

J. H. Belser, Shoe-Heel Machine.

N^o 51,254.

Patented Nov 28/1865.

Fig. 4.

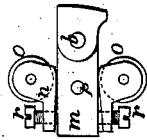


Fig. 3.

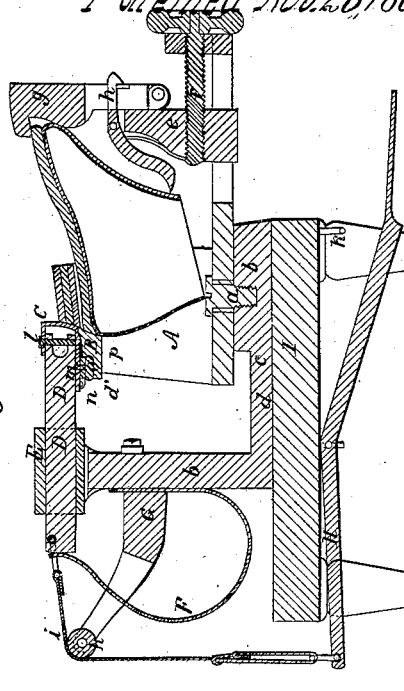


Fig. 1.

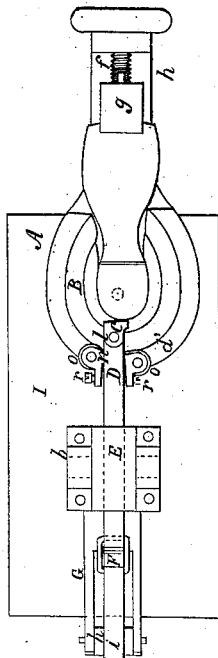
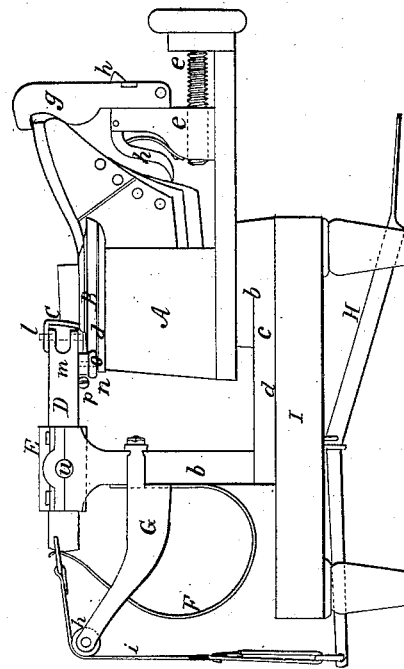


Fig. 2.



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JAMES H. BELSER, OF MARLBOROUGH, MASSACHUSETTS, ASSIGNOR TO
HIMSELF AND SIDNEY G. FAY, OF SAME PLACE.

IMPROVED MACHINE FOR SHAPING HEELS OF BOOTS AND SHOES.

Specification forming part of Letters Patent No. 51,254, dated November 28, 1865.

To all whom it may concern:

Be it known that I, JAMES H. BELSER, of Marlborough, in the county of Middlesex and State of Massachusetts, have invented an Improved Machine for Shaping the Heel of either a Boot or a Shoe; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, and Fig. 3 a longitudinal section, of it. Fig. 4 is a top view of the knife, its guiding-carriage, and its adjustment as separated from the rest of the machine.

In the said drawings, A denotes a rotary shoe-holder, which is supported by and so as to be capable of turning around horizontally on a pivot or pin, *a*, screwed into a step, *b*, projecting upward from the base *c*, of a standard, *d*. The said shoe-holder has applied to it a heel-socket plate, B, which is formed so as not only to embrace the curved part of the heel of a shoe, when such heel is placed within it, and so cover that part of the upper immediately contiguous to the heel as to protect it from injury from the heel-cutter, but has a pattern or knife-guide, *d'*, made upon it. This pattern is a curved abutment which is intended to guide the knife in forming the curved edge of the heel.

Besides the socket-plate the shoe-holder has a contrivance for supporting the shoe at its toe, the same being thus described: A standard, *e*, provided with an adjusting-screw, *f*, is so applied to the base of the holder as to be capable of being moved thereon either toward or away from the heel-support. To this standard a toe-clamp, *g*, is hinged at its lower end in order that such clamp may be turned from a vertical down into a horizontal position, or thereabout. A lever-catch, *h*, applied to the standard serves to latch the toe-clamp or hold it in a vertical position. The object of the toe-clamp and its latch so applied to the adjustable standard is to facilitate the application of the shoe to and its removal from the holder, as they save the necessity of moving the standard by the screw after it has been adjusted for any particular size of shoe.

The pin *a* is arranged a little eccentric with respect to the opening of the heel-rest, the

same being to force the knife backward, more or less, while it may be in action on the heel, and thus increase the pressure of the spring which keeps the knife well up to the pattern.

The knife is shown at C as applied to one end of a slider, D, which is supported by and so as to be capable of sliding through a rocker-tube, E. The said tube B, like a cannon, is provided with two trunnions, *u*, duly supported within the standard *b*, the same being so as to enable the tube to be turned in a vertical plane, (passing longitudinally through the slider D,) in order to adopt the knife-carrier to patterns of different sizes.

A spring, F, fixed to the standard *b*, acts against the outer end of the slider, so as to advance such slider and force the wheels of its carriage into contact with the heel-platform. A bifurcated arm, G, extending from the standard *b*, carries a roller, *h*, a strap, *i*, connected with the rear end of the slider D, being carried over such roller and down to the end of a lever, H, to which it is also connected. The said lever H is arranged underneath the table I, on which the base *c* is fastened. A catch, *k*, to hold the lever in position when the slider is at the extreme of its rearward movement, is fixed on the table I.

The knife C, formed as shown in the drawings, turns horizontally on a pin, *l*, extending through the slider D. An arm, *m*, projects backward from the lower part of the knife and into a recess made transversely across a carriage, *n*, which has two rollers, *o o*, to rest against the pattern. Furthermore, the arm *m* is connected to the carriage by an upright pin, *p*, on which the arm freely turns. The carriage is provided with adjusting-screws *r r*, arranged with respect to the arm as shown in the drawings. By means of the arm, the carriage, and the adjusting-screws, the proper angular position of the knife with respect to the heel to be cut may be attained in order that the knife in going around the heel may make a cut in parallelism with the pattern. Were it not for the said means of adjusting the knife relatively to the heel, such knife, by the action of the heel against the rear portion of the front part of it, would be liable to be deflected from its proper course while in the act of shaping a heel.

In the operation of the above-described heel-shaping machine, a shoe having a last within it is to be secured within the shoe-holder, after which the latter is to be turned about so as to carry the shoe into the desired position for the knife to commence the cut of the heel. Next, the knife is to be advanced upon the heel so as to cause the periphery of the wheels of the carriage of the knife to rest against the pattern, all of which having been accomplished the shoe-holder should be turned about, so as to cause the knife to cut through the heel and impart to it the required shape of the curved part of its outer edge.

I do not claim as my invention, a shoe-holder and a knife so arranged and applied or combined together that by rotating the knife against a pattern held by the shoe-holder, or by rotating such shoe-holder and the pattern, the knife shall be guided and caused to reduce a heel of the shoe supported by the holder.

I claim as my invention the following, viz:

1. The combination of the toe-clamp *g*, and its latch *h*, with the standard *e*, provided with an adjusting-screw and applied to the base of the holder, as described.

2. The combination and arrangement of the carriage *n*, and its adjustments with the knife *C*, the same being affixed to such carriage in manner and for the purpose substantially as described.

3. The combination and arrangement of the rocker-tube *E*, with the slider *D*, its supporting standard *b*, the knife *C*, and the shoe-holder, as described.

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Witnesses:

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