

No. 642,731.

Patented Feb. 6, 1900.

O. A. SWANSON.
ROTARY BLACKING BRUSH.

(Application filed Jan. 21, 1899.)

(No Model.)

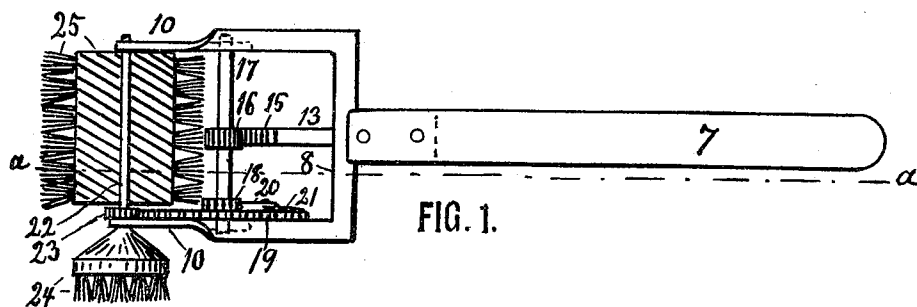


FIG. 1.

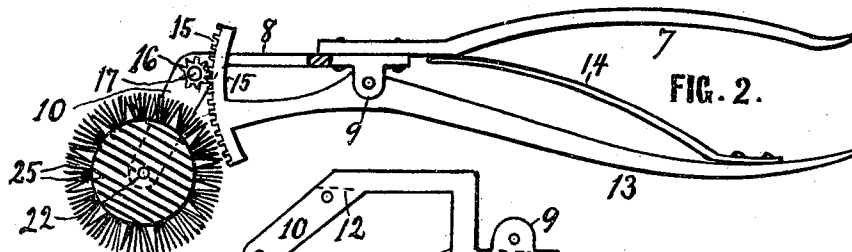


FIG. 2.

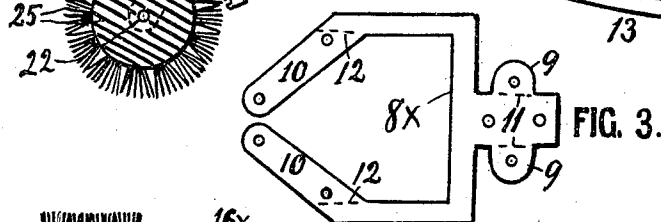


FIG. 3.

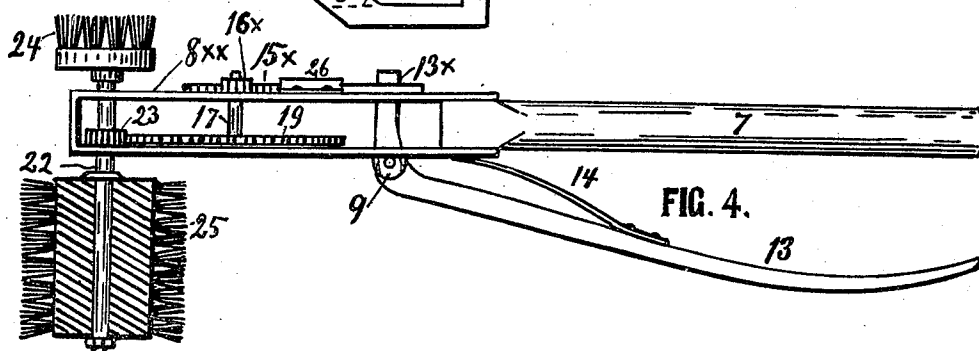


FIG. 4.

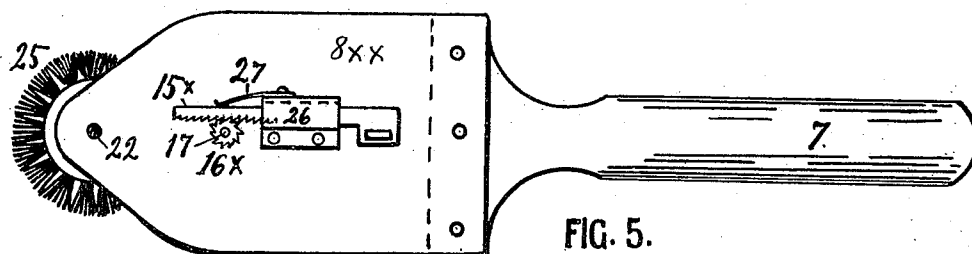


FIG. 5.

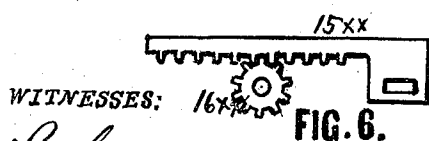


FIG. 6.

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UNITED STATES PATENT OFFICE.

OLOF A. SWANSON, OF MINNEAPOLIS, MINNESOTA.

ROTARY BLACKING-BRUSH.

SPECIFICATION forming part of Letters Patent No. 642,731, dated February 6, 1900.

Application filed January 21, 1899. Serial No. 702,891. (No model.)

To all whom it may concern:

Be it known that I, OLOF A. SWANSON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Rotary Blacking-Brushes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in brushes for blacking and shining shoes and boots; and the objects of my invention are, first, to provide a rotary blacking-brush having a power-increasing lever and a speed-increasing mechanism; second, to provide a rotary blacking-brush that may be operated by the same hand that holds it; third, to provide a rotary blacking-brush with two kinds of brushes on a single rotary shaft, and, fourth, to provide a rotary brush with an improved frame as an article of manufacture. These and other objects I attain by the novel construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a top or plan view of my improved rotary brush with the main brush proper in central section. Fig. 2 is a longitudinal sectional view of my blacking-brush as on the line *a a* in Fig. 1. Fig. 3 is a plan view of the metallic blank from which the frame of the brush in Figs. 1 and 2 is formed. Fig. 4 is a side view of a modified form of my brush. Fig. 5 is a top view of Fig. 4 with the small brush removed. Fig. 6 is a modification of the rack and wheel or pinion in Figs. 4 and 5.

Referring to the various parts in the drawings by reference-numerals, 7 is the brush-handle, to which in Figs. 1 and 2 is secured a metallic frame 8, formed from a blank, like 8^x in Fig. 3, by bending downward the lips 9 and the arms 10 to about right angles at the points indicated by the dotted lines 11 and 12. Between the lips 9 of the frame I pivot the operating-lever 13, which is normally held by the spring 14 away from the handle. The short front end of said lever is provided with

a toothed member 15, which in Figs. 1 and 2 is of segmental form, with the teeth upon the peripheric side and engaging the pinion 16, secured near the middle of the shaft 17, which is journaled with its ends in the sides of the frame and carries at one end the secured ratchet wheel or pinion 18 and adjacent thereto the loosely-journaled cog-wheel 19, on which is pivoted the dog or pawl 20, held by the spring 21 in engagement with the ratchet-pinion, so that the latter may rotate the wheel by means of the pawl. In the ends of the arms 10, which project on a slant down and forward from the frame, I journal the shaft 22, upon which is secured the pinion 23, engaged and driven by the wheel 19. Upon this shaft 22 I secure the small end brush 24 outside the frame and inside or between the arms of the frame the larger and cylindrical brush 25.

In the modification Figs. 4 and 5, where the frame 8^x is of a different shape, I prefer to have also the main brush 25 outside the frame at or near the end of the shaft opposite to the end carrying the small brush 24. It will also be seen that instead of the segment 15 a rack 15^x may be operated by the short arm 13^x of the operating-lever 13. This rack slides in the guide 26 and is pressed by the spring 27 against the pinion 16^x, which it revolves in one direction only if the rack and pinion have ratchet-teeth; but if provided with common teeth or cogs, as the rack 15^{xx} and the wheel 16^{xx} in Fig. 6, then the pinion, all the wheels, and the brushes will rotate alternately in opposite directions as the lever 13 is swung alternately by the operator's hand and by the spring 14.

In operation the blacking should properly be put on the shoe by the small brush 24, and the large brush 25 should be used for the polishing or shining; but the small brush may also be used in corners and places difficult to reach with the large brush or where fancy toe-tips and other fine edges of the leather are apt to get bent or bruised by the large brush.

It will be observed that the peculiar shape of the frame in Figs. 1 and 2 enables the brush to reach any part of the shoe without bringing the frame or mechanism of the brush into contact with the shoe. The latter purpose is

attained in Figs. 4 and 5 by having the frame made tapering at the front end; but this shape does not admit of holding the brush in so handy a position as the shape in Figs. 1 and 2.

5 By using long handles on these brushes a person may black his shoes while having them on his feet with very little or no stooping.

In the claim where not otherwise stated the words "rotate" and "rotary" are used in the
10 general sense of rotating either or both ways, the same as in speaking of rotary valves and engines.

What I claim, and desire to secure by Letters Patent, is—

15 In a blacking-brush, the combination of a suitable handle, a power-increasing operating-lever pivoted thereto and held away from

the handle by a spring, a suitable frame extending on a slant forward of the handle, a rotary shaft journaled in the front part of 20 the frame and carrying one or more brushes, speed-increasing cog-wheels mounted in the frame and adapted to rotate the brush-shaft; a toothed member secured to the short end or arm of the operating-lever and engaging 25 the slowest pinion of the gear-wheels, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

OLOF A. SWANSON.

Witnesses:

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