

M. Marshall,

Pegging Machine,

N<sup>o</sup> 34,370.

Patented Feb. 11, 1862.

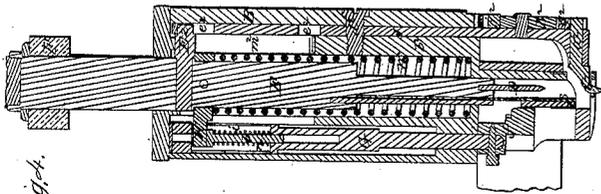


Fig. 4.

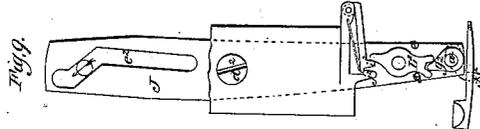


Fig. 9.

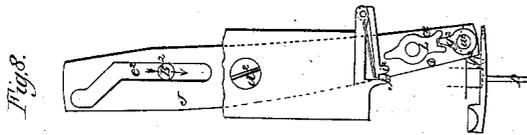


Fig. 8.

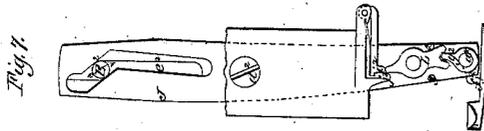


Fig. 7.

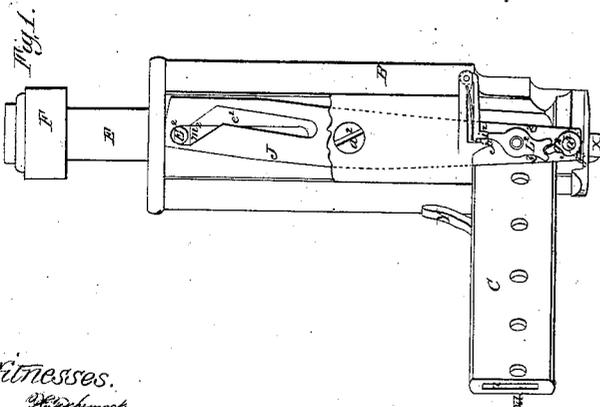


Fig. 1.

Witnesses.  
W. B. ...  
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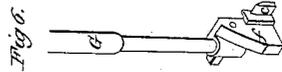


Fig. 6.

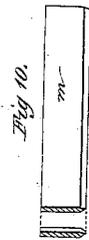


Fig. 10.

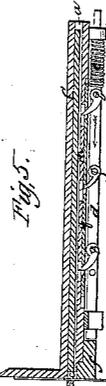


Fig. 5.

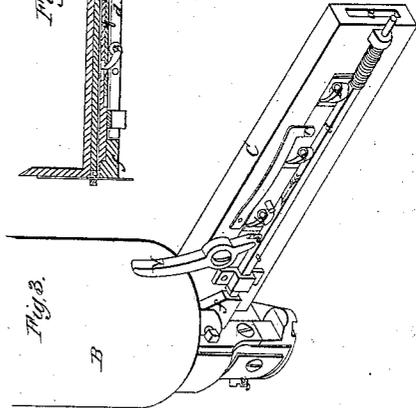


Fig. 3.

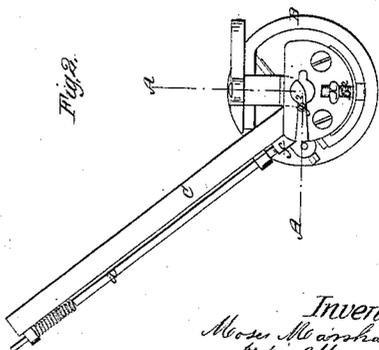


Fig. 2.

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Moses Marshall  
by his attorney  
Samuel Cooper  
or Reach

# UNITED STATES PATENT OFFICE.

MOSES MARSHALL, OF LOWELL, MASSACHUSETTS.

## IMPROVEMENT IN MACHINES FOR PEGGING BOOTS OR SHOES.

Specification forming part of Letters Patent No. 34,370, dated February 11, 1862.

*To all whom it may concern:*

Be it known that I, MOSES MARSHALL, of Lowell, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Machines for Pegging Shoes or Boots, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an elevation or side view of my machine, a portion of the case being broken away to show the parts within; Fig. 2, an underneath view of the same; Fig. 3, a perspective view of the peg-trough and feeding apparatus; Fig. 4, a vertical section upon the line A A of Fig. 2; Fig. 5, a section through the peg-trough and feeding apparatus; Fig. 6, a view of the splitting-knife and the parts immediately connected therewith; Figs. 7, 8, and 9, details to be referred to hereinafter.

There are various difficulties in the way of applying an automatic feed of the peg-wood to a hand-pegging machine, which it is the object of my present invention to overcome. Thus far it has not been found practical to apply such a feed where the peg was cut off by a stationary knife on the descent of the peg-driver.

My present invention consists in feeding the peg-wood by an automatic intermittent feed on the descent of the plunger and splitting off the peg as the plunger rises; and my invention also consists in so forming and arranging the splitting-knife that it shall force the peg forward under the plunger as it is cut off, as will now be more fully described.

The operating parts are contained within a body or case B, to which the peg-trough C is screwed. The awl D, Fig. 4, is carried by a plunger E and is forced into the leather by the blow of a hammer upon the top of the plunger, and withdrawn therefrom by an india-rubber spring F, which strikes upon the cap-plate of the machine as the plunger descends. The plunger is raised in the usual manner by a spiral spring W, which encircles it. The peg-driver *g* is also carried by the plunger and descends to drive the peg when the awl enters the leather.

The strip of peg-wood is entered at the open end *a* of the peg-trough, and is fed in-

termittently to the knife *c*, as follows: The feeding-pawls *b* are pivoted to a sliding bar *d*, which is forced in the direction of its arrow to effect the feed by a spiral spring *e* and in the opposite direction when the piston descends by the inclined block *f*, attached to the knife, Figs. 2, 3, 5, and 6. The bar G, to which the knife and feeding-block *f* are attached, is operated by a pin H, projecting from the plunger and entering a slot *i* in the bar. Immediately beneath the pin H is a short bar or pin *l*. This pin is surrounded by a spiral spring *n*, which yields as the hammer strikes the plunger, and relieves the concussion which would otherwise take place upon the bottom of the slot. The spring *n* also prevents any rebound of the knife, which might otherwise interfere with the proper feeding of the peg-strip. The raising of the knife to drive back the bar *d* and cut off the peg is effected by the last upward motion of the plunger E, the pin H striking against the bar G at the top of the slot *i*.

When the bar *d* is driven back by the rise of the plunger, as above stated, the pawls are carried back to take a new hold upon the peg-wood *m*, Fig. 5. These pawls pass through inclined holes in a sliding plate *q*, which is held in place by a spring *r*. As the pawls are carried forward by their spring *e* at the last moment of the descent of the plunger, they are forced in by the inclined edges of the holes in the plate, and are thus caused to press upon the peg-wood and effect the feed. The bar *q* also serves to keep the pawls constantly in contact with the wood and in readiness for action. The peg-wood is fed up in contact with the peg-driver which supports the advance end of the wood until the knife comes in contact with its lower edge to cut it off. The knife is of such a thickness that it shall just occupy the space from which a peg is split, and thus as the knife splits off a peg it forces it in under the peg-driver, Fig. 4, ready to be driven on the next descent of the plunger, and as the space between the knife and the plate *s* is wider than the peg the latter drops so soon as it is cut into the tube *t*, from which it is driven at the next descent of the plunger.

The feeding of the machine over the shoe

is accomplished in a manner similar to that which was adopted in the machine for which Letters Patent were granted to me on the 5th day of November, 1861.

To the interior of one side of the body or case B is pivoted at  $d^2$  a lever J, having on its upper end an irregular slot  $e^2$ , cut through it, of the form seen in the drawings. In this slot works a pin  $E^2$ , projecting from the plunger E, so as to vibrate the lever J back and forth as the plunger rises and descends. The pin  $E^2$  also passes through a straight slot  $m^2$  in the division-plate  $b^2$ , and thus the plunger is prevented from turning. To the bottom of the lever J is pivoted the feeding-point  $f^2$ , which is attached to one end of the swivel-pin  $a^2$ , and is so actuated that on the rising of the plunger it shall first be thrust into the hole last made by the awl and then by the continued upward motion of the plunger be fed along so as to bring the peg and peg-driver directly over the hole. On the descent of the plunger the feeding-point is first withdrawn from the hole, leaving it ready to be occupied by the peg, and is then carried back out of the way of the awl, which now descends to make a new hole, and on the plunger again rising the feeding-point enters this new hole and feeds the machine along. This is effected in the following manner: The feeding-point, as before stated, is secured to the swivel-pin  $a^2$ , and to the other end of this pin, and outside of the lever J, is secured a tooth  $g^2$ , which engages with a notch in a lever  $L^2$ , pivoted to the lever J.  $j^2$  is a stationary stop secured to the body of the machine, and  $i^2$  is a movable stop, which is forced down by a spring  $c^2$ , the office of the stops  $j^2$   $i^2$  being to hold the lever  $L^2$  in position at certain times, while at others it is allowed to escape from their control. The operation of this part of the mechanism is as follows: When the plunger is up, Figs. 1 and 4, the end of the lever  $L^2$  has forced up the spring-stop  $i^2$  and is held stationary by the stops  $j^2$  and  $i^2$ , the point  $f^2$  remaining in the hole in the sole immediately beneath the peg-driver and peg. As the plunger commences to descend, Fig. 7, the motion of the pin  $E^2$  in the inclined portion of the slot  $e^2$  vibrates the lever J to one side. While this is taking place, the upper end of the lever  $L^2$  being held stationary by the stops  $i^2$  and  $j^2$ , this lever is vibrated and also the pin  $a^2$ ; but as the tooth  $g^2$  is held by the notch in the lever  $L^2$  and is moved with it the pin  $a^2$  is caused to turn, and the feeding-point  $f^2$  is withdrawn from the hole in the sole, as seen in Fig. 7. So soon as this has taken place the lever  $L^2$  strikes against a pin 2 on the lever J, by which the motion of the lever  $L^2$  upon its pivot is arrested, and its upper end slips past the spring-catch  $i^2$ , when by the continued motion of the lever J the feeding-point is carried back, Fig. 8, out of the way of the peg-driver and awl, which are now, while the pin  $E^2$  is descending through the vertical portion of its slot  $e^2$ , left free to descend for

the purpose of making a new hole and of driving a peg into the one previously made. As the plunger again descends, it is necessary that the feeding-point go through a different set of motions, which are produced as follows: While the pin  $E^2$  is ascending through the vertical portion of the slot  $e^2$  the feeding-point remains stationary, and during this interval the awl has risen clear of the path of this point. The pin  $E^2$  now enters the inclined portion of the slot  $e^2$  and the feeding-point begins to travel back, being still raised above and clear of the surface of the leather. On the feeding-point arriving opposite to the hole last made by the awl the upper end of the lever  $L^2$  strikes against the spring-stop  $i^2$ , Fig. 9, by which the point  $f^2$  is forced down into the hole, and at this juncture the lever  $L^2$  strikes against a pin 3 upon its opposite side, by which its motion on its pivot is arrested and the parts are caused to travel with the lever J, the feeding-point causing the machine to move over the surface of the leather, while the upper end of the lever  $L^2$  pushes back the spring-stop  $i^2$ , and the parts are again left in the position seen in Fig. 1. The stop X, which rests against the edge of the sole as the pegging proceeds, is made adjustable in position by means of a screw  $s^2$  for the purpose of regulating the distance to which the pegs are to be put from the edge of the sole. A lever Y, pivoted to the peg-trough, Fig. 3, bears at its lower end upon a pin 5 on the bar  $d$ , and when this lever is pressed toward the body of the machine the feeding of the peg-strip is interrupted.

Operation: The stop X being adjusted by means of its screw  $s^2$ , so as to bring the awl at the proper distance from the edge of the sole, and the trough C being replenished with peg-wood, (a strip of which is seen in Fig. 10,) the machine is ready for its work. The operator now grasps it in his left hand, at the same time pressing upon the lever Y to prevent the feeding of a peg while he strikes a blow upon the plunger and discharges the peg already in the machine. The machine is now applied to the sole, the lever Y is released, and a blow is struck upon the plunger with a mallet or hammer, by which the awl is forced into the sole and the first hole is made at the same time that the peg-wood is fed forward. As the plunger rises the awl is withdrawn from the sole, the knife is raised, and a peg is split off and forced in under the peg-driver. The feeding-point enters the hole just made by the awl and feeds the machine over the sole a distance equal to that between two adjacent pegs. On the next descent of the plunger the peg-wood is again fed forward, and the operation continues, each blow of the hammer upon the plunger driving a peg and making a new hole.

When it is required simply to make the holes in the sole for the insertion of metallic nails, the feed of the peg-wood is interrupted by means of the lever Y, as above described.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The intermittent automatic peg-feed operating as the plunger descends, in combination with the splitting-knife operating as the plunger ascends, substantially in the manner and for the purpose described.

2. A splitting-knife so constructed and ar-

ranged as to split off the peg and force it under the peg-driver while the latter is up.

3. The bar *g*, operating as described, in combination with the pawls *b*.

MOSES MARSHALL.

In presence of—

J. N. MARSHALL,  
PERSON NOYES.