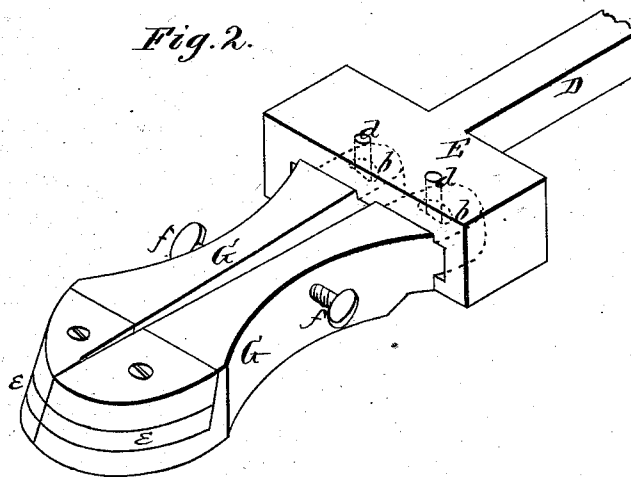
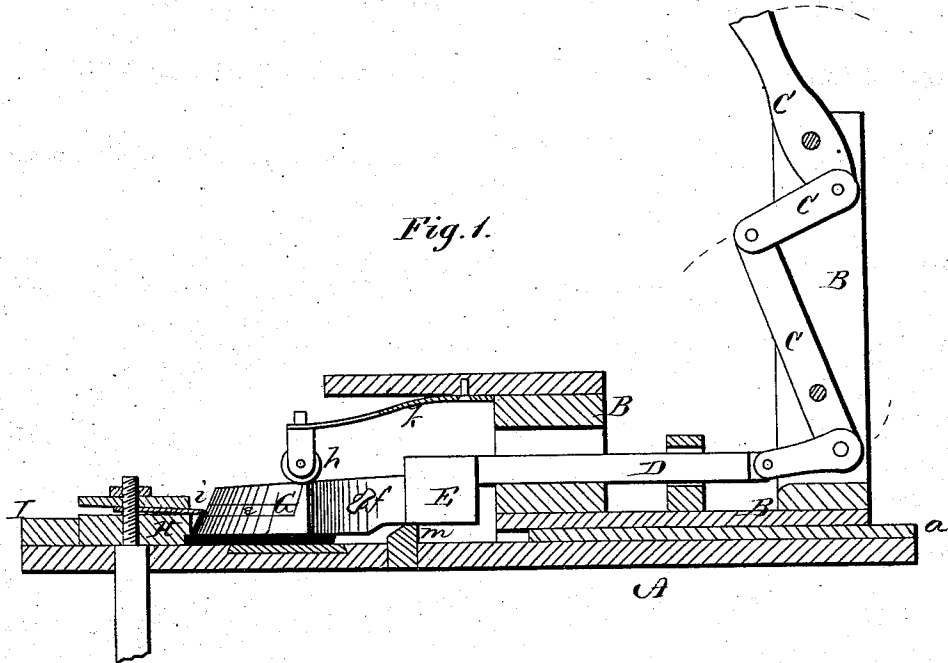


J. J. HENRY.

Device for Forming Shoe-Sole Tips.

No. 158,939.

Patented Jan. 19, 1875.



WITNESSES

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JOHN JOSEPH HENRY, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN DEVICES FOR FORMING SHOE-SOLE TIPS.

Specification forming part of Letters Patent No. **158,939**, dated January 19, 1875; application filed December 7, 1874.

To all whom it may concern:

Be it known that I, JOHN J. HENRY, of Baltimore, in the county of Baltimore and in the State of Maryland, have invented certain new and useful Improvements in Device for Forming Shoe-Sole Tips; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a machine for forming and pressing up a tip on the front of shoe-soles, and trimming the edge of said tip, all as hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section of my machine; and Fig. 2 is a perspective view of a part thereof in enlarged dimensions.

A represents the bed or base of my machine, on top of which is a longitudinal guide-rib, *a*, to fit in a groove in the under side of a head-block, B. This head-block may be of any suitable construction to contain the various working parts necessary for the operation of the machine.

The head-block may be fastened to the base A by a bolt passing through an elongated slot in the base or in the head-block, so that the head-block can be adjusted back and forth, as may be required.

In the head-block B are arranged compound levers C C, which operate a plunger-rod, D, attached to a plunger, E. The front of this plunger is hollowed out, as shown by dotted lines in Fig. 2, and in this recess are inserted tenons *b b*, formed upon the inner ends of two jaws, G G. These tenons have elongated slots, through which are passed pins *d d*. The jaws G G are constructed, as shown, to form what I term a "split toe," the rounded front edge of which may be more or less beveled or straight, as deemed best, and in this edge is inlaid a piece, *e*, of lead or other soft metal.

Through the jaws of the split toe are passed set-screws *f f*, for the purpose of regulating the distance between their inner or rear ends. The upper surface of the split toe is beveled or inclined, and on the same bears a roller, *h*, attached to a spring, *k*, to hold the split toe down to its work. In front of the split toe G is a head, H, in which is fastened a slightly-inclined curved or semicircular knife, *i*. The head H butts against a shoulder, I, and is, in a full-sized machine, to be held up by a suitably-arranged spring, and is to be forced down for operation by means of a treadle. Suitable guides may also be arranged to insure the proper vertical movement of the head and knife.

After a shoe-sole has been channeled by means of the ordinary channeling-machine now in use, it is placed on the bed A below the split toe G. The head H is then lowered, and, by means of the compound levers C, the split toe is pressed forward, which raises, forms, and presses the tip, the edge of said tip being trimmed by means of the knife, which comes against the lead or soft metal *e* inlaid into the end of the toe, and thus prevents the injuring of the edge of the knife. The upper surface of the split toe being inclined, the pressure of the spring-roller *h* increases as the toe is moved forward, thus causing the same to plow down into the channel to raise and form the tip.

By means of the set-screws *f* the sides of the jaws forming the split toe are made wider or narrower according to the width of the shoe-sole, while the front ends of the jaws are kept close together.

When the tip is raised, pressed, and trimmed the head H is allowed to rise by means of the spring operating the same, and the split toe is drawn back by means of the levers. While thus moving backward the split toe is raised by means of a beveled lug, *m*, projecting upward from the bed A.

The end of the split toe may be slightly rounded from top to bottom, instead of perpendicular or inclined, and whatever form the toe is the head should be made to correspond reversely to this shape.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a reciprocating split

toe, G G, and a head, H, for forming and pressing shoe-sole tips, as herein set forth.

2. The combination of a reciprocating toe, G G, a head, H, and a knife, *i*, for forming, pressing, and trimming shoe-sole tips, as herein set forth.

3. The split toe G G, having its inner ends provided with slotted tenons *b*, held by pins *d*, and adjusted by means of set-screws *f*, substantially as and for the purposes herein set forth.

4. The combination of the split toe G G, having its upper surface inclined, the roller *h*, and

spring *k*, substantially as and for the purposes herein set forth.

5. The combination of the adjustable head B, compound levers C, rod D, recessed plunger E, and split toe G G, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of November, 1874.

J. JOSEPH HENRY.

Witnesses:

C. L. EVERT,

H. A. HALL.