H. Churchman,

Boot Blacking Apparatus.

No. 91,825. Patented June 29, 1869.

Fig. 1.

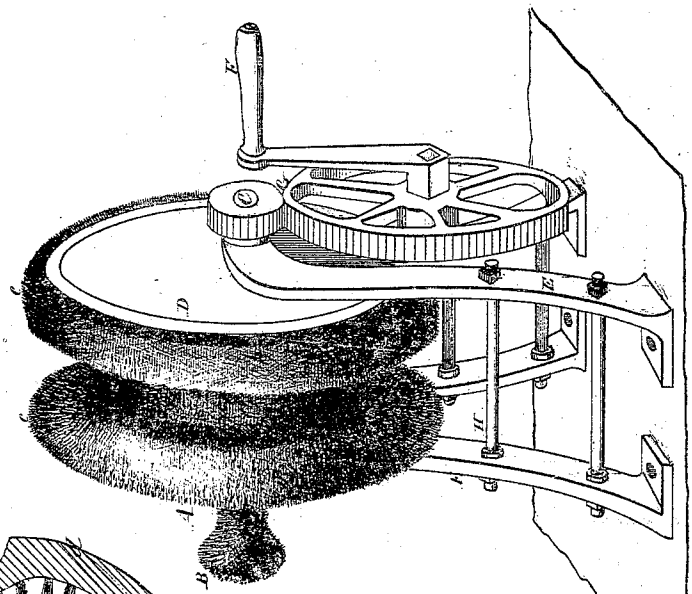


Fig. 3.

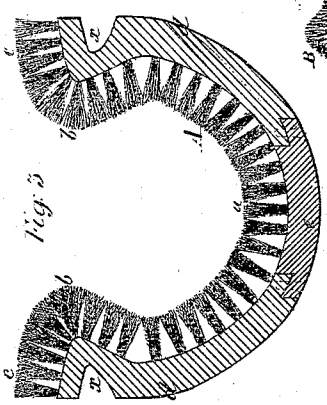
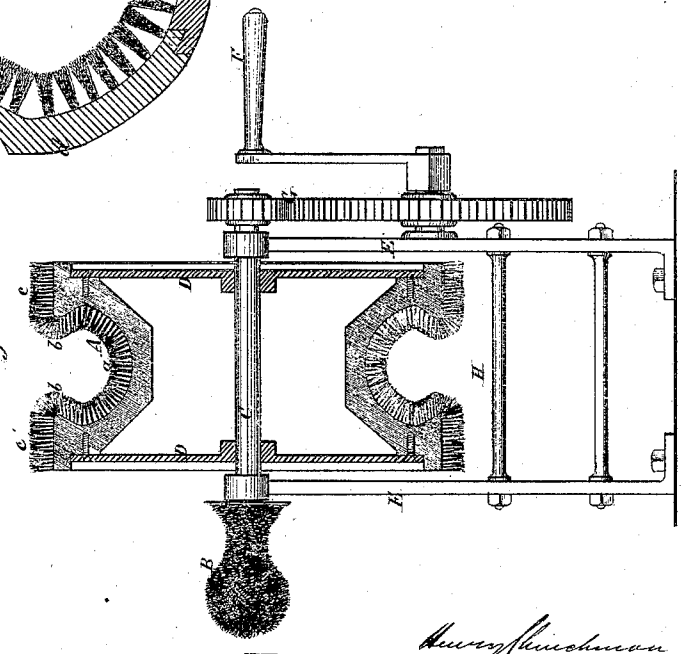


Fig. 2.



Witnesses

Chas. D. Abel

Wm. Shipwright

Henry Churchman

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

United States Patent Office.

HENRY CHURCHMAN, OF HORSHAM, ENGLAND.

Letters Patent No. 91,825, *dated June* 29, 1869; *patented in England, August* 6, 1868.

IMPROVED BOOT-BLACKING APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HENRY CHURCHMAN, of Horsham, in the county of Sussex, England, have invented "An Improved Apparatus for Cleaning Boots and Shoes;" and I do hereby declare that the following is a full and exact description of the said invention, reference being had to the accompanying drawing, and to the figures and letters marked thereon, that is to say—

Various arrangements of revolving brushes have been proposed for cleaning boots and shoes, some of which consist of one or more rotating brush-surfaces, of a concave form, to which the boot is applied.

Such arrangements, however, have not proved successful, on account of the form of the brushes not being such as would act effectively upon every part of the boot or shoe.

Now my present invention consists in one part, in constructing such rotary brushes in the following manner:

I construct a circular concave brush, the surface of which is formed rounded or concave at bottom, widening out to a certain point, from which the brush-surface again contracts toward the rim of the brush, it being made to extend partially or completely over such rim.

By this form of brush, the boot is effectually acted upon in all parts, as, the sole being made to fit into the widest point of the side surfaces, the front of the upper leather is cleaned by the concave bottom brush-surface, while the sides of the boot are acted upon by the contracted side brush-surfaces.

Such rotary brush may either be employed alone, for effecting both the removal of the dirt and the polishing of the boot, while the blacking is applied by hand; or by preference, I fix on the same spindle with this brush a small rotary concave brush, for applying the blacking, the brush-surface of which is also by preference made to extend over the rim.

If required, also, a third concave brush may be applied for removing the dirt, and the first-named brush be used only for polishing.

The brush or brushes may be driven either direct by a crank-handle, on the spindle thereof, or, if required to be of a small diameter, it, or they, may be driven by means of speed-increasing gearing, so as to obtain the requisite surface-speed for the brush.

The brush or brushes may also be driven by means of a treadle, or by a pulley and strap, from a steam-engine, or other source of motive power.

On the accompanying drawing is shown the arrangement of my before-described improved rotary brushes, which I prefer to employ, adapted for being worked by the hand of the operator.

Figure 1 shows an elevation of the machine in perspective, and

Figure 2 shows a vertical section of the same, and

Figure 3 shows an enlarged transverse section of the form of brush-surface which I prefer to employ.

The annular brush-surface A is composed, first, of the concave or rounded bottom surface *a*, extending up to about the point shown, from which the two side surfaces, *b b*, extending up to the rim, are made to overhang the part *a*, thus contracting the space between them; and lastly, other brush-surfaces, *c c*, are formed upon the rim.

By introducing the boot into this rotating annular brush, the front of the upper of the boot will be cleaned by the part *a*, while the side-portions will be cleaned by the parts *b b*, and afterwards the heel of the boot, being introduced into *a*, will be cleaned in like manner.

The upper edges of the parts *b* may be advantageously employed for cleaning such corners of the boot as are not reached by the other parts of the brush.

The parts *c c* may be made of hard bristles, and serve for removing any dirt from the boot preparatory to cleaning it by the other part of the brush.

The blacking is applied to the boot by means of the concave brush B, with rounded end, carried by the same spindle, C, that carries the brush A.

This latter may be constructed of segments, fixed between two side cheeks D D, carried by the spindle C, the segments being either of the form shown in fig. 2, or they may be built up of three separate parts, *d d e*, fixed together; in order to facilitate the manufacture of the brush-surface, as shown at fig. 3, the parts *d* being hollowed out at *x x*, in order more readily to wire the bristles.

The spindle of the brush is carried by the framing E E, and has a quick rotary motion imparted to it by means of the crank-handle F, and speed-increasing gearing G.

A spring may be provided at H for resting the boot upon while it is being acted on by the brush.

Having thus described the nature of my invention, and in what manner the same is to be performed, I wish it to be understood that what I claim, is—

1. Constructing and using rotary concave brushes, wherein the bottom surface is formed rounded and widens out up to a certain point, from which point the concave brush-surface is contracted toward the rim of the brush, so as to overhang the lower part, substantially as and for the purposes set forth.

2. Combining with such concave rotary brush, constructed as aforesaid, a brush for applying the blacking, arranged and operating substantially as hereinbefore described, with reference to figs. 1 to 3, on the accompanying drawings.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses, this 6th day of January, 1869.

HENRY CHURCHMAN.

Witnesses:

CHAS. D. ABEL,

WM. SHIPWRIGHT.