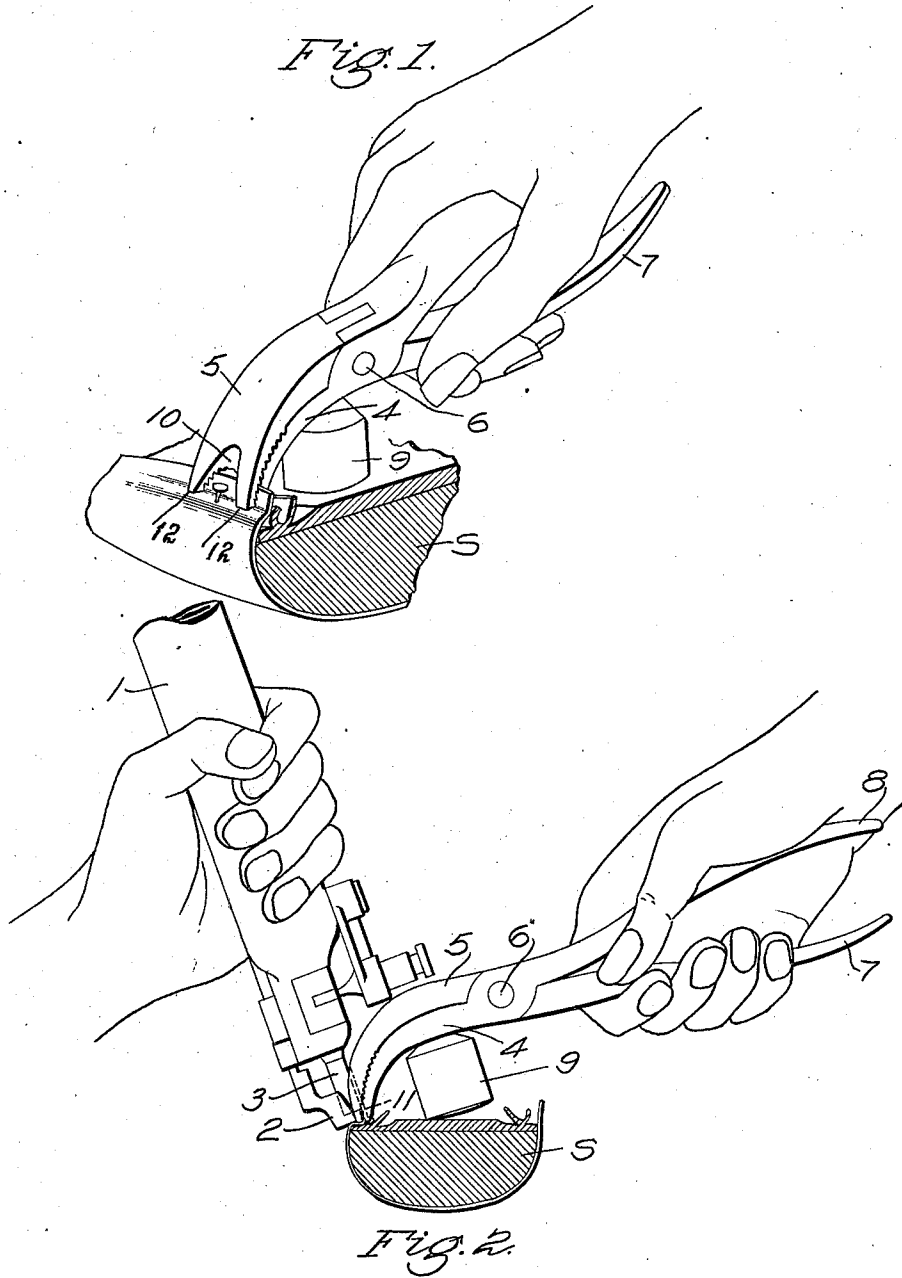


T. G. PLANT.
LASTING PINCERS.
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1,001,681.

Patented Aug. 29, 1911.



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UNITED STATES PATENT OFFICE.

THOMAS G. PLANT, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

LASTING-PINCERS.

1,001,681.

Specification of Letters Patent. Patented Aug. 29, 1911.

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To all whom it may concern:

Be it known that I, THOMAS G. PLANT, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Lasting-Pincers, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The invention to be hereinafter described relates to lasting pincers employed in the manufacture of boots and shoes for drawing the upper over the bottom or insole edge preliminary to driving a tack or other fastener through the upper and sole.

As well understood by those skilled in the art, it is usual to cut the upper sufficiently large to permit the edge portion to extend well above the edge or plane of the insole that the operator may readily grasp the edge of the upper with a pair of pincers and draw the upper snugly about the last. After the upper has been thus drawn it is usual to drive a tack or other fastener through the upper and insole just beyond the nose of the pincers and along the edge portion of the last, an expedient requiring the upper to be cut sufficiently larger than the last to leave an edge for the grasp of the pincers inside the line of tacks or fasteners. This inwardly extending edge is subsequently cut away and constitutes waste material. It sometimes happens also that the upper, at places, is not cut sufficiently large to enable the pincers to grasp its edge and the line of tacks to be driven outside or beyond the nose of the pincers.

The present invention aims to provide a pair of lasting pincers so constructed that the upper may be cut smaller than usual to avoid the waste incident to the lasting pincers heretofore used, and wherein the lasting pincers may grasp and pull the narrow marginal edge of the upper into place and yet not preclude the insertion of the lasting

tacks or fasteners in their proper place along the edge of the lasted shoe, all as will hereinafter more fully appear.

In the drawing:—Figure 1 is a fragmentary view showing the present invention and its relation to the edge of the upper and lasting tack driven into the upper and insole along the edge of the last; and Fig. 2 is a side elevation of the pincers and tack driver implement showing the relation of parts in lasting a shoe, the upper of which has only a narrow projecting edge above the insole.

In lasting a shoe, as ordinarily practiced by means of a pair of hand operated pincers, the upper is first assembled with the last and then the projecting edge of the upper above the insole, which is itself secured to the bottom of the last, is grasped by a pair of pincers in the hands of the operator, who draws the upper snugly about the last and then, by means of a separate instrument such as a tack driver, the operator inserts a lasting tack in front of or beyond the nose of the pincers and along the edge of the last. Obviously, where the edge of the upper does not project, as usual, above the plane of the insole, the grasp of the pincers so far extends over the projecting edge of the upper, after the latter is pulled to place, that the tack driver cannot locate and drive a tack beyond the nose of the pincers and into the sole on the last. This condition is well understood by those skilled in the art.

In the present embodiment of the invention the tack driving implement 1 may be of any usual or desired character, such, for instance, as pointed out in the patent to Glass, 888,485, dated May 26, 1908, wherein the tacks are fed from an inclined channel or holder into a driver head beneath a reciprocatory plunger, which serves to drive the tacks through the upper and insole along the edge of the last. This plunger may be driven mechanically or, if desired, it may be actuated by air or fluid pressure, as, for

instance, in the application of Merton D. Phelan, Ser. No. 350,492, filed January 2, 1907, wherein a presser-foot, as 2, is adapted to be pressed against the work S to start the pneumatically operated plunger into action, the tacks being fed through a proper channel 3. Since the present invention is not directed to any particular character of tack driving implement, and since such implements are well known and are fully exemplified in the Glass patent and the Phelan application, hereinbefore mentioned, further description thereof will be unnecessary, it being sufficient to say that there must be sufficient space along the edge of the work S to permit the tack channel 3 to direct a tack properly downward through the upper and insole into the last along the edge thereof.

The pincer mechanism comprises a pair of jaws 4 and 5 pivoted at 6 and provided with the rearwardly extending handle members 7 and 8 which are adapted to be grasped by the hand of the operator, as indicated in the drawings, the other hand of the operator, as shown by Fig. 2, being free to handle and manipulate the tack driving implement.

Secured to one of the jaws 4 of the pincers is a fulcrum or head 9, which, when the pincers are closed upon the edge of the upper, may rest upon the bottom of the insole and provide a fulcrum or bearing about which the pincers may be turned in drawing the upper to place.

The jaw members 4 and 5, as indicated in Fig. 1, are laterally expanded toward their nose or end portions. The pincer jaw 5 is provided at its end portion with an enlarged substantially V-shaped slot or bifurcation 10, Fig. 1, and such slot or bifurcation is preferably of such size and dimensions as to permit the insertion therein of the part 3 of the tack driving implement. It will be noted that at each side of the slot 10 the jaw 5 has the widely separated upper engaging portions 12, 12, so that a tack may be driven through the upper and into the insole on the last back of the line passing through the extremities of the portions 12, 12, and that the surfaces formed by the slot 10 extend upwardly from the end portions 12, constituting containing and guiding means for the nose or part 3 of the driver held by one hand of the operator while the pincers are held by the other hand. Thus not only does the laterally expanded and slotted pincer jaw 5 permit the tack to be driven inside the line joining the extremities of the end portions 12, 12, but also furnishes a receiver for the nose of a separate driver, the walls of the slot guiding the nose to place within the line joining the end portions 12, 12, and enabling the operator to

quickly and accurately correlate the driver and jaws and drive a tack in proper position even when the edge of the upper is scant. The grasping surface of the lower jaw may likewise be provided with a slot or channeled portion 11, see dotted lines, Fig. 2, in extension of the rear wall of the upper slotted or bifurcated portion 10, the construction being such that when the edge of the upper projects insufficiently above the plane of the insole to permit the pincers to draw the upper to place and yet provide sufficient space outside of or beyond the nose of the pincers for the action of the tack driving implement in forcing a fastener through the upper and insole and into the edge of the last, such slotted portions of the pincer jaws provide space into which the part 3 of the tack driver may extend to properly locate and drive a tack with respect to the edge of the last.

From the construction described it will be apparent that the invention provides means for working lasting pincers much nearer to the edge of the last than has been the practice heretofore, with the result that the upper may be cut smaller than heretofore, thus economizing in the amount of material employed. It will also be apparent that the hands of the operator may be employed, the one in manipulating the lasting pincers and holding the upper edge in place, while the other may be free to manipulate the tack driving implement even when the upper projects to only a very slight extent above the edge of the insole. Under such conditions heretofore, it was necessary, after pulling the upper to place, to release the grasp of the pincers, lay them one side, and, while holding the upper as firmly as possible with the thumb of the left hand, to put a tack in proper position and drive it with a separate implement.

What is claimed is:

1. Hand lasting pincers adapted to be held and operated by the hand of the workman, comprising two jaws pivoted together, said jaws being expanded laterally toward their ends, and the upper jaw being provided with an enlarged V-shaped slot flaring toward the end of the jaw to permit a tack to be driven through the upper and into the insole back of a line joining the extremities of the end portions of the jaw, said slot adapted to receive the end or nose of a separate driver and having upwardly extended surfaces for guiding said end or nose.

2. Hand lasting pincers adapted to be held and operated by the hand of the workman, comprising two jaws pivoted together, said jaws being expanded laterally toward their ends, the upper jaw being provided with an enlarged V-shaped slot flaring toward the end of the jaw to permit a tack to be driven

through the upper and into the insole back
of a line joining the extremities of the end
portions of the jaw, said slot adapted to re-
ceive the end or nose of a separate driver
5 and having upwardly extended surfaces for
guiding said end or nose, and the grasping
surface of the lower jaw provided with a
slot or channeled portion in extension of
the rear wall of the slotted portion of the

upper jaw, substantially as and for the pur- 10
pose described.

In testimony whereof, I have signed my
name to this specification, in the presence of
two subscribing witnesses.

THOMAS G. PLANT.

Witnesses:

ALFRED H. HANDLEY,
EDWARD L. STANLEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
