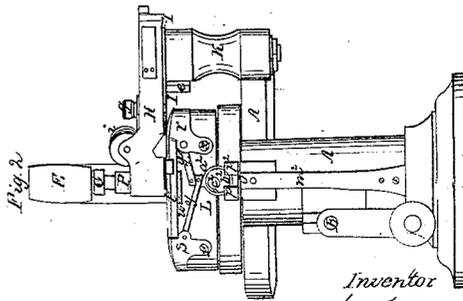
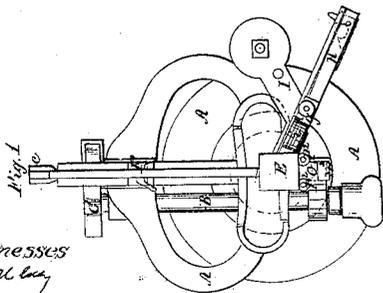
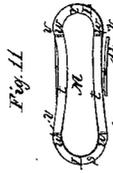
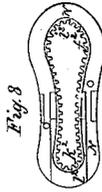
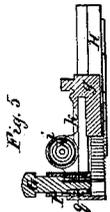
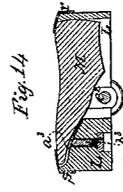
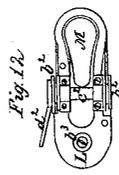
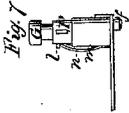
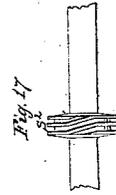
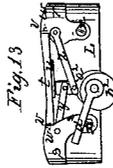
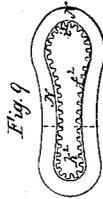
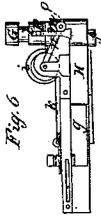
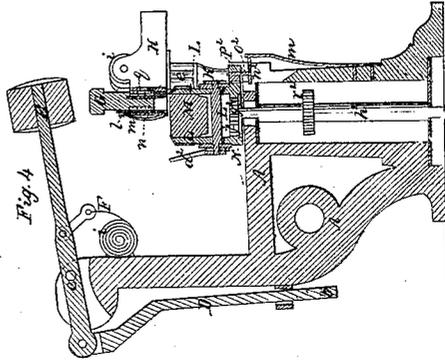
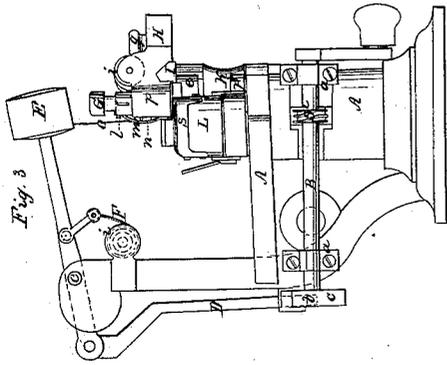


J. Taggart,
Shoe Pegging Machine,

No. 34,170,

Patented Jan. 14. 1862.



Witnesses
H. H. Coe
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Inventor
John Taggart

UNITED STATES PATENT OFFICE.

JOHN TAGGART, OF ROXBURY, MASSACHUSETTS.

IMPROVEMENT IN PEGGING-MACHINES.

Specification forming part of Letters Patent No. 34,170, dated January 14, 1862.

To all whom it may concern:

Be it known that I, JOHN TAGGART, of Roxbury, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Machinery for Lasting and Pegging Shoes; and I do hereby declare the same to be fully described in the following specification, and illustrated in the accompanying drawings, of which—

Figure 1 denotes a top view of the machine containing my improvements; Fig. 2, a front elevation of it; Fig. 3, a side elevation, and Fig. 4 a longitudinal and vertical section of it; Fig. 5, a longitudinal section; Fig. 6, a rear elevation, and Fig. 7 an inner end view of the peg-wood carrier and peg-driver. Fig. 8 is a top view, Fig. 9 a bottom view, and Fig. 10 a longitudinal section, of the lasting-mechanism adjustable carriage. Fig. 11 is a top view, Fig. 12 a bottom view, Fig. 13 a side elevation, and Fig. 14 a longitudinal section, of the lasting mechanism. Fig. 15 is a representation of the periphery or threads of the peculiar screw or worm, by which the movements and intervals of rest of the vertical shaft of the lasting-mechanism carriage are produced.

The nature of my improvements consists as follows: in the combination of a back-latching mechanism and its unlatching mechanism with the hammer and peg-driver; also, in a lasting-block as constructed of a bed-block and heel and toe and lateral or side clamps or crimpers arranged substantially in manner and so as to operate as hereinafter described.

In the drawings, A denotes the frame or stand of the machine.

B is the driving-shaft, which is arranged horizontally and supported in boxes *a a*. This shaft has a double cam C, fastened upon its rear end. Such cam, while the shaft is being revolved, acts against the foot *b* of a pitman D, suspended from the tail end of a hammer E, which is arranged in the upper part of the frame A, and turns vertically upon a fulcrum *c*. To the said hammer and to the upright standard of the frame a spiral spring F is applied for the purpose of effecting the downward motion of the hammer-head upon a peg-driver G. The said peg-driver plays vertically within a rocker *p* at one end of a

peg-wood carrier H, which is supported on an arm I, whose outer end is supported by a post or column K, arranged on the frame A, as shown in the drawings. A spiral spring *e*, applied to the said post or column and the said arm, operates to press the arm and of course the carrier toward, and to keep the latter in proper contact with the lasting-block, (represented at L.) There is a small roller *f* on the peg-wood carrier, which is borne against the side of the lasting-block and serves to maintain the peg-wood carrier in its proper position in reference to the lasting-block. This peg-wood carrier H is provided with a slider *g*, which is drawn forward or toward the peg-driver G by a spiral spring *h*, contained within a pulley or barrel *i*, which is connected with the slider *g* by a cord *k*, arranged as shown in the drawings.

The peg-driver G is intended to carry an awl for making peg-holes in the sole of a shoe, each of such holes being made while a peg is being driven into another hole or one previously made. The peg-wood driver and its carrier may also be furnished with a suitable device or devices for separating a peg from a strip of peg-wood preparatory to such peg being driven into a shoe or its sole when fixed on the last M, contained within the lasting-block.

After each blow of the hammer upon the peg-driver such hammer, owing to the sudden elevation of the peg-driver by the spring of the latter, is liable to rebound more or less and strike one or more unnecessary blows. It has been found that in consequence of such rebounding of the hammer a peg is liable to be driven a short distance into the shoe while the latter may be in movement, or may be in the act of being fed along a suitable distance for the reception of another peg after one may have been driven. The result of the rebound of the hammer is generally the breakage of the peg or a failure to drive it into the hole for its reception, and it is to prevent such a result that I have combined with the hammer and the peg-driver what I term the "back-latching mechanism and its unlatching mechanism." The said back-latching mechanism consists not only of a stud *l* extended from the peg-driver, but a spring-catch or spring

m , projected upward from the peg-wood carrier, and under the latch, as shown in Figs. 6 and 7.

The unlatching mechanism consists, mainly, of a lever n and its lifting-cord o , this latter being attached to the hammer E and the said lever n . While the hammer is being raised it lifts the lever, which extends between the spring-catch and the guide or socket p , in which the peg-driver is supported. As the peg-driver after each of its downward movements is elevated by a spring q , this latter will raise the peg-driver far enough for the catch m to spring underneath the stud l , and thereby prevent the peg-driver from being depressed by a blow that may be produced by a rebound of the hammer. While the hammer is being raised it will lift the lever n up to the stud l , the lever during its elevation operating to move or throw the spring-catch m outward from underneath the said stud, in order that the peg-driver may be driven downward by the next regular blow of the hammer. The peg-driver while descending takes the lever down with it, and so as to relieve the spring-catch in a manner to enable it to catch underneath the stud when the peg-driver next rises upward.

The lasting-block L above mentioned is formed as a mold or matrix to receive a last M and the upper of a shoe when placed on such last. This lasting-block has two heel and toe clamps $r s$ and two lateral or side clamps or crimpers $t t$, each of the latter being hinged to the block, as shown at u , and provided with studs or projections $v v$, extending, respectively, from its ends and so as to pass underneath the lips $w w$ of the heel and toe clamps while these latter are being drawn toward one another. Each clamp $r s$ turns on two pivots or centers $x x$, extending from opposite sides of the block L. On each side of the block the two clamps, by means of two pitmen $y z$, are connected to a lever a^2 , the said pitman being arranged with reference to the clamp and lever, as shown in the drawings. Each lever a^2 embraces one of two eccentrics $b' b^2$, fixed upon a transverse shaft c^2 , from one end of which a lever d^2 extends. By laying hold of the lever d^2 and moving it so as to turn the shaft c^2 in one direction the two heel and toe clamps $r s$ will be drawn toward one another and caused to lock the two lateral clamps. Inside of the lasting-block is an adjustable toe-rest a^3 , which serves to extend underneath and support the toe part of the heel. A screw b^3 extends into the lasting-block and up against the toe-rest a^3 , and serves to elevate such rest in order to adapt the lasting-block to the reception of lasts, which may vary in thickness or size at the toe.

By means of the lasting mechanism constructed as described a shoe may be lasted and prepared ready for having an outer sole pegged to it. The said lasting-block rests and is suitably fixed upon the carriage N, that is provided with a toothed internal rack f^2 ,

which engages with a pinion g^2 , fixed on the upper end of an upright shaft h^2 . (See Fig. 4.) Instead of making the rack continuous, it may be formed in two parts k^2 , as shown in Figs. 8, 9, and 10, the rearmost part k^2 being placed in a frame l^2 , which is separate from and is applied to the carriage N in such manner as to be capable of being slid or moved longitudinally therein, and so as to enable one rack to be slid or moved more or less longitudinally upon the other. By thus constructing the carriage N, as shown in Figs. 8, 9, and 10, we have the means of adjusting the rack of such carriage to operate lasting-blocks of different lengths or sizes. Thus one carriage may answer for several of the blocks, for by properly adjusting the sliding portion of the rack with reference to the stationary part the pinion will work in either or from one to the other. The rack of the carriage N is kept in engagement with its pinion by means of a peculiar self-adjusting presser, (shown at O,) which consists partly of a spring m^2 , that supports the fulcrum n^2 of a lever o^2 . This lever supports two vertical rollers $p^2 p^2$, which rest against the carriage. Thus the presser is composed of the said spring, the lever, and the two rollers, arranged as shown in the drawings. By having two rollers applied to the spring by means of a lever, as described, the proper position of the lasting-block with respect to the peg-driver is better insured than would be the case were but one roller used with the spring.

On the lower end of the shaft h^2 there is a worm-gear r^2 , which engages with a screw or worm s^2 , fixed upon the driving-shaft B. Each of the threads of this screw, instead of being a true helix, runs perpendicular to the shaft for short distances on two opposite sides of it, so as to produce during opposite quarters or arcs of each revolution of the worm no rotary movement of the worm-gear r^2 , the said worm-gear being put in revolution by the other parts or arcs of the worm.

Fig. 16 is a side view, and Fig. 17 a top view, of the worm, while Fig. 15 exhibits its development, as hereinbefore mentioned.

While the shaft B is in revolution successive intervals of rest and rotary movements will be imparted to the shaft h^2 . In consequence of such the lasting-block will be fed forward with an intermittent motion, such as will be necessary to enable the pegs to be inserted in the shoe carried by such block. The shoe should always be at rest while a peg is being driven into it.

In the operation of the machine above described the pegs will necessarily be driven into the shoe until they may be inserted entirely around its sole and close to the edge thereof.

I do not claim the device as shown in the United States Patents Nos. 18,879 or 30,950 for imparting motion to the shoe while being pegged; nor do I claim a lasting-block composed of a bed-block, two toe, two heel, and two

side clamps constructed and operated in manner as shown and described in Letters Patent No. 5,063; but

What I do claim is—

1. The combination of the back-latching mechanism (or stud l and spring-catch m) and its unlatching mechanism, (or lever h and cord o .) with the hammer and the peg-driver.

2. My improved lasting mechanism having its parts constructed and applied in manner as

set forth and so as to operate together, as described.

3. The combination of the eccentrics b^2 , the lever a^2 , and their pitmen $y z$, as applied to the shaft c^2 and each side of the lasting-block, and its heel and toe clamps, as described.

JOHN TAGGART.

Witnesses:

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HERMAN D. BRADT.