

F. D. BALLOU.

Machinery for Lasting Boots and Shoes.

No. 150,123.

Patented April 28, 1874.

Fig. 1.

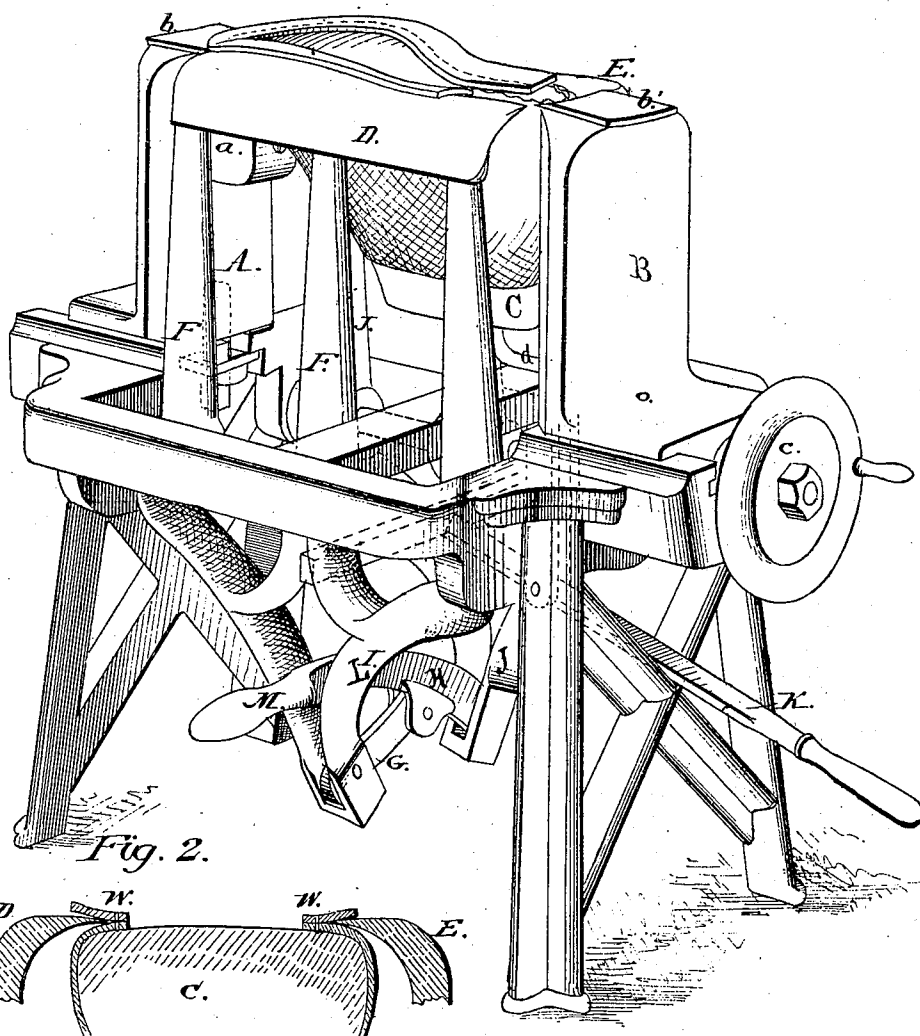
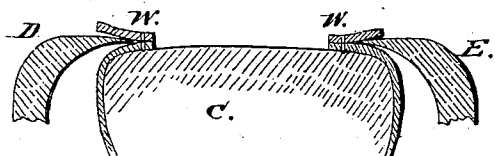


Fig. 2.



Witnesses.

Boston, Mass. & Wint. pers
 F. J. Raymond "

Francis J. Ballou
Inventor.

UNITED STATES PATENT OFFICE.

FRANCIS D. BALLOU, OF ABINGTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINERY FOR LASTING BOOTS AND SHOES.

Specification forming part of Letters Patent No. 150,123, dated April 28, 1874; application filed December 15, 1873.

To all whom it may concern:

Be it known that I, FRANCIS D. BALLOU, of Abington, Massachusetts, have invented a Method and Machinery for Lasting Boots and Shoes, of which the following is a specification:

The machine I am about to describe is specially adapted to lasting a peculiarly-made shoe, and a shoe, in order to be successfully lasted on the machine, must, up to the time of putting to the machine, be specially made for it.

In lasting hand-made shoes by hand, the inner sole is laid on the bottom of the last, the upper drawn over and tacked, the welt put round, and then upper welt and inner sole united by stitches through all. In this operation the lasting is done before sewing, and the line of stitches is determined by the lasting.

In my method the upper is cut by pattern carefully developed to the shape of the last to be used. Next, a welt is attached to the edge of the upper all round, except at the heel. This work finished, the shoe is ready for lasting. With an upper properly developed to the last and cut to size, the attachment of the welt is very readily made at the proper line by running through a stitching or riveting mechanism with the edge of the welt or upper against a gage. The shoe is thus made ready for lasting. A last of proper size is taken, the upper slipped upon it and adjusted in the machine.

At one end of the machine is a standard, A, carrying a toe-block, *a*, and lasting-plate *b*, which projects inward toward the shoe, and is to be inserted under the welt. At the other end is a movable standard, B, operated by a hand-wheel and screw, *c*, and carrying a spindle or bracket, *d*, upon which the last C is hung, the toe being adjusted in the toe-block *a*.

This standard also carries a lasting-plate, *b'*, to fold the upper over at the heel. Two jaws, D E, formed at the edges, in plan, to lap upon the last a moderate distance when closed along a line parallel to the outer conformation of the last, and in elevation to correspond with the curved under surface of the last, are arranged on levers of the first order F, I, and J, which are pivoted in slots in the frame of the machine, allowing the jaws D E to be raised and lowered parallel to the sides of the last. Another lever of the first order, K, having arms L, which lay hold of the jaw-frame F I J, serves to lift the jaws, and the toggles G H with its handle *m* serves to close the jaws. The two motions of the jaws, each independent of the other, enable the workman to catch and lift the welt, and with it the upper around the last, and then, by closing, catch under the welt W, as shown in Fig. 2, and draw the upper round the last to a bearing all over, where it is tacked by hand, or by a continuous tacker, devised and soon to be patented by me.

Of course, these independent vertical and horizontal motions of the jaws D E can be produced in various ways, the one I have indicated being the most obvious.

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

1. The arrangement of lasting-plates D and E, upon jaws which have a vertical movement parallel to the sides of the last, substantially as described.

2. The lasting-plates D and E, having positive motions vertical and horizontal, by means substantially as described.

FRANCIS D. BALLOU.

Witnesses:

THOS. WM. CLARKE,
F. F. RAYMOND.