

No. 96,638.

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Letters Patent No. 96,638, dated November 9, 1869.

IMPROVED MACHINE FOR SHAPING BOOT AND SHOE-SOLES.

The Schedule referred to in these Letters Patent and making part of the same:

To all whom it may concern:

Be it known that I, S. D. TRIPP, of Lynn, in the county of Essex, and State of Massachusetts, have invented a new and improved Machine for Shaping Boot and Shoe-Soles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The object of this invention is to provide an improved machine for shaping and compressing the soles of boots and shoes, after they are fastened to the uppers.

The invention comprises a method of compression by rolling the soles between a last and former, of peculiar construction, specially adapted for action upon all parts of the soles, whether of similar form or varying thickness, as hereinafter more fully specified.

Figure 1 represents a side elevation of my improved machine, one of the housings of the frame being removed; and

Figure 2 represents a section at right angles thereto, taken on the line *x x* of fig. 1.

Similar letters of reference indicate corresponding parts.

A represents a last, having a convex bottom transversely, and arranged to be readily applied to or taken from a rocker, B, with the bottom upward.

The rocker is connected to a shaft, C, having suitable bearings in a cross-head, D, supported between two A-shaped housings, E, and connected, by rods F, to a similar cross-head, G, above the top of the housings.

This shaft C is provided with a large segmental wheel, H, which gears with a train operated by a crank-shaft, or other suitable means for imparting an oscillating movement.

I represents a former, designed for working against the bottom of the last. It is concaved in cross-section, to fit the convexity of the last, and convex longitudinally for the most part of its length, for fitting the longitudinal concavity of the last between the ball and heel, but slightly concave at the heel, and the same to a greater extent from the ball of the last to the toe.

This former is suspended by pivots, *a*, at each end, from rocker K, suspended in bearings from the upper housing G, and is free to oscillate on these pivots to some extent.

The rear end is provided with a bracket, *b*, supporting a set-screw, *d*, for gauging the position of the last relatively to the former.

The curvatures of the former in the direction of the length, both convex and concave, are so calculated, relatively to the shape of the bottom of the last and radii of the two centres of motion, that when

the two are rocking back and forth together, the former will press on all parts of the bottom alike.

The upper cross-head G is provided with yielding washers, L, between it and the binding-nuts M, of the rods F, which allow the cross-head to yield to any thick and hard places in the sole.

After the soles are secured to the uppers, the boots or shoes are placed on the last, the said last being oscillated so far forward as to disengage it from the former. They are then brought together by moving the last back, so that the heel strikes the set-screw *d*, which governs the position of each relatively to the other. The to-and-fro oscillating motion is then imparted by turning the crank back and forth, as long as required, producing a rolling-compression on the sole, which reduces it to an even thickness, and levels the uneven places very rapidly, and with but little labor.

The pivots *a* permit the former to oscillate laterally, to accommodate itself to any parts where one side of the sole may have thicker places than the other, while, at the same time, acting upon the whole surface transversely.

The top of the last is considerably enlarged at the point where it is seated on the rocker B, and one or more dowel-pins may be used to hold the parts in line with each other.

This joint may, if preferred, or found best, be so made as to permit the last to have a lateral oscillation, to harmonize with the lateral oscillation of the former.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The combination, with a last, arranged to oscillate as described, of a former, oscillating in unison therewith, and against the face thereof, and provided with a longitudinal convexity, fitting the hollow of the last when oscillating thereon, and concavities at the ends, fitted to work upon the heel and toe of the said last, substantially as specified.

2. The combination of the same, when the former is concaved transversely, and arranged to oscillate on its longitudinal axis, and the face of the last is made convex, to correspond therewith, substantially as specified.

3. The elastic washers L L, arranged on the rods F F, between the cross-head G and binding-nuts M M, to operate in conjunction with the rocker K and former I, as shown and described.

4. The combination of the rocker B and last A, substantially as specified.

S. D. TRIPP.

Witnesses:

E. E. BOWKER,
M. L. EDDY.