

P. HOGAN & D. WHITLOCK.  
Machine for Attaching Heels to Boots and Shoes.

No. 206,237.

Patented July 23, 1878.

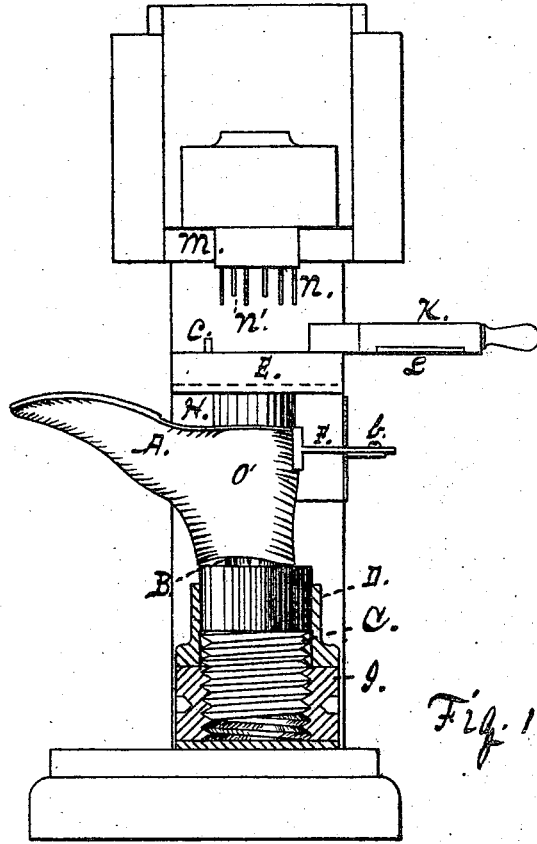


Fig. 1

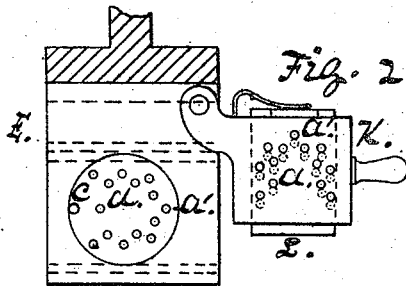


Fig. 2

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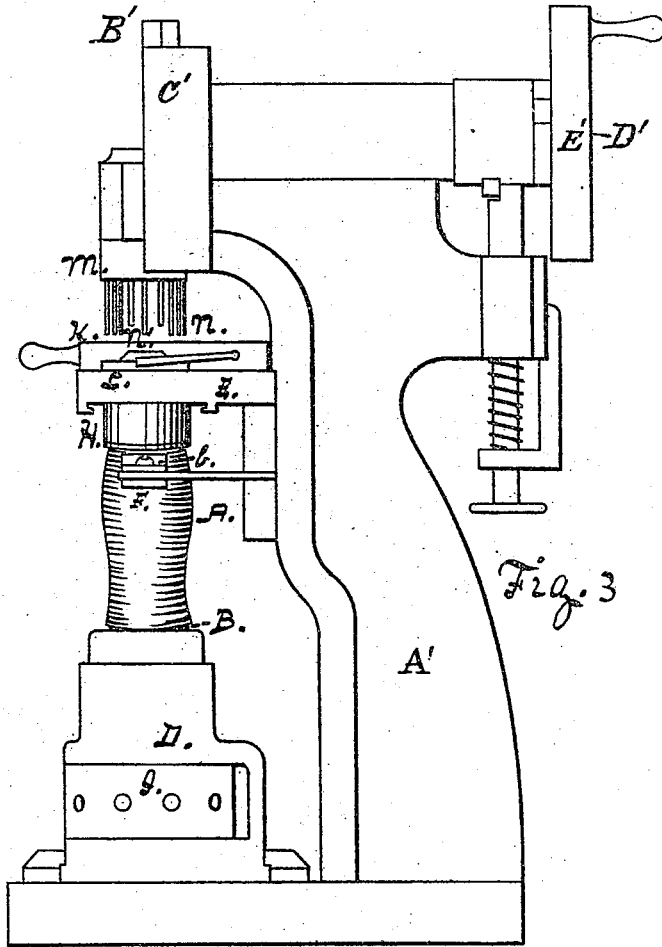


Fig. 3

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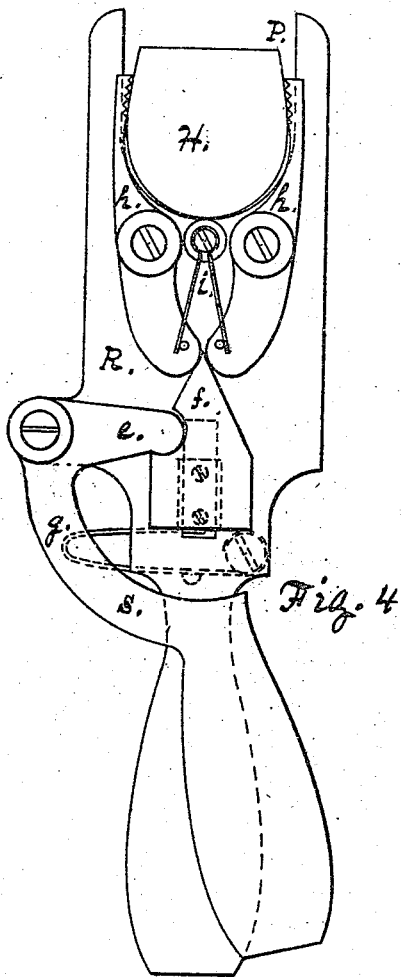


Fig. 4

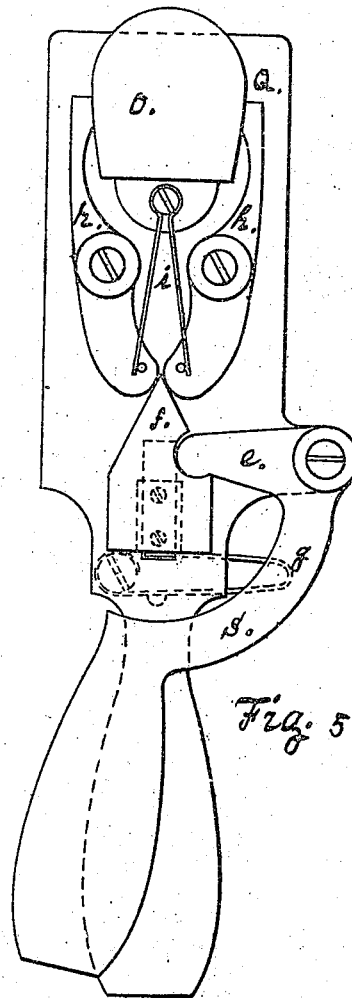


Fig. 5

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# UNITED STATES PATENT OFFICE.

PATRICK HOGAN AND DANIEL WHITLOCK, OF NEWARK, NEW JERSEY.

## IMPROVEMENT IN MACHINES FOR ATTACHING HEELS TO BOOTS AND SHOES.

Specification forming part of Letters Patent No. 206,237, dated July 23, 1878; application filed April 27, 1878.

To all whom it may concern:

Be it known that we, PATRICK HOGAN and DANIEL WHITLOCK, of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Machines for Attaching Heels to Boots and Shoes, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a front elevation. Fig. 2 is a plan of the bed or die and the loader. Fig. 3 is a side elevation. Figs. 4 and 5 are plan views of clamps for holding sections of the heel.

The object of our invention is to produce a machine for attaching heels to boots and shoes which shall be simple in construction, substantial, cheap, and rapid in action.

The machine is constructed with a stationary frame, A', having a vertical sliding head, B', and box C', driven by a crank-shaft, D', taking its motion from a fly-wheel, E', when thrown together by a clutch. Some other form of driving mechanism may answer the same purpose. At the base of this frame is fitted a sliding bed, D, having attached to it the nut I, which nut, fixed vertically, is made to contain and operate the screw-shaft C of a last-standard, B, the nut being designed to raise the shoe A up to the work.

Attached to the frame, above the sliding bed, is a stationary bed or die, E, up against which the shoe-heel is to be pressed when being nailed. This die is perforated with a double set of holes, a and a', to receive, guide, and support the nails, which will further be explained hereinafter.

To one side of the frame, above the die E, is jointed a swing-loader, K, having the adjustable spring-bottom L, and this loader and bottom have also holes exactly agreeing with those in the die; but the holes in the bottom and loader do not agree until called into use, as hereinafter stated.

To the sliding head B' is secured the plate m, in which is fixed the driving-rods n and n', directly over, and in numbers corresponding to, the holes in the die.

Figs. 4 and 5 show clamps, which are to be used in connecting sections of the heel with the shoe. The clamps are alike, except that

Fig. 4 has an open end, P, to receive a thick section of the heel, and Fig. 5 has the end Q closed to receive the thin section of a heel for blind-nailing. These clamps are made with the plate R, to which is hung the swing-lever S, used to open the clamp, which is effected by pressing the lever inward, when the arm e draws down the pointed slide f, which allows the jaws h, acted by the springs i, to open at the outer end for receiving a section of the heel, which, on releasing the lever, is held in position.

We will now explain the operation of attaching the heels.

The shoe A is placed on the last O' on the top of the last-shank B, and is slid under the die E, and rests against the adjustable stop K. Then a section, H, of the heel is put in the clamp, Fig. 5, and is slipped in under the die to its place on the top of the heel part of the shoe. The shoe is then raised by turning the nut I, and the heel is firmly clamped up under the die. The nails are now put in the holes a' in the loader K, the bottom L keeping them from falling through, and the loader is swung around over the die, when the bottom, striking the stop e, is pushed back, so that the holes in the loader and in the bottom agree, and the nails drop through into the holes in the die; then the loader is swung back, and motion is given to the machine, and the plate m is forced down, and the rods n, entering the holes in the die, where the nails are, force them down into the heel.

In some cases the loader may be dispensed with, and the nails be deposited directly in the die.

After the nails have been driven as above shown, the shoe is lowered a little, and a section, O, of the heel for blind-nailing is placed in clamp, Fig. 5, and slipped in on the top of the heel, when the shoe is again pressed up, and this section is forced down upon the top of the nails left up a little to engage it.

Sometimes it is necessary to attach heels in two regular sections, besides the section for blind-nailing, as in French heels; and for this purpose we construct our machine with two sets of holes, a and a', in the die and loader, and with two sets of driving-rods, n and n', the one set inside of the other. The

inside rods *n'* are made shorter than the outside ones, and in nailing the heel in sections, as just named, the nails are deposited in the outside set of holes, *a'*, and then, when the rods descend, these nails are driven. The shoe is then lowered, and the second section of the heel is put in place and fastened by nails driven through the inner holes. The blind-nailing piece is then attached as above shown, if required.

We do not claim, broadly, driving nails in a shoe-heel by means of rods working through holes in a die or bed, for that has been done substantially before; but we have elements of novelty not found in other patents that we know of, on which we base our claims for novelty, which features are set forth in the following claims:

I claim—

1. In a heel-nailing machine for boots and shoes, the combination of the die or bed E, having two sets of perforations, *a* and *a'*, and the driving-plate *m*, provided with two sets of rods, *n* and *n'*, of variable lengths, substantially as and for the purposes specified.

2. In combination with the bed E and driving-plate *m*, the adjustable swing-loader K, provided with the spring-bottom L, substantially as set forth.

3. In a boot and shoe heeling machine, the combination of the sliding bed D, and last-standard B, and adjustable stop F, and nailing loading mechanism, all arranged and operating substantially as and for the purpose specified.

4. In a boot and shoe heeling machine, the combination of the sliding bed D, the nut I, and screw-shaft C, all arranged substantially as set forth.

5. The adjustable clamp, having the plate R, either open or closed at the end for receiving the section of the heel, and having the lever S, arm *e*, slide *f*, jaws *h*, and springs *i*, combined and operating substantially as and for the purpose set forth.

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Witnesses:

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