(No Model.)

R. NAGLE.

BLACKING MACHINE.

No. 454,755. Patented June 23, 1891.

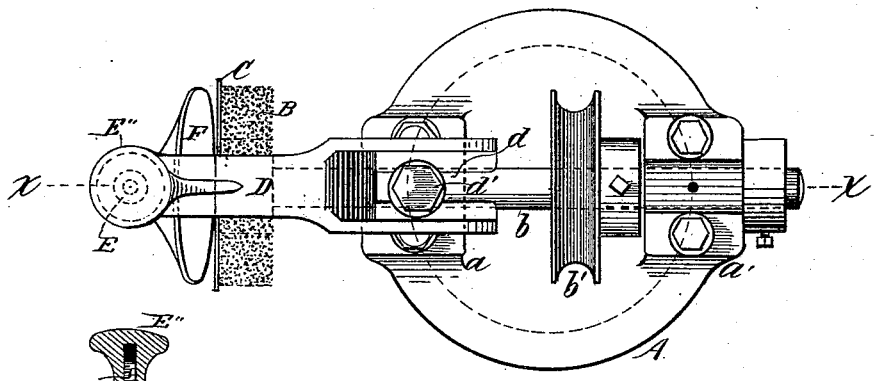

Fig. 1.

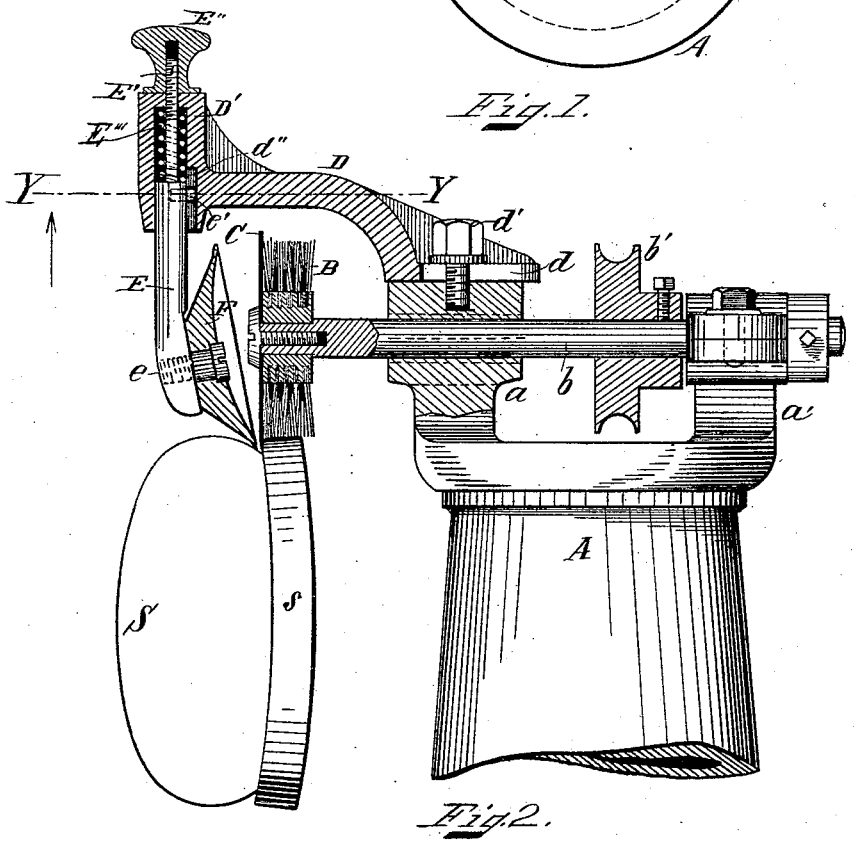

Fig. 2.

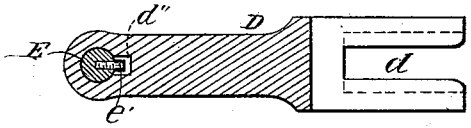

Fig. 3.

Witnesses.
Alice A. Perkins.
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UNITED STATES PATENT OFFICE.

RICHARD NAGLE, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE EDGE AND HEEL BLACKING MACHINE COMPANY, OF SAME PLACE.

BLACKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 454,755, dated June 23, 1891.

Application filed October 27, 1890. Serial No. 369,433. (No model.)

To all whom it may concern:

Be it known that I, RICHARD NAGLE, a citizen of the United States, and a resident of Lynn, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Blacking-Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in heel and sole blacking machines, and it is carried out as follows, reference being had to the accompanying drawings, wherein—

Figure 1 represents a plan view of the improved machine. Fig. 2 represents a central longitudinal section on the line X X, shown in Fig. 1; and Fig. 3 represents a horizontal section on the line Y Y, shown in Fig. 2.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In the drawings, A is a suitable head or standard provided with bearings *a a'*, in which is journaled the brush-shaft *b*, which is set in a rotary motion by means of belt-power applied to its pulley *b'*. To the forward end of the shaft *b* is secured, in a suitable manner, the circular brush B, as is common in machines of this kind. Outside of the brush B and in close proximity to it is arranged the circular rand-guide and upper-guard C, which is preferably secured to the shaft *b;* but this is not essential, as said disk C may be journaled on the said shaft, if so desired, without departing from the essence of my invention. The said disk C by projecting beyond the periphery of the brush B serves as a rand-guide for properly guiding the sole or heel edge of the shoe to the blacking-brush, and it also serves partially as a guard for preventing the upper from being blacked during the operation of blacking the heel or sole edges.

In Fig. 2, S represents the upper of a boot or shoe, and *s* represents its sole, as usual. The brush B is to be charged with blacking, in any of the well-known manners, either from a disk or brush partially submerged in a blacking-containing tank or from an endless band, or in any other suitable or convenient manner, without departing from the essence of my invention, and as such charging of the brush with blacking does not form the subject-matter of my invention it is not represented in the drawings.

In machines of this kind it is very essential that the blacking should be prevented from reaching and defacing the upper, and the disk C on the brush or brush-shaft generally employed for this purpose has not been found sufficient for such purpose, and I have therefore added an auxiliary upper-protector, which is constructed and arranged as follows: To the bearing *a* or other stationary part of the machine is secured a bracket D, which is preferably made adjustable in the direction of the axis of the shaft *b*. Such adjustment may be made in any suitable manner. In the drawings I have shown the foot of the bracket D, provided with a slot or recess *d*, through which passes a set-screw *d'*, which is secured in the top of the bearing *a* or other stationary part of the machine to which the bracket D is secured.

The bracket D has a preferably-vertical sleeve D' in its outer end, in which is longitudinally adjustable the spindle E, which for this purpose has a reduced screw-threaded portion E' projecting through a perforation in the upper end of the sleeve D' and made adjustable by means of a thumb-nut E'', as shown in Figs. 1 and 2.

E''' is a coiled spring surrounding the reduced portion E' between the upper end of the sleeve D' and a shoulder or offset on the spindle E, as shown in Fig. 2.

To the lower end of the spindle E is loosely journaled at *e* the auxiliary upper protector or guard F, as shown in Figs. 1 and 2. This protector or guard is preferably made in the shape of a conical disk having its axis slightly inclined toward the horizontal, as shown in Fig. 2; but, although this is preferable, it is not essential, and it may be of any other shape without departing from the essence of my invention.

The protector F is located at the outer side of the disk C, composing the rand-guide and upper-guard, and its lowermost edge is in juxtaposition to the lowermost edge of the disk C, whereby such protector F fulfills the

conditions required for an auxiliary or supplemental guard for pressing the boot or shoe upper away from the disk, and thereby effectually protecting the upper from liability of being defaced by blacking from the rotary brush B. In this respect my auxiliary protector differs materially from a sole-bottom guard arranged at the inside of a rotary brush, as in Patent No. 439,018.

I prefer to make the upper-protector F in the form of a loosely-rotating disk, as described; but it may be made non-rotatory, if so desired, without departing from the essence of my invention. By adjusting the bracket D in the direction of the axis of the shaft *b* the disk F may be placed at any desired distance from the rand-guard C, and by adjusting the disk F in the direction of its spindle E said disk F may be placed with its lower edge in such a position relative to the rand-guard C as to crowd the upper of the boot or shoe away from the said rand-guard C, and thus effectually preventing the blacking from the brush B from reaching the shoe-upper.

d'' is a vertical groove or recess on the interior of the sleeve D', in which is guided a pin or projection *e'* on the spindle E for the purpose of preventing the latter from turning around; but as it is essential that the disk F should be free to adjust itself to the variations in the curvature of the sole or heel where it joins the upper I make the groove *d''* a little wider than the pin or projection *e'*, so as to permit the spindle E and its pivoted disk F to oscillate slightly for the purpose of allowing said disk to be freely adjustable relative to such curvature of the sole or heel at the junction with the upper.

In using the machine the blacking-charged brush B is set in a rotary motion, as described. The operator takes the boot or shoe and guides the sole or heel edge to the action of the brush by placing the rand-guide C at the junction of the upper and the heel or sole, with the lower edge of the auxiliary upper guard or disk F pressing the upper away from the rand-guide C, by which the desired object is attained—namely, blacking the sole or heel edge without defacing or smutting the upper of the boot or shoe.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. The combination, in a sole or heel edge blacking machine, of a standard, a rotary brush-shaft journaled on the latter and provided with a blacking-brush, a rand-guide and upper-guard arranged beside and projecting past the periphery of the brush, an overhanging slotted bracket adjustable on the standard in the direction of the axis of the brush-shaft and having at its outer end a sleeve, a spindle arranged in the sleeve and having an attached screw-threaded stem projecting above the sleeve, a screw-nut engaging the screw-stem, a spring acting to press the spindle downward, but permitting it to yield upward at all times, and an auxiliary upper-protector carried by the spindle and having its lowermost edge arranged outside of and in juxtaposition to the lowermost edge of the rand-guide and upper-guard, substantially as described.

2. In a sole or heel edge blacking machine, the combination, with a head or standard, a rotary brush-shaft carrying a blacking-brush, and a rand-guide and upper-guard projecting past the periphery of the brush, of an adjustable bracket on the head or standard, and a vertically spring-yielding and axially-oscillating spindle supported by the bracket and provided with a protector having its lowermost edge arranged in juxtaposition to the lowermost edge of the rand-guide and upper-guard for pressing the shoe-upper away from the latter, and thereby preventing blacking from the rotary brush defacing the upper, substantially as described.

3. In a sole or heel edge blacking machine, the combination, with a rotary blacking-brush, and a rand-guide and upper-guard projecting past the periphery of the brush, of an axially-oscillating and vertically spring-yielding spindle carrying a rotating protector which has its lowermost edge arranged in juxtaposition to the rand-guide and upper-guard for pressing the shoe-upper away from the latter, and thereby preventing blacking from the rotary brush defacing such upper, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 2d day of August, A. D. 1890.

RICHARD NAGLE.

Witnesses:
ALBAN ANDRÉN,
NELLIE B. DUGAN.