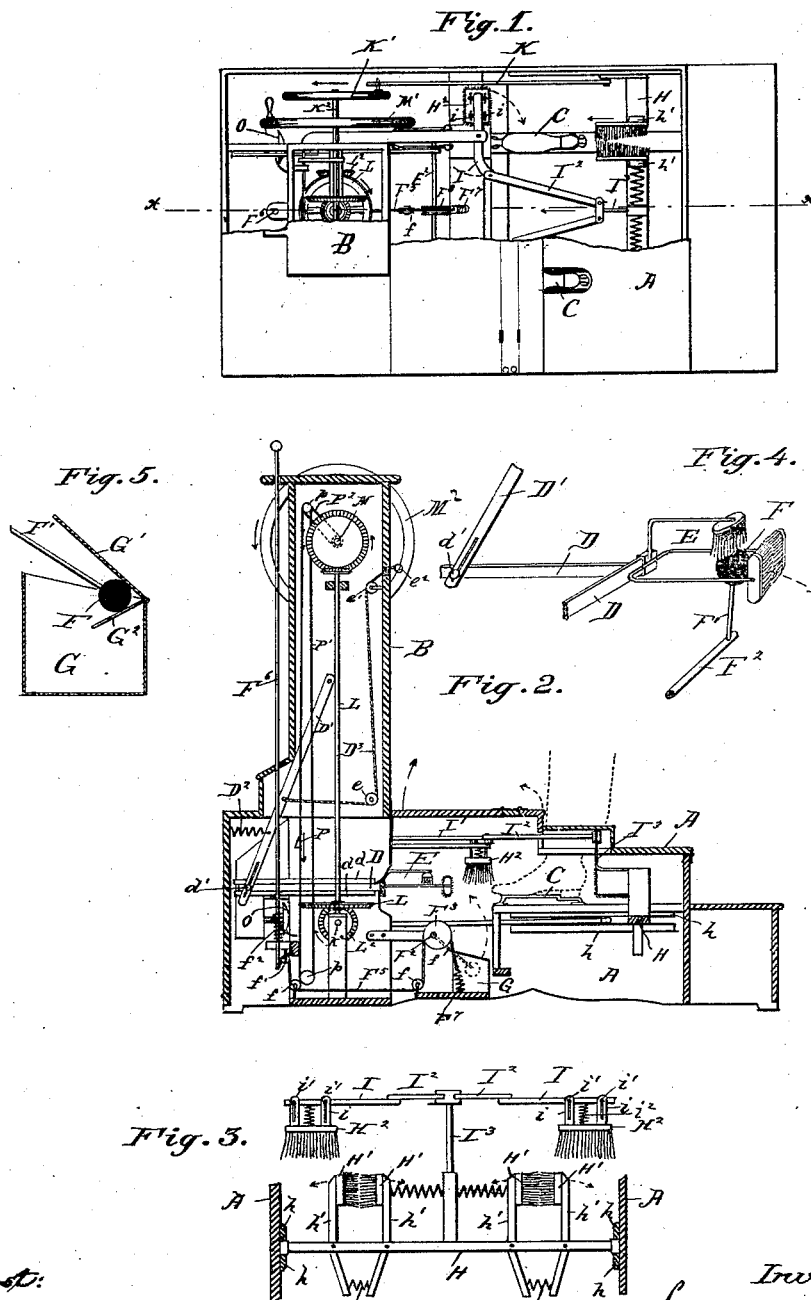


(No Model.)

L. GUZMAN.  
BOOT OR SHOE BLACKING MACHINE.

No. 303,637.

Patented Aug. 19, 1884.



Attest:

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# UNITED STATES PATENT OFFICE.

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## BOOT OR SHOE BLACKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 303,637, dated August 19, 1884.

Application filed June 14, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, LEOPOLDO GUZMAN, a citizen of San Salvador, Central America, and a resident of the city, county, and State of New York, have invented a new and useful Improvement in Shoe-Blacking Machines, of which the following is a specification.

My invention relates to an improved shoe-blackening machine, and has for its object to furnish a device whereby the blacking may be applied and the shoe polished by mechanism operated by any convenient motive power, either steam, water, or hand.

It consists, as hereinafter described, in mounting two sets of brushes of special construction, so that they may be made to move independently and with a reciprocating motion over and past a foot-rest, the one set adapted to apply the blacking material to a shoe placed upon the foot-rest, and the other set adapted and adjusted to polish the shoe after the blacking is applied.

It further consists in mounting an oscillating ball in such manner as to supply the blacking material from a fixed reservoir to the brushes for applying the same to the shoe.

In the accompanying drawings, Figure 1 is a plan view of my improved blacking-machine, with a part of the cover broken away. Fig. 2 is a vertical section through the machine on line *x x* of Fig. 1. Fig. 3 is a detached view of the polishing-brushes and their carrying-frame. Fig. 4 is a detached view, in perspective, of the blacking-brushes and the ball for applying the blacking to the same; and Fig. 5 is a sectional view of the reservoir, showing the movement of the blacking-ball to open or close the same.

In the drawings I have shown a blacking-machine as adapted to be operated by hand-power, and its construction and operation are as follows:

A is a frame or case to inclose the working parts, and B is an additional case projecting vertically therefrom at its rear end to support and surround the driving mechanism.

Within the case A, and near its forward end, are mounted one or more foot-rests, C, preferably two in number, as shown.

A frame, D, one-half of which is shown in Fig. 4, is mounted between guides *d d* upon the downwardly-projecting sides of the auxil-

iary case B, to allow its movement in a direction parallel with and to and from the foot-rests C, and this motion is derived from a lever, D', one end of which is pivoted within and to the side of the case B, its opposite end being attached to the frame D by a pin, *d'*, fixed therein, working through a longitudinal slot in the end of the lever. The lever D' is itself operated in one direction by a flexible cord, D<sup>3</sup>, attached thereto and led forward around a pulley, *e*, up around a second pulley, *e'*, and out through the case to terminate in a knob or handle, *e''*. The reverse movement of the lever is caused by a spiral spring, D<sup>2</sup>, attached at one end to the lever, and at the other to the rear end of the case A.

Upon the front end of the frame D and in line with the foot-rests C, are mounted the blacking-brushes E, one set for each foot-rest. These brushes, three in each set, are mounted, as shown in Fig. 4, by means of flexible rods attached to the frame D, two of the brushes being mounted with their bristles projecting sidewise, the one toward the other, in position to rub upon the sides of the shoe, and the other is mounted a little to the rear and with its bristles projecting downward to apply their ends to the top of the shoe. A forward movement of the frame D, by means of its operating-lever D' and actuating-cord D<sup>3</sup>, will cause the brushes E to move forward over and on either side of a shoe placed upon the foot-rest C. The blacking is applied to these brushes by means of a ball, F, mounted upon a swinging arm, F', attached to a rotating shaft, F<sup>2</sup>, so that as the shaft is rotated the ball will be raised up out of a fixed reservoir, G, attached to a cross-piece within the frame A, and will be made to pass between and against the brushes E, as shown in Fig. 4. To cause this movement of the blacking-ball a pulley, F<sup>3</sup>, is mounted upon the shaft F<sup>2</sup>, and in a groove thereon is secured a flexible cord, F<sup>5</sup>, leading therefrom in one direction around two pulleys, *f*, secured to cross-pieces in the frame A, and up around a third pulley, *f'*, and attached to the lower end of a spring-actuated rod, F<sup>6</sup>, working vertically through the case A, the upper end of the rod being fitted with a knob or handle in position to be conveniently pressed by the operator. A spring, *f''*, placed upon the body of the rod F<sup>6</sup>, is made to give it a re-

verse movement. The other end of the cord  $F^5$  is attached by means of a spring,  $F^7$ , to a cross-piece in the case A, and is adapted to give to the ball its reverse movement after it has been passed between the brushes E. The reservoir G is fitted with a light cover,  $G'$ , (see Fig. 5,) having an inward and downwardly projecting arm,  $G^2$ , so that as the ball F is raised up out of the reservoir it will raise the cover  $G'$ , and when the ball is returned it will, by pressing upon the arm  $G^2$ , close the same. The polishing-brushes are mounted, as shown in Fig. 3, upon a cross-piece, H, working between guide-pieces  $h h$ , attached to the sides of the case A, and its motion is in a direction parallel to the foot-rests. These brushes are mounted in sets, one set for each rest and three in each set. Two of these brushes,  $H'$   $H'$ , in each set are mounted upon levers  $h' h'$ , passing through the cross-bar H and pivoted therein, to swing to and from each other, and between the lower end of these levers, projecting downward, is placed a spring,  $h^2$ , to press their upper ends together and to hold the brushes mounted thereon in contact the one with the other. The third brush,  $H^2$ , of each set is mounted upon a pivoted lever, I, by means of slotted hangers  $i i$ , secured to the back of the brush and embracing the pins  $i' i'$ , driven into the lever I. One or more springs,  $i^2$ , are placed between the brush  $H^2$  and the lever I to retain the brush in its downwardly-projecting position. The lever I is pivoted to the strips  $I'$ , projecting forward from the downwardly-projecting sides of the case B, and is adapted to be swung around upon its pivoted bearing, to move the brushes backward and forward over the foot-rest C, and it derives its motion from the moving bar H through a connecting-rod,  $I^2$ , pivoted to a backward and upwardly projecting arm,  $I^3$ , attached to said bar H. The bar H receives its motion to operate the brushes through connecting-rods K, (see Fig. 1,) there being one at each end of the bar, secured at one end to the bar H and at their other end pivoted to a crank-pin upon wheels  $K'$ . The wheels  $K'$  are mounted upon a cross-shaft,  $K^2$ , working within the case A and beneath the auxiliary case B. The rotation of this shaft to operate

the brushes may be accomplished in any convenient manner, but I have shown in the drawings a machine wherein hand-power is applied through a vertical shaft, L, geared at its lower end by means of the beveled cog-wheels  $L' L^2$  to the operating-shaft, and passing up into the auxiliary case B, and there geared by means of beveled gearing to a cross-shaft, M, projecting outwardly through the case and fitted with a balance-wheel and crank,  $M^2$ .

In order to notify the operator when the brushes have been moved sufficiently, I place an alarm-bell, O, within the case A, and in position to be operated by a lug, P, upon an endless belt,  $P'$ , passing from the top to the bottom of the auxiliary case B, and operated to move around suitable pulleys,  $p p$ , by a short belt,  $P^2$ , leading from a pulley upon the shaft M.

Having described my invention, what I claim is—

1. In a shoe-blackening machine, the combination, with a foot-rest adapted to receive the shoe, of an oscillating brush-carrying frame, substantially as described, adapted to apply the blacking to the shoe, substantially as and for the purpose set forth.

2. In a shoe-blackening machine, the combination, with a foot-rest and with an oscillating frame carrying brushes, of a reciprocating ball adapted to carry the blacking from the reservoir and apply it to the brushes, substantially as and for the purpose set forth.

3. In a shoe-blackening machine, the combination, with one or more foot-rests, of a set of oscillating spring-actuated brushes to apply the blacking, one or more reciprocating balls to carry the blacking from a reservoir to the blacking-brushes, and a set of oscillating spring-actuated polishing-brushes, all substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 17th day of May, 1884.

LEOPOLDO GUZMAN.

Witnesses:

A. W. STEIGER,  
F. G. ANDERSON.