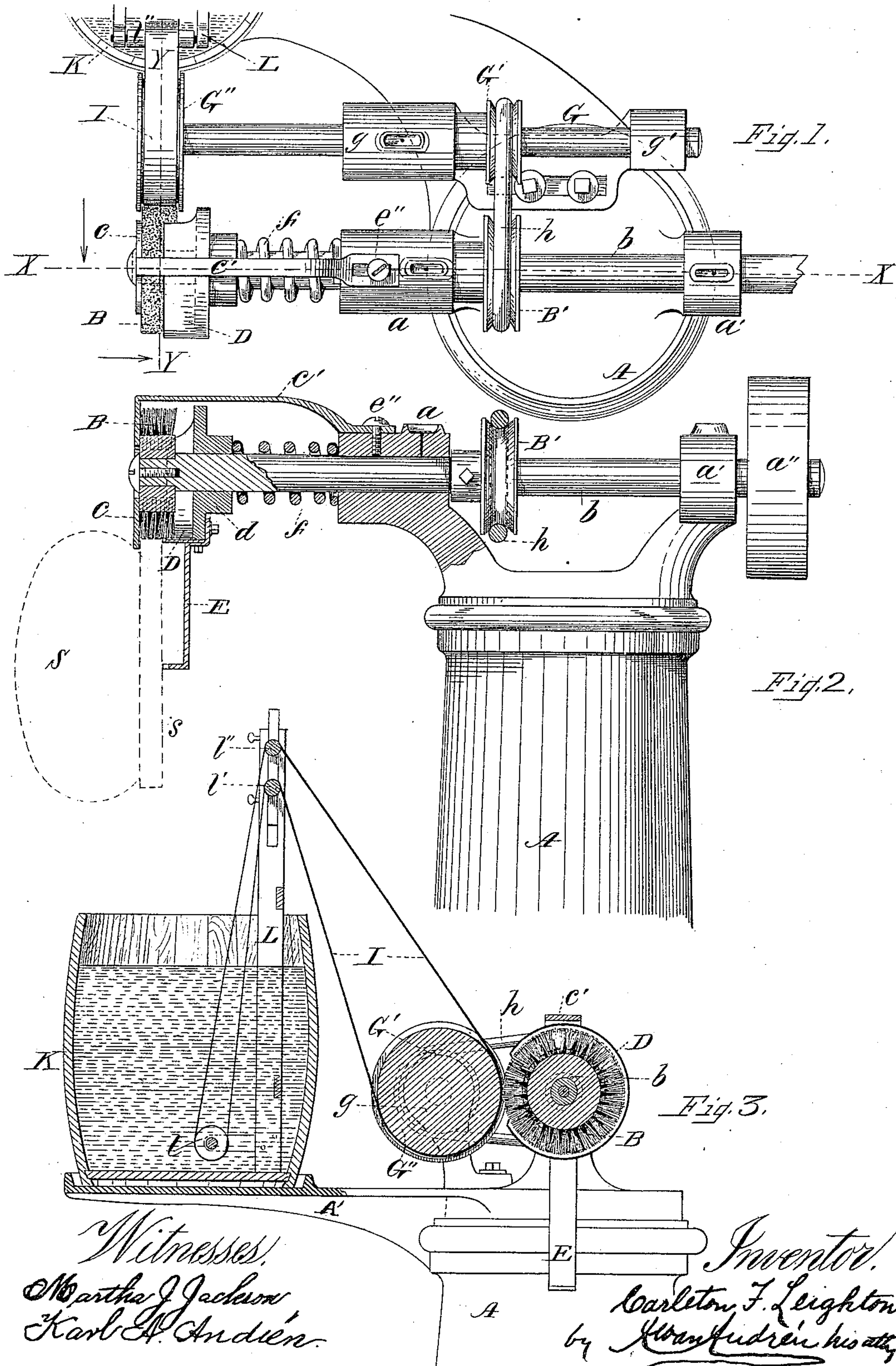


(No Model.)

C. F. LEIGHTON.  
HEEL AND SOLE EDGE BLACKING MACHINE.

No. 439,018.

Patented Oct. 21, 1890.





# UNITED STATES PATENT OFFICE.

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EDGE AND HEEL BLACKING MACHINE COMPANY, OF PORTLAND, MAINE.

## HEEL AND SOLE EDGE BLACKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 439,018, dated October 21, 1890.

Application filed December 5, 1889. Serial No. 332,677. (No model.)

*To all whom it may concern:*

Be it known that I, CARLETON F. LEIGHTON, a citizen of the United States, and a resident of Beverly, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Heel and Sole Edge Blacking Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention has for its object to provide a novel machine for blacking the heels and the sole-edges of boots and shoes, to provide novel means for more effectually preventing the liquid blacking from spreading onto the uppers, to provide novel means for preventing the under sides or bottoms of the heels and soles from being blacked, and to provide novel means for supplying the blacking to the rotary brush.

To accomplish all these objects my invention involves the features of construction, the combination or arrangement of devices, and the principles of operation hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 represents a plan view of the improved machine. Fig. 2 represents a longitudinal section on the line X X in Fig. 1, parts being shown in elevation; and Fig. 3 represents a cross-section on the line Y Y, also shown in Fig. 1.

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 rotary motion by means of belt-power applied to its pulley  $a''$ . To the forward end of the shaft  $b$  is secured in a suitable manner the circular brush B, as shown in the drawings. Outside of said brush is arranged the stationary rand-guide and upper guard  $c$ , preferably provided with an arm or extension  $c'$ , that is secured by means of a screw  $e''$ , or in any other suitable manner, to the bearing  $a$  or other stationary part of the machine. The stationary plate  $c$ , by projecting at its lower edge beyond the periphery of the brush, serves as a rand-guide for properly guiding the sole or heel edge of the shoe to the black-

ing-brush B, and also serves as a guard to prevent the upper from being blacked during the operation of blacking the heel or sole edges.

By having the rand-guide and upper guard  $c$  held stationary, as shown, the upper S of the boot or shoe is prevented from being chafed or injured during the blacking operation, and it will prevent the liquid blacking on the rotary brush from spreading onto the upper more effectually than other devices of this kind, in which the rand-guide is made to rotate with the blacking-brush.

On the shaft  $b$ , between the bearing  $a$  and the brush B, is loosely journaled the hub  $d$ , provided with a brush cover or shield D, surrounding a portion of the brush B, for the purpose of preventing the under side of the heel or sole from being blacked. To said hub or its shield is secured in a suitable manner the bottom guard E, which is held against the under side of the shoe or heel  $s$  by the influence of a spring  $f$ , interposed between the yielding hub  $d$  and the bearing  $a$  or any other stationary part of the machine.

Instead of a bristle brush, as shown in the drawings, a circular disk of felt or other suitable material may be used without departing from the essence of my invention.

For the purpose of automatically charging the brush B with liquid blacking I use the following mechanism: To the head or standard A are secured in an adjustable manner the bearings  $g g'$ , in which is journaled the shaft G, which is set in a rotary motion preferably by means of a belt or cord  $h$ , passing around pulleys B' and G' on the respective shafts  $b$  and G, as shown in the drawings. To the forward end of the shaft G is secured the pulley G'', which latter carries the ink-ribbon I, by means of which the liquid blacking is conveyed to the brush B from the tub or receptacle K containing the liquid blacking, as shown in Fig. 3. The tub K is made to rest preferably on a bracket A', forming an extension of the head or standard A, as shown. Within the tub or receptacle K is secured in a suitable manner the post or frame L, having journaled at its lower end the loose guide-roller  $l$ , as shown in Fig. 3.  $l'$  and  $l''$  are vertically-adjustable tension and guide roll-



ers, on which the endless ink-ribbon I is guided from the roller *l* to the pulley *G''*, as shown in said Fig. 3. Thus it will be seen that as the pulley *G''* is rotated it causes the  
 5 endless ribbon I, charged with the liquid blacking, to be brought in contact with the rotary brush B, by which means the latter is automatically charged with a proper supply of blacking. As the brush B wears off, the  
 10 bearings *g g'* may be adjusted so as to bring the ribbon carried by the pulley *G''* in contact with said brush.

In using the machine the shafts *b* and *G* are set in rotary motions, as described, by  
 15 which the brush B is rotated and an endless rotary motion imparted to the ink-ribbon I. The operator takes the boot or shoe and guides the sole or heeled edge to the action of the brush B by placing the rand-guide *c* at the junction  
 20 of the upper and the heel or sole, with the under side of the latter resting against the longitudinally-yielding bottom guard E, and by presenting the edge of the sole or heel to the action of the rotary blacking-brush, as  
 25 above described, it is blacked without smutting the upper or under side of the sole or heel.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent, and claim—  
 30 1. In a heel and sole edge blacking machine, the combination, with a rotary brush for applying the blacking and means for supplying the blacking to the brush, of a laterally-yielding shield for shielding the brush to  
 35 prevent the under sides of the heel and sole being blacked and a rand-guide and upper-guard located beside the brush and projecting beyond the periphery thereof to prevent the upper being blacked, substantially as de-  
 40 scribed.

2. In a heel and sole edge blacking machine, the combination, with a rotary shaft carrying a brush for applying the blacking and means for supplying the blacking to the brush, of a  
 45 hub loose on the shaft, a spring pressing the hub toward the brush, a shield secured to and moving with the hub and shielding the brush to prevent the under sides of the heel and sole being blacked, and a rand-guide and upper-guard serving to prevent the upper being  
 50 blacked, substantially as described.

3. In a heel and sole blacking machine, the combination, with a rotary brush for applying the blacking and means for supplying the blacking to the brush, of a spring-pressed  
 55 shield extending around the periphery of the brush, a bottom-guard moving with the shield and adapted to rest against the bottoms of the heel and sole, and a rand-guide and upper-guard serving to prevent the upper being  
 60 blacked, substantially as described.

4. In a heel and sole edge blacking machine, the combination of a rotary brush for applying the blacking to the heel and sole edge, an  
 65 endless traveling ribbon moving in superficial contact with the periphery of the brush, a receptacle for the blacking, and a rand-guide and upper-guard arranged beside the brush and serving to prevent the upper being  
 70 blacked, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 27th day of November, A. D. 1889.

CARLETON F. LEIGHTON.

Witnesses:

ALBAN ANDRÉN,  
 KARL A. ANDRÉN.