D. H. LAURIE.

BOOT-CLEANER.

No. 190,598. Patented May 8, 1877.

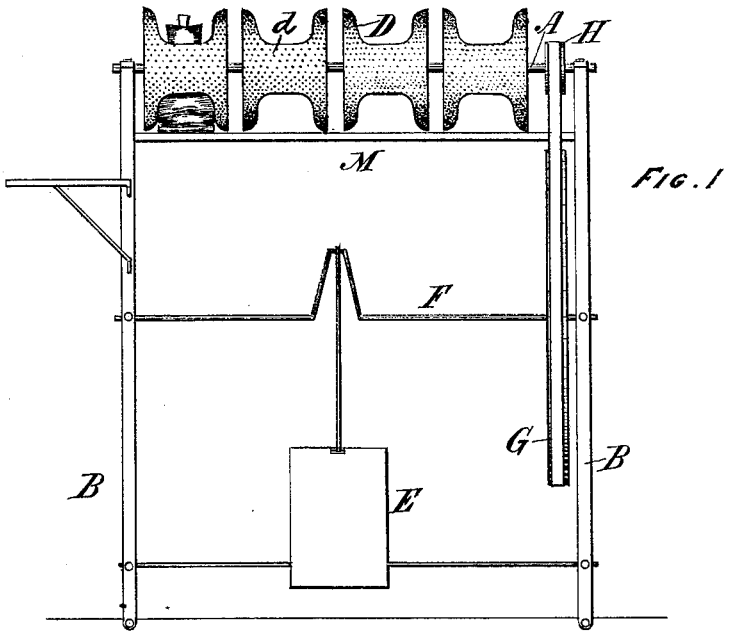


FIG. 1

FIG. 2

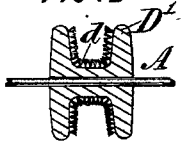


FIG. 3

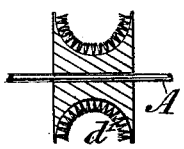


FIG. 5

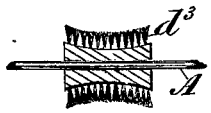


FIG. 6.

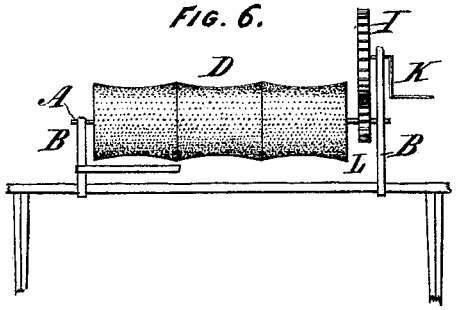


FIG. 7.

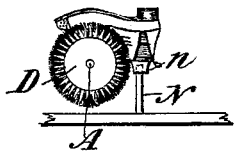
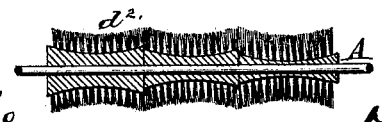


FIG. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN BOOT-CLEANERS.

Specification forming part of Letters Patent No. **190,598**, dated May 8, 1877; application filed January 18, 1877.

To all whom it may concern:

Be it known that I, DAVID HARLEY LAURIE, of the city of Montreal, in the district of Montreal and Province of Quebec, Canada, have invented a certain new and useful Improved Apparatus for Cleaning and Polishing Boots and Shoes, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to that class of machines for cleaning and polishing boots and shoes having a rotary brush; and consists in a series of brushes, the bristles of which are of different stiffness in consequence of their differing lengths, mounted upon a single shaft in any suitable frame.

For a fuller understanding of my invention reference should be had to the drawings, where—

Figure 1 is a side view of my invention; Figs. 2, 3, 4, and 5, sections of the brushes. Fig. 6 is a side view, and Fig. 7 is a sectional elevation of a modification of my invention.

Similar letters of reference indicate like parts.

A is a shaft or spindle, carried in suitable bearings formed in a frame, B, which may be of any convenient form, made of wood or metal, and secured, in any suitable way, either to the floor of the room in which it is placed, or to any kind of stand either fixed or movable.

Upon the spindle A are mounted any desired number of rotary brushes, D, made so as to be slipped off and on, and provided with any usual means, such as a key, for securing them in place.

These brushes may either be made perfectly cylindrical, or, by preference, hollowed out, in order, to some extent, to follow the form of the boot, as shown in the drawings, as at d^3, Fig. 5, the stocks in which the bristles are set being correspondingly curved.

The brushes may also either be single, and arranged on the spindle at any distance apart that may be desired, or made with one continuous stock.

A set of brushes for my machine are of equal exterior diameter, but differ from each other in stiffness, because of varying length of the bristles, and consequent variation in the diameters of the separate stocks, as clearly shown in Fig. 4.

The necessary rotary motion may be imparted to the brushes D and spindle A, as in Fig. 1, by a treadle, E, driving, by means of a crank-shaft, F, the fly-wheel G, which communicates motion to the pulley H, mounted on the spindle A.

Instead of this a spur-wheel, I, carried in the frame, rotated by a crank-handle, K, and intermeshing with a pinion, L, mounted on the spindle, may be used; or, in any case where steam or other power is used, a pulley may be mounted on the spindle, and driven from any going part of the other machinery.

One set of four brushes may be mounted on a spindle—*i. e.*, the cleaning, blacking, brushing, and polishing brushes—the four operations being simultaneously carried on; or each spindle may carry the brushes proper for one of these purposes, and the four be arranged to be driven from each other.

Any suitable device may be adopted for charging the brushes with blacking.

Motion having been imparted to the spindle, the operator presents the boots or shoes to be polished, two at a time, to the rapidly-revolving brushes, which, by the extra speed at which they move, and the greater amount of friction which they impart, perform the several operations of cleaning, blacking, brushing, and polishing in far less time and more easily than can be accomplished at present.

If desired, a shelf, as shown at M, Fig. 1, may be arranged, in connection with the frame, at such distance from the brushes as to bring the boots or shoes set upon it under their influence when revolving; or a set of uprights, N, may be placed in juxtaposition to the brushes, one to each, on the top of these being set plates or lasts *n*, upon which the boot or shoe to be polished can be slipped, so as to bring each part of the boot, in turn, to the brush.

Although my invention has been described as being applicable, primarily, to boots and shoes, it will be obvious that it will be equally useful for harness, or in any case where any article has to be cleaned and polished.

I have shown various forms of brushes, all of which may be used in the making and using of my invention.

I do not claim any particular form of brushes. The gist of my invention consists in the use of a series of brushes on the same shaft, all of the brushes being of equal size exteriorly, but differing in stiffness by reason of differences in the sizes of the stocks to which the bristles are attached.

Having thus described my invention, what I claim is as follows:

A boot and shoe cleaning, blacking, and polishing apparatus, composed of a series of rotary brushes mounted on a single shaft, the brushes being all of like size exteriorly, but the stocks being of varying sizes, so that, by reason of the different lengths of bristles, the brushes will be of different stiffness, and better adapted to the several purposes of cleaning, blacking, and polishing.

Montreal, 13th day of January, A. D. 1877.

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Witnesses:

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