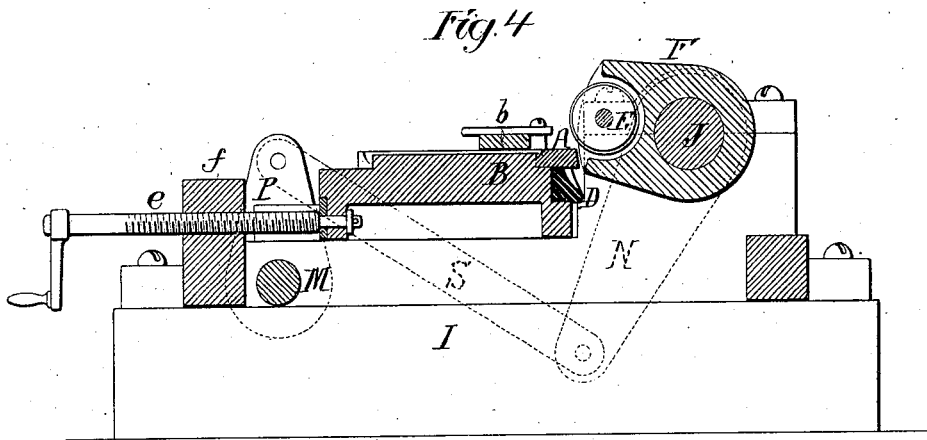
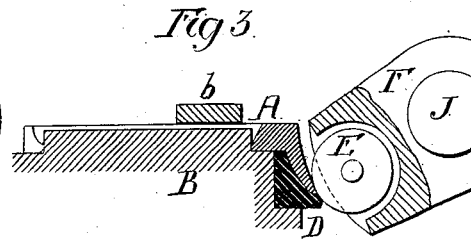
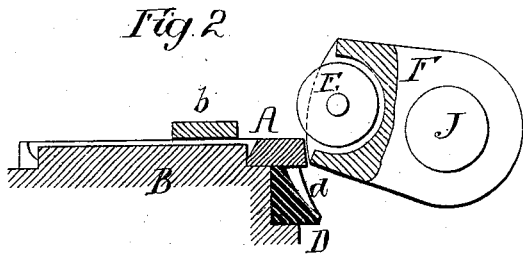
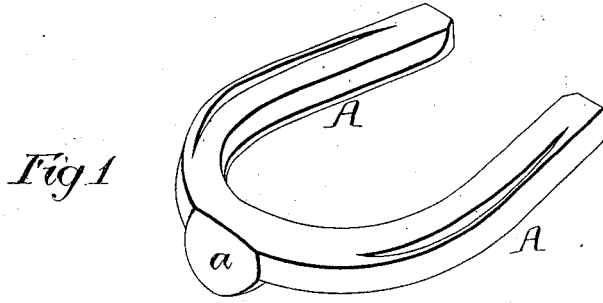


J. MILLER.

Machine for Forming Clips on Horseshoes.

No. 197,651.

Patented Nov. 27, 1877.



Witnesses
Henry Cowson Jr.
Harry Smith

Inventor
Joel Miller
by his Attorneys
Howson and son

UNITED STATES PATENT OFFICE.

JOEL MILLER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR FORMING CLIPS ON HORSESHOES.

Specification forming part of Letters Patent No. **197,651**, dated November 27, 1877; application filed October 22, 1877.

To all whom it may concern:

Be it known that I, JOEL MILLER, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Forming Tips or Calks on Horseshoes, of which the following is a specification:

The object of my invention is to rapidly and effectually form tips or calks on a horseshoe—an object which I attain in the following manner, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of a horseshoe on which a toe-tip has been formed according to my invention; Figs. 2 and 3, diagrams illustrating the mode of carrying my invention into effect, and Fig. 4 a sectional view of the machine.

A represents a horseshoe, having at the toe a tip, *a*, which is usually formed by hammering over the edge of an anvil a portion of the metal forming the front of the shoe.

In order to avoid the tedious manipulation demanded in thus forming the tip in the ordinary manner, I confine the shoe-blank A, by means of a transverse bar, *b*, to a bed, B, having at its front end a recess, to which is adapted a block, D, of steel, having a recess, *d*, of a shape conforming to that of the tip to be produced. (See Figs. 1 and 2.)

The shoe, which may be either hot or cold, having been adjusted to the proper position on the bed, as shown in Fig. 2; a roller, E, carried by a vibrating head, F, is caused to press upon the front end of the shoe, and to force a portion of the metal composing said front end down into the recess *d* of the block D, as shown in Fig. 3, thereby, at a single operation, forming a perfect tip. After the elevation of the roller E, the shoe may be removed, and another shoe-blank may be inserted in its place, prior to a repetition of the above operation.

The depth of the tip formed by the above-described operation may be varied by varying the position of the front end of the shoe in respect to the roller E. Thus, the nearer said front end is brought to the roller the greater will be the amount of metal rolled down, and the deeper will be the tip, while the farther

the front end of the shoe is removed from the roller the less will be the amount of metal rolled down, and the shorter will be the tip.

The machine by which I prefer to carry out the above-described operations is shown in Fig. 4, in which I represents a substantial framework, to guides on which is adapted the bed B, the latter being made adjustable longitudinally, for the purpose above described, by means of a screw-spindle, *e*, passing through a transverse bar, *f*, on the frame-work I, and provided with a suitable handle.

In the frame I are formed bearings for two shafts, J and M, the former carrying the head F, and being provided at each end with an arm, N, while the shaft M carries at each end an arm, P, connected to the arm N, on the same side of the machine, by a rod, S. The shaft M should also be provided with an operating lever or levers, by operating which a vibrating movement may be imparted to the shaft J and head F, the proper action of the roller E on the horseshoe being thus insured.

The above-described process and machine may be employed in forming calks on the heels, as well as tips on the toes, of horseshoes, the roller E, when employed for the former purpose, being preferably made of such a width as to form both calks at once. Two rollers, one for each calk, may, however, be used, if desired.

A rigid presser might be substituted for the roller E in some cases; but the roller is to be preferred, as it has no tendency to tear the metal in its action upon the same.

I claim as my invention—

The combination of the vibrating presser with a bed, B, having in its front edge a recess, *d*, and provided with means whereby a horseshoe-blank may be secured in position on the bed, all substantially as specified.

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

JOEL MILLER.

Witnesses:

HERMANN MOESSNER,
HARRY SMITH.