

J. A. TALPEY.

Molds for Shaping Shoe Uppers.

No. 150,630.

Patented May 5, 1874.

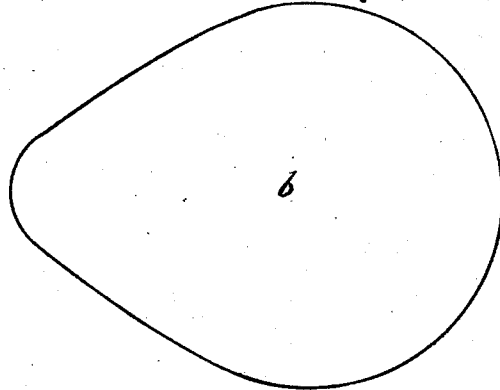


Fig. 1.

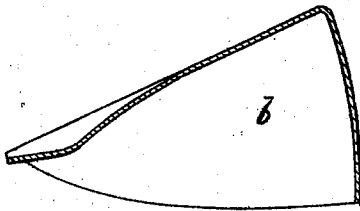


Fig. 3.

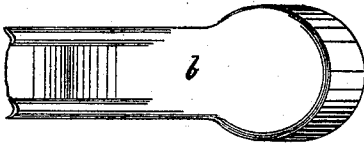


Fig. 2.

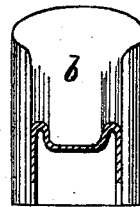


Fig. 4.

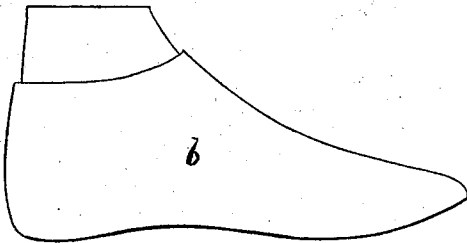


Fig. 6.

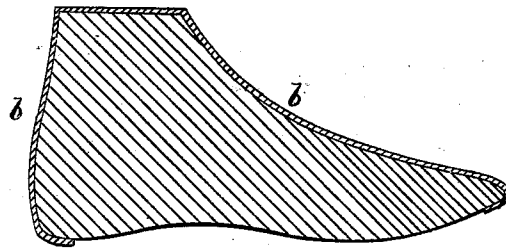


Fig. 5.

Witnesses.
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L. A. Wood.

Inventor
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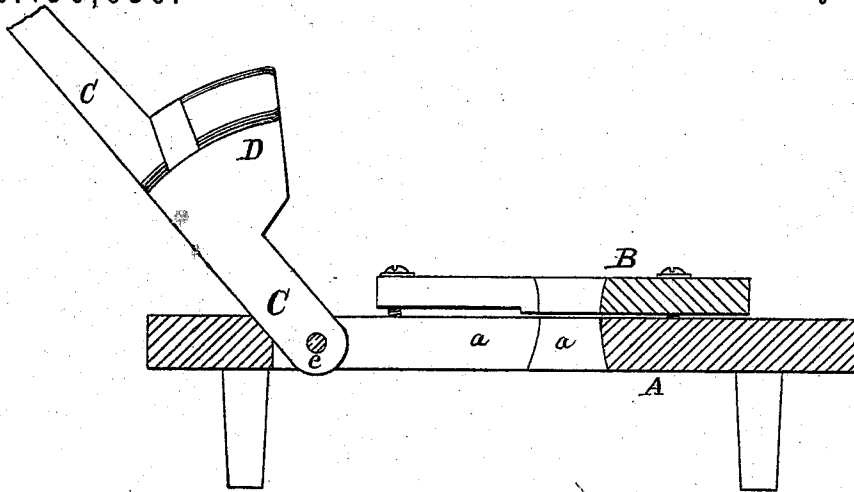


Fig. 8.

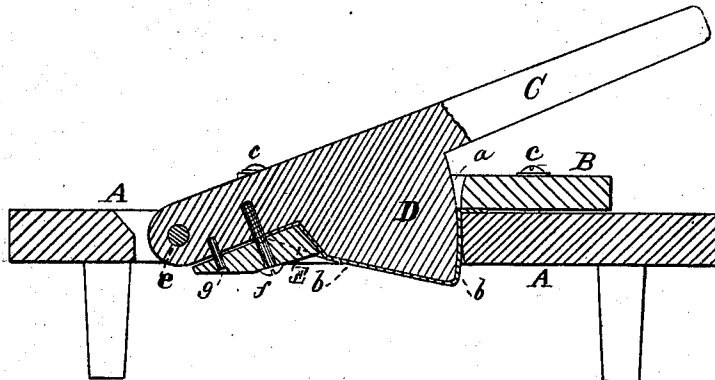


Fig. 9.

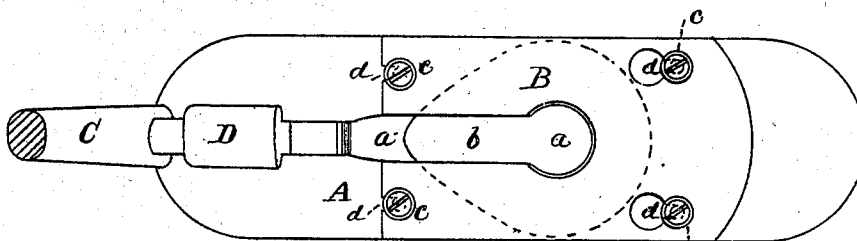


Fig. 7.

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UNITED STATES PATENT OFFICE.

JOSEPH A. TALPEY, OF SOMERVILLE, MASSACHUSETTS.

IMPROVEMENT IN MOLDS FOR SHAPING SHOE-UPPERS.

Specification forming part of Letters Patent No. **150,630**, dated May 5, 1874; application filed March 31, 1874.

To all whom it may concern:

Be it known that I, JOSEPH A. TALPEY, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in the Manufacture of Boots and Shoes, of which the following, taken in connection with the accompanying drawings, is a specification:

My invention relates to the manufacture of seamless leather shoes, or boots and shoes the foot portion of the upper of which is formed or molded from a single piece of leather without seam, and the means employed to mold or crimp a shoe-upper; and it consists in the use of a male and female die, one of which is fixed or stationary, while the other is movable, in combination with suitable clamping or holding devices for securing the outer edge of the heel portion of the upper to the female die in an extended position, and the toe or central portion to the male die, for the purpose of preventing the forming of wrinkles or plaits in those portions of the upper that are to be full, and to hold the upper or blank in proper position on the male die, and prevent it from being drawn too much toward one end or side of the former and making the shoe one-sided. It further consists in so constructing and applying the clamp-plate for securing the outer edge of the upper to the female die that it shall bear upon the upper only around the outer edge of the heel portion thereof, as will be described.

The descent of the male die striking upon the center of the leather carries it downward through the female die, drawing the outer edge of the piece of leather inward toward the opening in the die, drawing it across the corner of the die, stretching the center portion of the leather and fulling the outer edge, while the clamping-plate prevents any wrinkles from forming in the leather.

In the drawings, Figure 1 is a plan of the upper. Figs. 2, 3, and 4 represent, respectively, a plan, a longitudinal section, and a transverse section of the same after passing through the molding-machine. Fig. 5 is a longitudinal section of a last and the molded upper fitted thereto before cutting the opening for the entrance of the foot. Fig. 6 is a side elevation of a last with the upper

fitted thereto, the opening for the foot having been cut in the molded upper before lasting. Fig. 7 is a plan of a machine, illustrating one mode of molding the seamless upper. Fig. 8 is a longitudinal section of the same with the brake and male die thrown back preparatory to inserting the upper to be molded; and Fig. 9 is a similar section with the brake or lever and male die thrown forward and in the act of forming or molding the upper, and showing the toe-clamp attached and gripping the toe of the upper.

A is a platform or table, through which is cut the opening *a*, of suitable form, over which is placed the upper *b*, cut to the form shown in Fig. 1, the wide or circular end being placed concentric with the enlarged circular end of the die-opening *a*, and the pointed or smaller end being placed over the parallel-sided extension of said opening, as shown in dotted lines in Fig. 7. B is a clamping-plate, placed above said upper and resting thereon, secured to the die-table A by means of the bolts *c c* and the slots *d d*, so that its height above the table A may be adjusted to different thicknesses of leather, and so that it may be readily and easily removed and applied. The plate B may be made of an even thickness and bear upon the leather all around the opening *a*; but as the toe portion of the upper does not need to be crimped any more than any ordinary shoe-vamp, I so construct the plate B that it will bear upon the upper *b* only a little more than half its length, and that around the heel portion, as shown. The plate B may be attached to the table A in a variety of ways besides that shown, among which I will mention that it may be hinged to the table A at one end, and the other end be held in position by a hook catch or latch. C is a brake-lever, pivoted to the die-table A by means of the pin *e*, and having formed upon or secured to its under side the male die D, made of a shape to fit loosely the openings *a* in the table A and plate B. E is a clamp for holding the toe end of the upper and preventing the friction of the leather held between the plate B and table A from drawing the leather too much toward the heel, said clamp being secured to the under side of the lever C by the screw *f* and pin *g*.

I will now proceed to explain the manner of operating my improved process of forming seamless uppers for boots and shoes, and the operation of the machine shown for facilitating said process.

The upper is first cut to the outline shown in Fig. 1, or other suitable outline, according to the style or height of the shoe to be produced, without hole or opening of any kind. The upper is then wet and placed upon the table A over the opening *a*, as shown in dotted lines in Fig. 7, and the plate B is then placed in position resting upon the leather, when the lever C is brought forward until the under surface of the die D rests upon the upper surface of the leather, and the clamp E is secured to the lever C, so as to gripe the toe of the upper and hold it firmly. The lever C is now depressed until the leather is all drawn out from under the plate B, and turned into a position nearly at right angles to its former position, when the flat piece of leather is molded into the form represented in Figs. 2, 3, and 4. This molded upper is next put upon a last while it is still in a moist state, and lasted, as shown in Fig. 5, and then it is allowed to dry, after which an opening is cut for the entrance of the foot and the usual slit in front.

In some cases I propose to cut the opening between the operations of lasting and molding.

By the use of this process much more of the stretch of the leather is taken out than

by the old process of shaping seamless shoes by hand, and therefore a better shoe is produced from a smaller piece of leather, and a much higher shoe can be made without seam than heretofore has been possible.

The male die may be made to reciprocate, instead of being attached to a vibrating lever, as shown.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a machine for molding boot or shoe uppers from a flat piece of leather without seam, the combination of a female die provided with a clamp-plate for securing the outer edge of the upper to said die, and a male die provided with a clamp for securing the toe or central-portion of said piece of leather thereto, substantially as described.

2. The clamp-plate B, in combination with the male die D and female die A *a*, when constructed substantially as described, and arranged to bear upon the leather only around the heel portion of the upper.

3. In combination with the brake-lever C and male die D, the clamp E, arranged to operate substantially as described, for the purpose specified.

Executed at Boston, Massachusetts, this 27th day of March, 1874.

JOSEPH A. TALPEY.

Witnesses:

WM. P. EDWARDS,
L. A. WOOD.