

(No Model.)

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MACHINE FOR ATTACHING HEEL PLATES.

No. 381,604.

Patented Apr. 24, 1888.

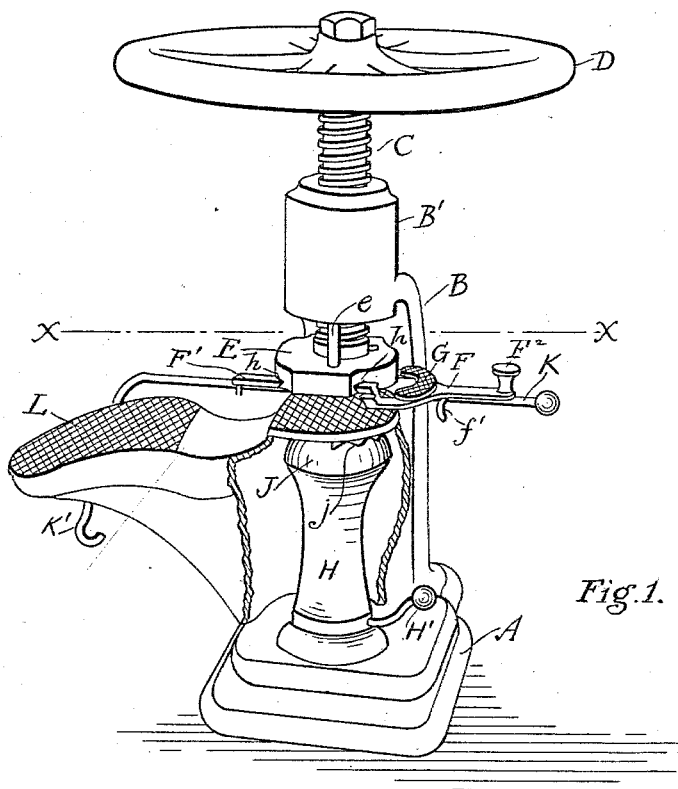
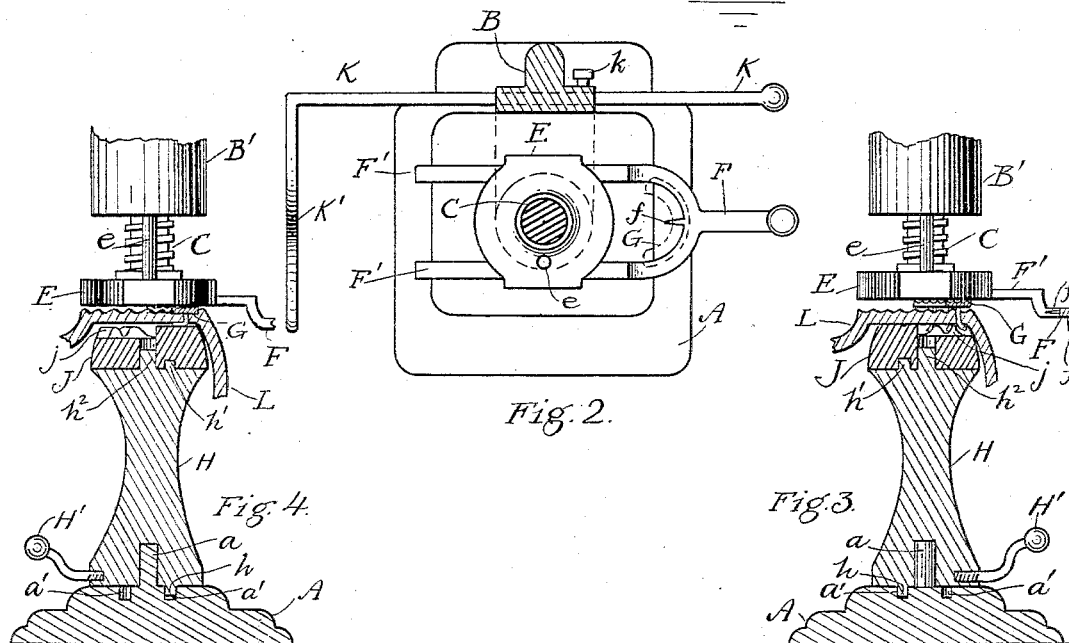


Fig. 1.



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# UNITED STATES PATENT OFFICE.

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## MACHINE FOR ATTACHING HEEL-PLATES.

SPECIFICATION forming part of Letters Patent No. 381,604, dated April 24, 1888.

Application filed January 2, 1888. Serial No. 259,536. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM J. ATWELL, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Machines for Attaching Plates to Rubber Shoes, of which the following is a description, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of my improved machine, showing a rubber shoe thereon in position to receive the heel-plate, a portion of the shoe being broken away to show the die beneath, and a heel-plate in position upon the plate-holder. Fig. 2 is a plan view of said machine in transverse section upon the line *x x*, Fig. 1. Fig. 3 is a central vertical sectional view of the lower portion of said machine as the same appears when in the act of bending the nails of the heel-plate, and Fig. 4 is a like view showing the die in a reverse position from that shown in Fig. 3, and in the act of clinching the nails upon the heel-plate.

Like letters of reference designate corresponding parts in the different figures.

My invention relates to machines for attaching metallic heel-plates to rubber shoes, and one object of said invention is to so attach a plate-holder to the movable head, or that portion by which the pressure is directly applied to the plate, that said plate may be "centered," and temporarily retained in the proper position with relation to the heel of the shoe, while a sufficient pressure is applied to insert the plate-prongs partially within the rubber, when the plate-holder may be withdrawn and the further operations of bending and clinching the nails or prongs completed, independently of said plate-holder.

A further object is to provide a rest or support for the toe of the shoe, which may be readily adjusted to shoes of varying size and length, so that the inside of the heel may rest flatly and firmly upon the die.

To this end my invention consists in the combination of elements hereinafter more particularly described, and definitely pointed out in the claims.

Referring to the drawings, A represents the base of my improved machine, from which is extended upwardly a support or standard, B,

Fig. 1, through the top B' of which is passed a screw, C, having a hand-wheel, D, attached to the top for rotating the same. The lower end of the screw C is swiveled into a metal head-block, E, which is prevented from rotating by means of a pin, *e*, rigidly attached thereto and passing loosely into a bore in the part B'. Preferably in the bottom of the head-block E are formed one or more, but, by preference, two, grooves or bores, *h h*, into which may be loosely inserted the prong or prongs F' of a heel-plate holder, F, which is bent in a horseshoe form, as shown, and provided with a projecting handle, F<sup>2</sup>, by which it may be slid back and forth in said head-block. Said prongs are bent downwardly at their juncture with the part F, so that said part which supports the heel-plate is sufficiently below the bottom of the head-block E to permit a heel-plate, G, to be placed loosely thereon, as shown in Fig. 1, and passed beneath the head block by sliding the prongs of said plate-holder in the grooves, as stated.

Upon the base A is loosely secured a standard, H, said standard having a socket, into which is inserted a pintle, *a*, Figs. 3 and 4, which forms a center of rotation for the standard. A stud, *h*, is adjusted to fall within one or another of two sockets, *a' a'*, and thus temporarily retain the standard in one of two positions with relation to its axis. A handle, H', serves to rotate said standard, which is shown in opposite positions in Figs. 3 and 4.

J represents a removable die loosely secured to the standard H in the same manner that the latter is attached to the base—viz., by means of pins *h' h'* projecting into suitable bores in the dies.

A rod, K, is loosely inserted in a horizontal position through a bore in the standard B, into which it is adjustably secured in any desired position by means of a set-screw, *k*, Fig. 2. The end K' of said rod is bent substantially at right angles to the main portion, so as to pass beneath and form a support for the toe of the rubber L, as clearly shown in Fig. 1.

The die J is provided with corrugations *j* upon one half of its face, while the other half is made plain.

In operating said machine the standard H is turned by means of a handle, H', so as to

place the corrugated portion of the die at the back of the heel, as shown in Figs. 1 and 3. The shoe is placed in position, as indicated, and the rod K adjusted to retain the heel flatly upon the die. A heel-plate is then placed in the holder F, as shown in Figs. 1 and 2, said plate being centered by means of a finger, *f*, Fig. 2, which projects between the depending prongs of the plate. The holder is then caused to slide forward until the downwardly-projecting stud *f'* rests against the back of the heel, thus gaging the position of the plate. The hand-wheel D is then turned until the prongs of the plate are sufficiently inserted within the rubber of the heel to temporarily retain said plate in position. The plate-holder F is then withdrawn, as in Fig. 3, when the screw is turned still farther, so as to cause the plate-prongs to pass through the heel and become bent upon the corrugations of the die J. The head-block E is then raised, the position of the die reversed by means of the handle H', when the flat portion of the die is brought into contact with the plate-prongs. Upon tightening the screw the operation is completed by clinching the prongs.

The advantages of said construction are that a single plate holder may be utilized for plates of varying size, in lieu of a separate holder for each plate, as has been heretofore required where the plates have been detached. Moreover, said sliding plate-holder, being accurately guided in the grooves of the head-block, enables each plate to be secured in the exact position required, which is impracticable where a detached plate holder is employed or where it is secured to any part of the machine other than the head-block, which serves to compress the plate. This feature is of considerable importance in that it always presents the plate

in the proper relative position to heels of varying thickness, which could not be satisfactorily accomplished were said plate-holder secured to any other part of the machine than the head-block.

I do not confine myself to the exact manner of securing the plate-holder by means of the two prongs and dovetailed grooves upon the bottom of the head-block, as it is obvious that it may be attached in various ways at the top, middle, or bottom with one or more prongs without varying from the essential features of my invention, which involve a combination of the adjustable plate-holder with the head-block.

The importance of the support K in helping to accurately secure the plate to the heel is also manifest.

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

1. In a machine for attaching heel-plates to rubber shoes, the combination, with the head-block E, having one or more grooves or bores, *h h*, of the adjustable heel-plate holder F, having one or more prongs, *F'*, constructed to slide and be held within the groove or grooves *h* of the head-block E, substantially as shown and described.

2. The combination, with a machine having a die and head-block for attaching heel-plates to rubber shoes, of the adjustable toe-support K, having bent part K', and means—as a set-screw—for securing the same in any desired position, substantially as shown and described.

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