

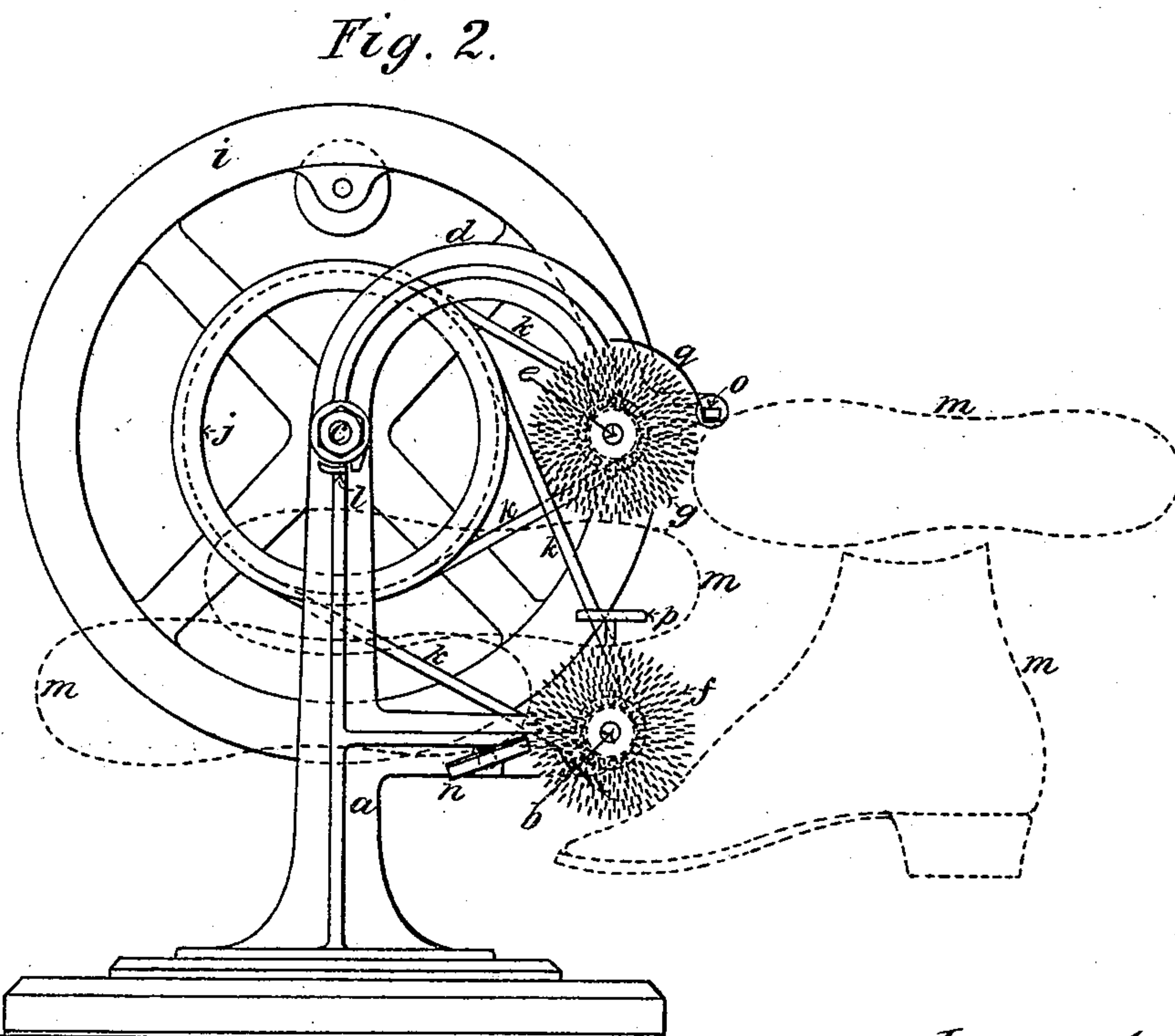
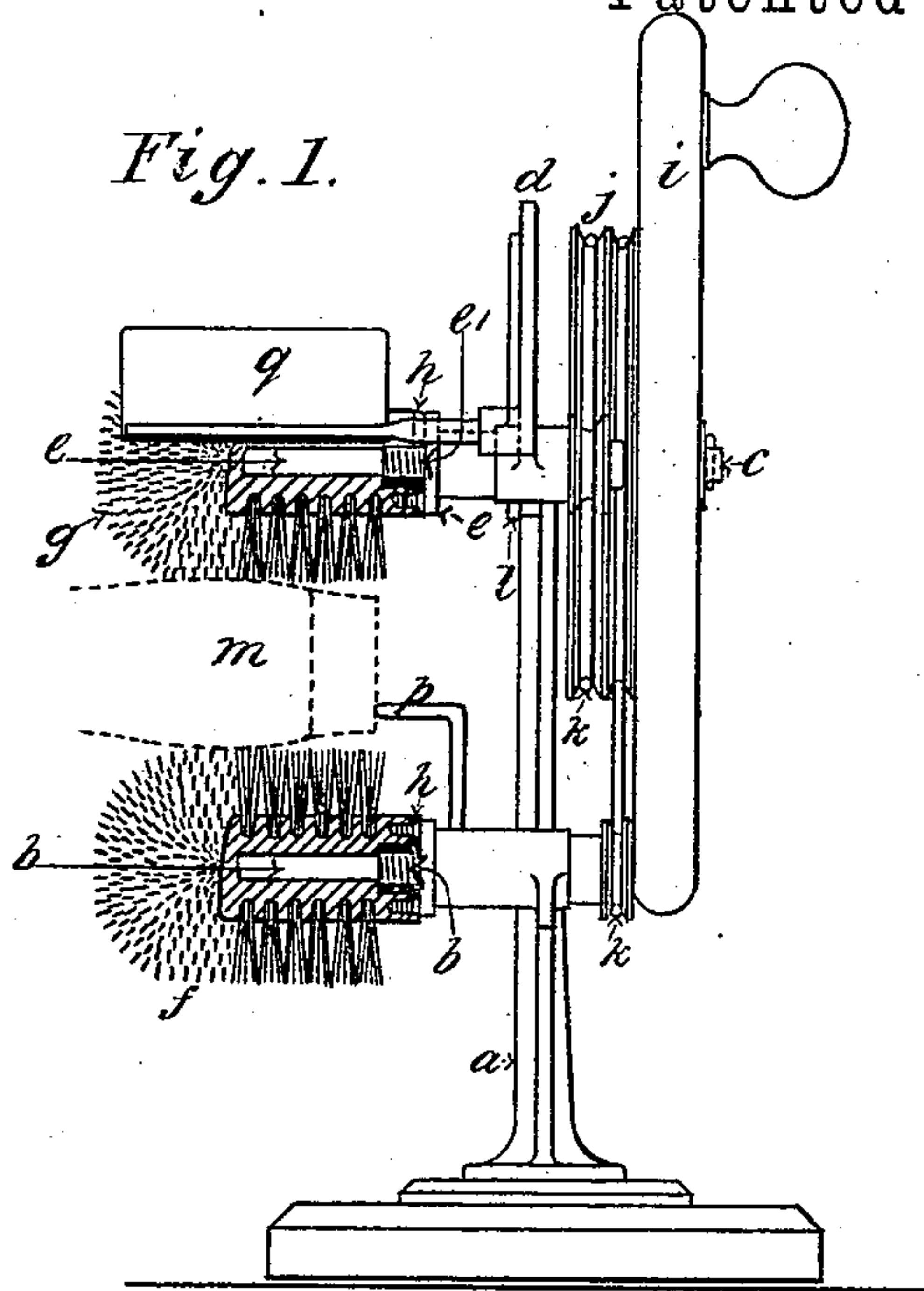
(No Model.)

J. HARGRAVE.

MACHINE FOR CLEANING AND BLACKING BOOTS OR SHOES.

No. 297,390.

Patented Apr. 22, 1884.



Witnesses:

J. E. Craven. Fell. Int. P. A.

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Inventor:

James Hargrave.



# UNITED STATES PATENT OFFICE.

JAMES HARGRAVE, OF BURLEY LEEDS, COUNTY OF YORK, ENGLAND.

## MACHINE FOR CLEANING AND BLACKING BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 297,390, dated April 22, 1884.

Application filed December 26, 1883. (No model.) Patented in England April 23, 1883, No. 2,054.

*To all whom it may concern:*

Be it known that I, JAMES HARGRAVE, a subject of the Queen of Great Britain and Ireland, residing at Burley Leeds, in the county of York, Kingdom of Great Britain and Ireland, have invented a new and useful Improved Machine for Cleaning, Blacking, and Polishing Boots and Shoes and for other analogous purposes, (for which I have obtained a patent in Great Britain, No. 2,054, bearing date April 23, 1883,) of which the following is a specification.

My invention has for its object the removal of dirt from boots and shoes, applying blacking thereto, and polishing the same in a more expeditious and effectual manner than obtains either by hand or machinery such as hitherto usually employed.

A machine according to my invention comprises two rotating spindles mounted in a convenient position, (by preference horizontally,) and having fixed on them a pair of suitably-shaped brushes, of which two pairs are provided, one pair being used for removing the dirt and the other pair for polishing. In constructing these brushes I provide each with a metallic ferrule or bushing having a female screw-thread for taking onto either of the spindles of the machine. Such provision admits of ready removal from the machine of one pair of brushes and substitution of another pair when a change of operation is required. In lieu of thus changing the brushes the machine may be arranged as a double machine—that is, be provided with four spindles driven from a common source and constituting two pairs—one to carry brushes for the removal of the dirt, the other to carry brushes for polishing. Both brushes of a pair act on a boot or shoe simultaneously, and are arranged to approach and recede from each other; or one spindle in the first-described arrangement of machine and the corresponding spindles in the double machine may occupy fixed positions, and the other spindle or spindles be caused to approach and recede therefrom to suit the varying configuration of the boot or shoe under operation.

In each of the above-described arrangements suitable rests, guide or guides, and guard or guards are provided as required to

assist in the manipulation of the boots or shoes and to render the operation, as cleanly as possible. The boots or shoes are subjected to the action of the brushes by hand, and in order to the better holding of the same I use a lining of some soft material—such as felt or india-rubber—placed within the boot or shoe, so that the boot or shoe may be more secure on the hand of the operator, thus giving him better command over the required movements for pressing it against the brushes; or, if preferred, a suitably-formed “last” may be inserted into the boot or shoe for the above-named purpose.

For putting on the blacking I provide an apparatus with a pair of horizontally-mounted rotating brushes, one above the other, the upper one being capable of approaching and receding from the lower one. Beneath the lower one, which occupies a fixed position in the machine, I provide a suitable trough or fountain for containing blacking, (either in a liquid state or otherwise,) which is transferred to the periphery of the said brush, either by raising the trough or fountain, or by means of a suitable distributor provided in the trough or fountain and actuated by hand or otherwise. From the lower brush the blacking is transferred to the upper brush.

Machinery or apparatus according to my invention, as above set forth, besides being employed for cleaning, blacking, and polishing boots and shoes, may (by a substitution of suitable brushes) obviously be used also for cleaning harness made of leather or other material, and the metallic mountings thereof, or metallic articles, plated or otherwise, and (by another substitution of suitable brushes) for cleaning fish intended to be used either in a cured or uncured state.

In the accompanying drawings the same reference-letters are used to denote like parts wherever they occur.

Figure 1 is a front elevation, and Fig. 2 a side elevation, of a machine or apparatus according to my invention, having horizontal rotating spindles and brushes.

*a* is an upright or standard, with a projecting arm for carrying the lower rotating spindle, *b*. On a stud, *c*, at the upper part of the upright or standard *a*, is mounted freely the



movable arm *d*, carrying the upper rotating spindle, *e*. The spindles *b* and *e* are threaded at the parts *b'* and *e'*, to admit of readily mounting and changing the brushes *f g*, which for  
 5 this purpose are provided with internally-screwed ferrules or bushings *h h*, attached to them, as previously referred to. On the stud *c* is also freely mounted, so as to rotate thereon, the hand-wheel *i*, carrying driving-pulley *j*,  
 10 from which, by means of driving-bands *k*, the spindles *b* and *e*, together with the brushes *f g*, are caused to rotate. When the machine is required to be driven by power, the pulley *j* may have an additional groove or other pro-  
 15 vision for the reception of a driving-band from any motor. The standard *a* and arm *d* are provided with stops *l*, for preventing the brushes *f g* from approaching each other too closely.  
 20 The dotted lines *m* indicate various positions of a boot or shoe under operation. *n* is a rest attached to the standard *a*, for use when a boot or shoe is being operated upon around the "heel."  
 25 *o* is a rest attached to the movable arm *d*, for use when a boot or shoe is being operated upon around the "toe." *p* is a guide for use when the sides of a boot or shoe are being acted upon. Other positions of a boot or shoe,  
 30 as indicated, require no explanation. *q* is a guard for preventing dust from being thrown into the face of the operator.

What I claim is—

1. The combination, with a suitable support, of lower and upper rotating brush-car- 35  
 rying spindles, the former in a fixed or constant position in the machine, the other moving radially about a center, a stud or center, *c*, the hand-wheel *i*, the pulley, and the driving-bands, arranged as described, so that one 40  
 brush approaches or recedes from the other while both are rotated from the common driving source, substantially as set forth.

2. The combination, with a suitable support, of the spindles *b e*, threaded, as shown, 45  
 to admit of readily mounting and changing the brushes, and the said brushes adapted to be mounted on said spindles, substantially in the manner as herein described.

3. In a machine for cleaning, blacking, and 50  
 polishing boots and shoes and for other analogous purposes, the combination of standard *a*, spindle *b*, stud *c*, movable arm *d*, rotating spindle *e*, brushes *f g*, driving-pulley *j*, and driving-bands *k*, whereby said spindles *b* and 55  
*e*, together with brushes *f* and *g*, can be caused to rotate, as and for the purposes described and set forth.

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Witnesses:

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