attaches the stock of the other instrument, and thus they are alternately worked.

That the plunger may be regulated for driving longer or shorter pegs or screws without changing the spring that forces it downward, I make a socket, Q, at the upper end of the frame, in which the upper end of the spring *b* passes and rests. Around the outer side of this socket is cut a screw-thread, by which it may be run up and down on the frame; and on this outer thread there is also run a jam-nut, R, so that, by the screw-socket and jam-nut, the force of the spring may be regulated to the length of the peg to be driven.

The operator, to simply grasp the upper end of the machine, could scarcely withstand the labor of holding and managing the machine for any great period of time; and to relieve him of this labor, and take away the weight from the wrist, and put it, or a portion of it, on the arm, I use a supporter, S, which, for convenience of shutting it down against the

machine when not in use, is hinged to the frame, and its outer end is furnished with a bow, T, or other suitably-shaped contrivance for fitting against or resting upon the arm of the user.

The pegs are driven in succession from their chambers 1 in the carrier K, and through said chambers, and through the same hole in the foot-piece V that the awl passes through.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The combination of the traversing head, carrying both the awl and the driver, with the plunger, so that the awl and driver shall be alternately brought under the action of said plunger, and both driven by it, substantially as described.

2. Also, in combination with an awl and driver, both arranged on and moving with a traversing head, and the plunger, the T-shaped grooves and terminus, so that said awl and driver can be connected to and detached from the plunger, as and for the purpose herein described and represented.

3. Also, the arrangement of the feeding, clamping, and cutting mechanism, so that a wire may be properly fed up, cut into pegs or screws, and delivered, so as to be conveyed to the point where they are driven, substantially as described.

4. Also, in combination with a machine for

making and driving its pegs or screw, an intermittently-rotating cylinder, with apartments or divisions in it for receiving said pegs or screws where cut off, and carrying them to the place where they are driven, substantially as described.

5. Also, feeding the shoe along under the awl and driver by means of a point that is forced into the sole while or by the act of drawing out the awl, and then moved in the direction of the feed, substantially as described.

6. Also, the combination of the screw-socket and jam-nut with the frame of the machine, for the purpose of adapting one and the same spring to the driving of pegs of variable lengths, substantially as described.

7. Also, the driving of the pegs or screws through or from their chambers in the revolving carrier, and through the same hole in the foot-piece of the machine that the awl passes through, substantially as described.

8. Also, in combination with a pegging-machine that is controlled and driven by hand, an arm-support that will carry or transfer a portion of the weight of the machine onto the arm of the operator, and thus very much relieve him from the burden of the machine, substantially as described.

JOHN H. BROWN.

Witnesses:

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EDWARD KAUFMANN.