

(No Model.)

E. S. HARRIS.

MACHINE FOR TRIMMING THE LIPS OF CHANNELED BOOT OR SHOE SOLES.

No. 343,452.

Patented June 8, 1886.

Fig. 1.

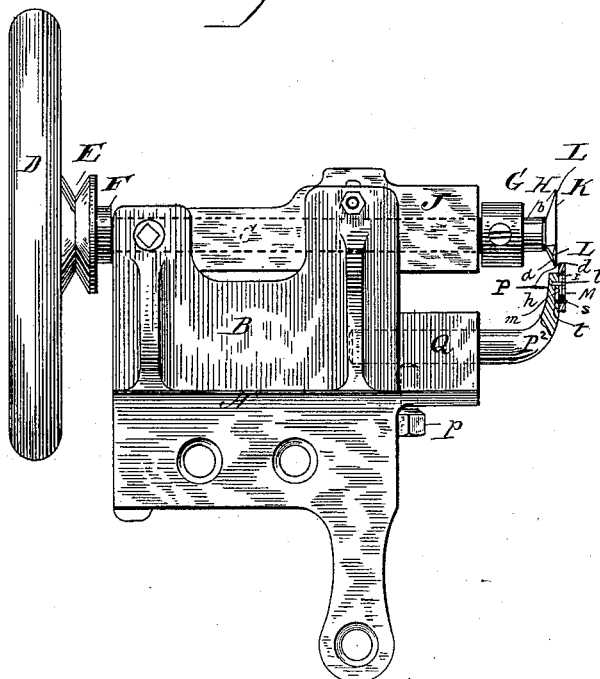


Fig. 2.

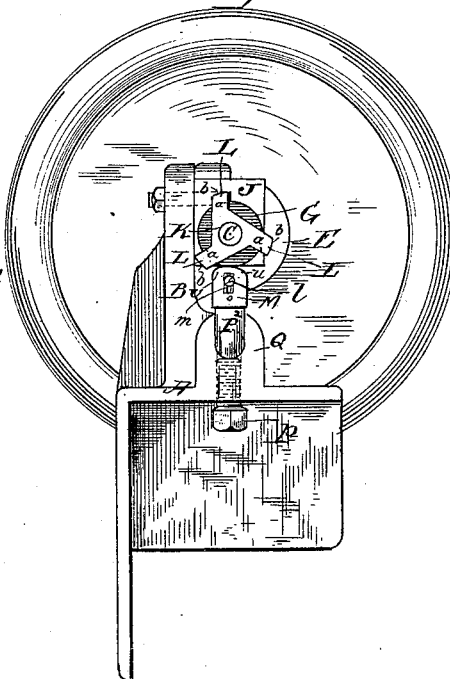


Fig. 3.

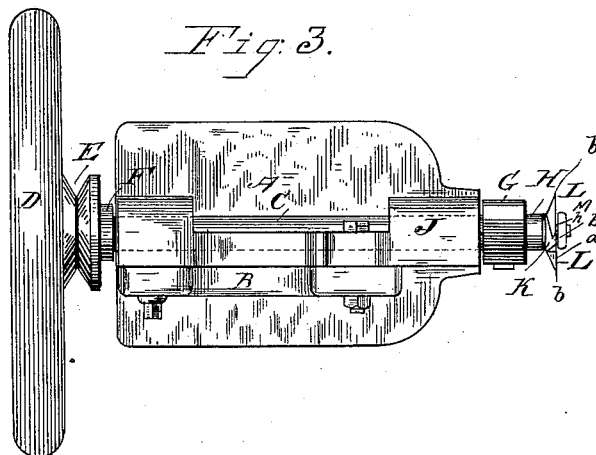
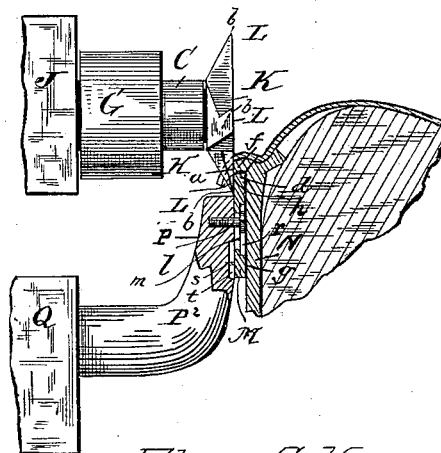


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

ELMER S. HARRIS, OF HAVERHILL, MASSACHUSETTS.

MACHINE FOR TRIMMING THE LIPS OF CHanneled BOOT OR SHOE SOLES.

SPECIFICATION forming part of Letters Patent No. 343,452, dated June 8, 1886.

Application filed September 30, 1885. Serial No. 178,658. (No model.)

To all whom it may concern:

Be it known that I, ELMER S. HARRIS, of Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Trimming the Lips of Channeled Boot or Shoe Soles, of which the following is a full, clear, and exact description.

In the manufacture of boots and shoes, as in some cases practiced, the soles are first grooved or channeled, and then a lip or flap of the groove or channel is turned upward or outward, and the upper or the upper and a welt, as the case may be, secured to the so-turned-up lip or flap by stitches or otherwise, after which the lip and the upper or the upper and the welt, as the case may be, so stitched to it, and outside of the line of stitches, are trimmed off, and the manufacture of the boots or shoes completed, all as well known.

This invention relates to improvements in machines especially designed for so trimming off the turned-up lip of the sole; and the invention, in substance, consists in the combination, with a rotating knife or cutter, of a rest for said lip of the sole, which is arranged for the rotating knife in its rotation to pass by and to secure, in connection with the inner edge thereof, a cutting and trimming of said lip at and along said inner edge of said rest, the lip being properly presented therefor from time to time as the knife rotates, all substantially as hereinafter described.

In the accompanying drawings, forming a part of this specification, a machine of this invention is illustrated.

Figure 1 is a side elevation. Fig. 2 is an end elevation. Fig. 3 is a plan view. Fig. 4 is an enlarged view in detail, illustrating the presentation and trimming of the lip to a sole, as the same is practiced with the machine illustrated in the preceding figures.

In the drawings, A represents the bed-plate, and B the supporting frame-work, of the machine, all of suitable construction. C is a horizontal shaft turning in suitable bearings of frame-work B, and provided with a balance-wheel, D, and grooved pulley-wheel E, by which to drive it. This shaft C is held against longitudinal movement in its bearings

by collars F and G, suitably attached at opposite ends thereof, and its end H projects beyond the bearing-head J of the frame-work B, and is provided with a knife or cutter-head, K, made with a series of blades, L, each having a cutting-edge, *a*, more or less radial with the axis of rotation of the shaft C, and a cutting-edge, *b*, at the outer end at equal distances, or substantially so, from said axis of rotation, and extending more or less at right angles to the radial cutting-edge *a*, and in a direction forward therefrom relative to the direction of travel of the blades L from the rotation of the shaft C, to which they are secured.

The knives L, as shown, are all in one piece with the head K; but obviously they may be made separate from and attached to the head. M is a block or plate, for the rest upon its upper end, *d*, of the lip *f* of the sole N to be trimmed, and for the abutment of the flat face of the sole against its outer vertical face, *g*. This rest-block M is arranged—as, for instance, as shown in Figs. 1, 3, and 4—so that the radial cutting-edge *a* of the knives L in the rotation of the knives will pass inside of and below the inside edge, *h*, of the upper and resting end, *d*, of the block, for the lip of the sole, thus securing, with the lip of the sole at rest upon and lapping over and beyond said inside edge, *h*, of the rest-block M and into the vertical plane of rotation of the cutting-edges *a b* of the knives K, a trimming of said lip in line with said inside edge of the rest-block M, it being of course understood that the lip as it is being trimmed is properly moved and presented on the rest-block to the action of the knives, as above stated.

The front vertical face, *g*, of the rest-block M, in the operation of trimming the lip *f* of the sole, as above described, makes an abutment for the flat face of the sole being so trimmed, and thus limits the extent to which said sole-lip *f* can be projected beyond the plane of action of the rotating cutting-knives.

In order that the rest-block M for the lip and for the flat face of the sole may be adjusted vertically and horizontally, as desired, in relation to the plane of rotation of the trimming-knives, the attachment of the rest-block

M to its carrier P, for its vertical adjustment, is by a headed set-screw, *l*, passing through a vertical slot, *m*, in the block, and screwing into the carrier, and the carrier by its horizontal arm P² is arranged to be moved horizontally in a support, Q, therefor of the bed-plate, and to be secured against movement by a set-screw, *p*, screwing into said support and abutting against said arm P².

10 The rest-block M has a vertical recess, *r*, to receive the head of the set-screw *l*, fastening it to its carrier, all so as to leave the flat vertical face *g* unobstructed for the rest of the flat face of the sole when the lip of the sole

15 is being presented to the cutting-knives for being trimmed. Again, the rest-block M has a pin, S, entering a vertical groove, *t*, of the carrier for said block, for insuring the hold of said block against turning when vertically

20 adjusted and fastened by set screw *l*.

The upper end of the rest-block M and the rest proper for the lip of the sole is made rounding from side *u* to side *v*, as shown in Fig. 2, which allows the sole to be rocked or

25 rolled as its lip is being trimmed.

The rest-block M, although herein described as made separate from and attached to the holder-arm P, may, if desired, be made in one piece with said holder P; but made separate

30 and capable of an adjustment thereon in a manner substantially as described, is preferable, for reasons that are obvious.

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

1. In combination, a rotating knife and a stationary block or plate, M, having a rest, *d*, and the edge *h* of said rest arranged for the knife in rotation to pass at one side of and below it, substantially as described, for the purpose specified.

2. In combination, a rotating knife and a stationary block or plate, M, having a rest, *d*, and the edge *h* of said rest arranged for the knife in rotation to pass at one side of and below it, and also an abutment or rest, *g*, substantially as described, for the purpose specified.

3. In combination, a rotating knife and a stationary block or plate, M, having a rest, *d*, curved or rounded from side to side, and its edge *h* arranged for the knife in rotation to pass at one side of and below it, substantially as described, for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ELMER S. HARRIS.

Witnesses:

WM. S. BELLOWS,

ALBERT W. BROWN.