

(No Model.)

M. C. LOCKWOOD.
HEEL BREASTING MACHINE.

No. 472,736.

Patented Apr. 12, 1892.

Fig. 1.

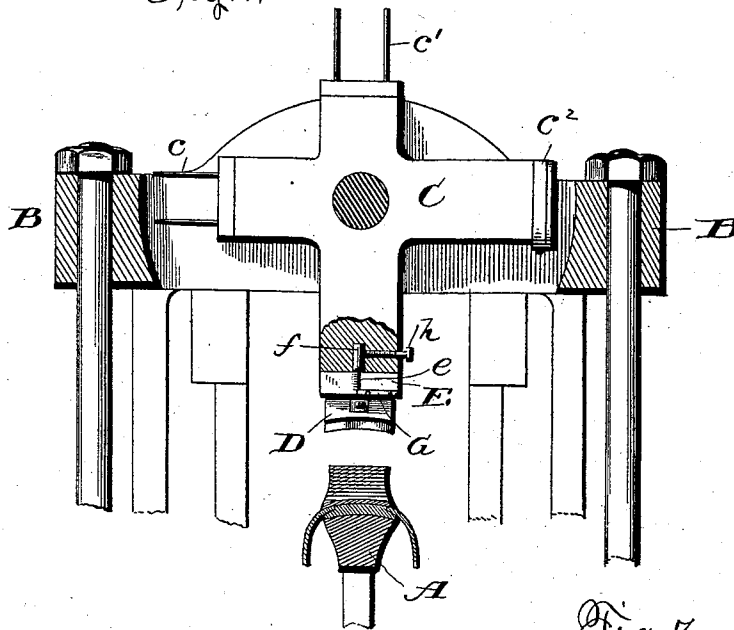


Fig. 2.

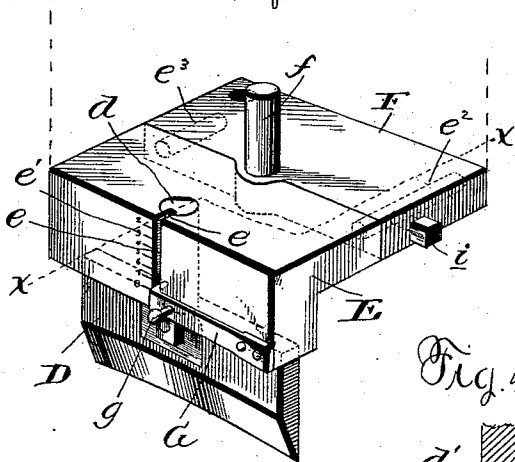


Fig. 3.

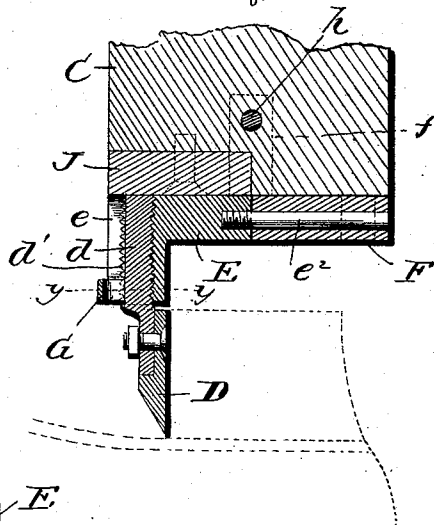
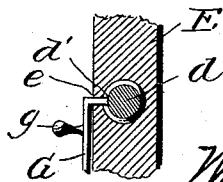


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

MORRIS C. LOCKWOOD, OF VINELAND, NEW JERSEY, ASSIGNOR OF FIVE-SIXTHS TO JOSEPH SHINER AND JOHN NORTHRUP, OF SAME PLACE.

HEEL-BREASTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 472,736, dated April 12, 1892.

Application filed February 8, 1892. Serial No. 420,737. (No model.)

To all whom it may concern:

Be it known that I, MORRIS C. LOCKWOOD, a citizen of the United States, residing at Vineland, in the county of Cumberland and State of New Jersey, have invented certain new and useful Improvements in Breastng Attachments for Heeling-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The design of my invention is to provide improved means for performing the operation known as "breasting" the heels of boots or shoes, such operation being the trimming of the inner face of the heel after its attachment to the boot or shoe.

To this end and such others as the same may pertain, said invention consists in the device and the parts thereof constructed and combined substantially as and for the purpose hereinafter specified.

In the accompanying drawings, Figure 1 shows a view of my device as arranged for use. Fig. 2 is a detail perspective view of the same; Fig. 3, a vertical section on the line *xx* of Fig. 2, and Fig. 4 a detail view in section on the line *yy* of Fig. 3.

My object more especially has been to provide a heel-breasting device which shall be capable of use with a heeling-machine, so that the breasting may be performed while the boot or shoe is in the latter and shall in proper sequence follow the attachment or nailing of the heel to the boot or shoe without the removal of the latter from the last or form on which it is placed while the heel is being nailed.

In the drawings I show my device as applied to the well-known "National" heeling-machine; but, while being especially well adapted for use with this machine, it is to be understood that I do not limit its use solely to it.

As the structure and operation of this machine are well known in the art, I show and shall describe but a portion thereof.

Referring to the drawings by letter, A des-

ignates the last or form for holding the boot or shoe during the heel-affixing operation, and B a cross-head that is vertically movable with reference thereto. In a recess or cavity in said head is the rotatable carrier C, having four arms, carrying, respectively, awls *c*, nail drivers or punches *c'*, the top-lift-affixing device *c''*, and my breasting device; said parts being adapted to act on the heel in the order named by the rotation of the carrier in the manner common to the National machine to bring the part vertically over the boot or shoe being operated on. The three first-named devices are of the usual structure and operation.

My breasting device attached to the fourth arm, as above set forth, consists of a knife D and the means for attaching the same to the arm, consisting of the two plates E and F. The knife is attached to the latter at the transverse center of said plate and near its outer edge by means of a screw-threaded shank *d*, that enters a threaded opening in said plates. The knife, by means of this connection, may be adjusted up or down, according to the height of the heel to be breasted, so that though the amount of movement of the cross-head may be constant yet the point to which the cutting-edge may be moved may be varied. To provide for the accurate adjustment of the knife, and that by sizes, I provide means for gaging the movement thereof, which consists of a vertical slot *e* cut through the front side or wall of the plate E nearest the screw shank *d* to the latter, so that the same may be visible through said slot, and along the side of said slot I provide a scale or gage *e'*, arranged with reference to the standard heel-sizes, with which the top of said shank co-operates. By comparing the position of the top of said shank as seen through the slot E with the marks of the gage the cutting position of the knife may accurately be determined.

As a means to determine absolutely and maintain the knife in a position to cut the heel squarely—that is to say, at a perfect right angle to the length of the shoe—I attach a spring locking-plate G to the outer side of the plate E, with an inwardly-turned end that passes through the slot *e* and is adapted to

engage with a vertical slot d' in the periphery of the screw-shank d . This constitutes a simple yet thoroughly reliable means for holding the knife in proper cutting position, though other forms of lock may be substituted therefor. I propose to have the thread of the shank of such pitch that when, say, four complete turns of the same are made the knife will be adjusted through one size. This arrangement, in connection with the locking means just described, makes reference to the gage necessary only to make certain that the proper position has been given to the knife, for by simply counting the number of turns in connection with a use of said locking device the position of the knife can accurately be determined. A knob or handle g , attached to the locking plate or latch G , affords means for disengaging the latter from the screw-shank d .

The plate F is the one by means of which the whole device is to be fastened or attached to the carrier-arm, being for this purpose provided on its upper side adjacent to the plate E with a shank or stem f , that enters an opening usually to be found in the carrier-arm. A set-screw h , tapped through the latter and abutting against said shank, securely holds these parts together, while admitting of their ready separation, when desired.

The connection between the plates E and F is by means of two horizontally-extending pins or rods e^2 and e^3 , that are attached to the plate E and engage openings in the plate F . This admits of the former being moved away from or toward the latter, so as to allow the position of the knife to be varied to operate on heels of different length from front to rear. It is to provide for this adjustment that I employ two plates E and F instead of one. A set-screw i , tapped through the side of the plate F , so as to impinge against the pin or rod e^3 , serves to lock or hold the two plates in the position to which they may be adjusted.

Although the provision I have described as made for the vertical adjustment of the knife

is adequate for all ordinary heights of heels, still to provide for extraordinary sizes I cut a cavity in the lower end of the carrier-arm to carry my device which has the proportions of the knife-carrying plate E , into which the latter can be placed, thus being raised to a higher plane than the attaching-plate F . Of course under these circumstances the rods or pins e^2 and e^3 will be suitably bent or shaped to conform to the different planes occupied by the two plates. When this extraordinary adjustment is unnecessary and the plates E and F are to be in the same plane, a block or piece J is put in said cavity and suitably secured in place therein.

While I show a knife adapted to make a square cut, it is to be understood that I also propose to use knives having a curved form to make a concave or any other desired cut.

My device is thoroughly practical and satisfactory in use, is capable of all adjustments that are called for, and can readily and quickly be attached to and removed from a heeling-machine.

What I claim to be new is—

1. In a breasting device, in combination, a knife having a screw-threaded shank and a plate having a threaded opening for the latter, said plate having a slot extending from its surface to said shank to render the latter visible therethrough.

2. In a breasting device, in combination, a knife having a screw-threaded shank, a plate having a threaded opening for the latter and a slot extending from its surface to the shank, the latch device passing through said slot and engaging a slot in said shank, and a second plate connected to the first by means of rods or pins and having a shank for attachment to a suitable part of a heeling-machine.

In testimony whereof I affix my signature in presence of two witnesses.

MORRIS C. LOCKWOOD.

Witnesses:

C. S. STEVENS,
J. PORCIUS GAGE.