

No. 897,286.

PATENTED SEPT. 1, 1908.

E. HASKELL.  
CLEANING AND POLISHING APPARATUS.

APPLICATION FILED NOV. 13, 1902.

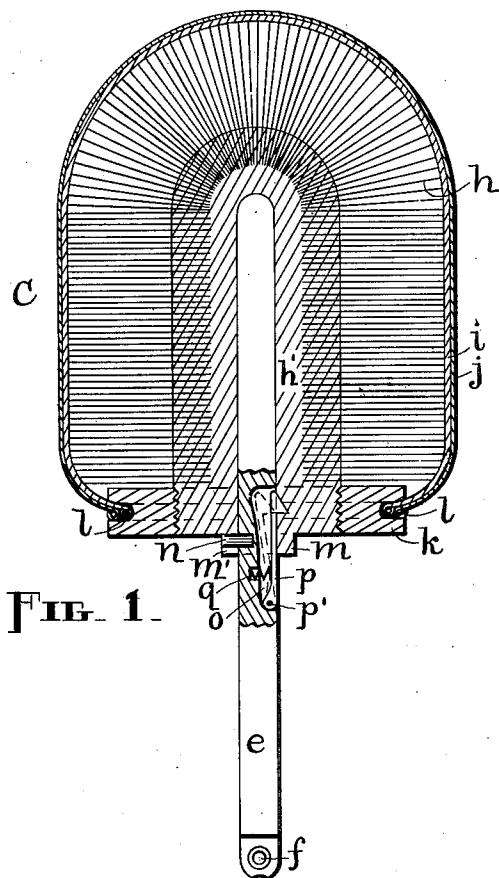


FIG. 1.

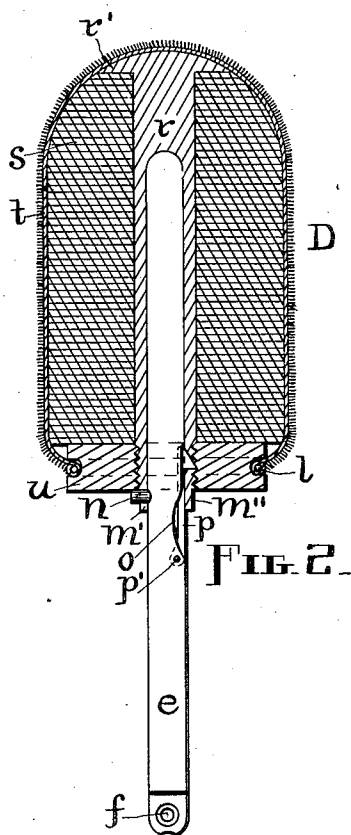


FIG. 2.

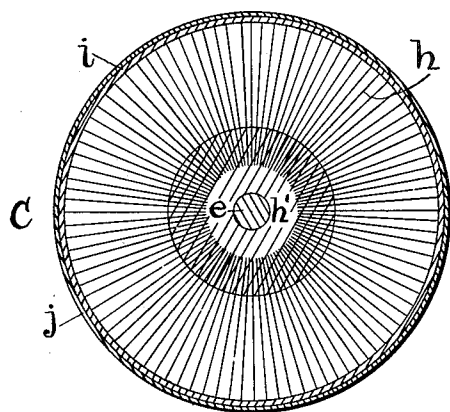


FIG. 3.

Witnesses  
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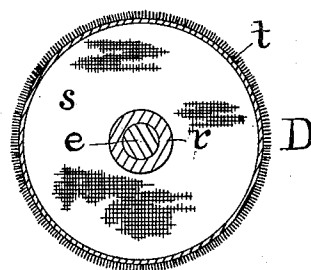


FIG. 4.

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# UNITED STATES PATENT OFFICE.

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## CLEANING AND POLISHING APPARATUS.

No. 897,286.

Specification of Letters Patent.

Patented Sept. 1, 1908.

Application filed November 13, 1902. Serial No. 131,168.

*To all whom it may concern:*

Be it known that I, EZRA HASKELL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Cleaning and Polishing Apparatus, of which the following is a specification.

My invention relates to improvements in apparatus for cleaning clothes and shoes, and polishing the latter, in which certain peculiarly constructed rotary devices intended to be operated by a motor through the medium of a flexible shaft, are employed; and the objects of my improvement are, first, to afford means for cleaning or polishing purposes, which does the work with great rapidity and thoroughness, with the minimum amount of labor on the part of the operator; second, to produce such means which is particularly adaptable to shoes; third, to provide devices for the aforesaid purposes, which can be practically and efficiently employed with any suitable motor. I attain these objects by the means illustrated in the accompanying drawings, in which:—

Figure 1 is a vertical section through a polisher and cleaner which embodies one form of my invention; a portion of the spindle being broken out to show the latch; Fig. 2, a vertical section through a modified form of my device; Fig. 3, a cross-section through the device shown in the first view, and Fig. 4, a cross-section through the device shown in the second view.

Similar letters refer to similar parts throughout the several views.

The device which I term the polisher C, since it is adapted particularly to be applied to shoes, comprises a brush *h*, an inner cover *i*, and a soft outer cover *j*. The brush *h* is cylindrical externally and rounded over at the top, the bottom also being slightly rounded as shown, but it will be understood that both the top and bottom curves may be changed more or less by trimming off the ends of the bristles or whatever other material is used in the construction of the brush, to give the desired outlines. These bristles (or similar material) are fastened into a central core *h'* in the usual manner, and said core is provided with a suitable passage for the reception of the spindle *e*. The inner cover *i* should consist of a good firm quality of woolen cloth or equivalent material, and the

outer cover *j* of a thinner material which is well adapted for polishing purposes, as canton flannel. The cover *j* polishes the shoe and, when worn out, can be readily renewed. The cover *i* acts as a buffer between the cover *j* and the brush *h*, furnishing a foundation of some consistency for said cover *j* to distribute the pressure over said brush which is flexible and yields under pressure but returns to shape immediately the pressure is removed. This construction enables the polisher to be successfully applied to all parts of the shoe. Without a brush and a brush of proper construction substantially as described, a device of this kind would be impracticable for the reason that it is necessary to provide a flexible and yielding surface beneath the polishing cloth or cloths in the absence of which such a device is not successful, and I have found nothing to answer the purpose so well or nearly so well as a brush, the bristles of which have flexible or yielding and resilient properties.

Although other fabric or textile materials besides woolen cloth and canton flannel, or possibly material which could not properly be termed a fabric or textile, may be substituted for the cloth or flannel or both in the covers *i* and *j*, these materials have been found to serve the purpose very satisfactorily. The covers *i* and *j* after being drawn over the brush *h*, are fastened around the base of said brush in a suitable manner.

In the drawings a grooved flange *k* is shown at the base of the brush core *h'*. Each cover is provided around its open end with a hem through which a cord or strong elastic band *l* is passed. The cover *i* is first drawn over the brush and its cord or band *l* inserted in the groove in the flange *k*, where it is tied or held by contraction; then the cover *j* is drawn over said cover *i* and fastened in the same manner, its cord or band *l* being outside of the other. The arrangement just described affords ready means for removing the cover *j* when worn out and replacing it with a new one. The cover *i* can also be replaced as readily, if desired.

In addition to the function above noted, the flange *k* at the base of the core *h'* supports the bristles of the brush at the bottom where they would otherwise be liable to become bent and broken and thus permit the cover or covers thereon to get loose and so impair the usefulness of the device. By providing this

support at the weakest part of the brush, in the present construction, the brush is enabled to maintain its original shape and so to properly fill the cover or covers.

5 A collar *m* is formed at the base of the core *h'*, and has a slot *m'* therein to receive a pin *n* extending from one side of a spindle *e*. Let into a slot *o* in the spindle *e*, is a latch *p* having its base pivoted at *p'* to said spindle.  
 10 The upper hooked end of the latch *p* is adapted to normally enter an opening in the core *h'*, being pressed into engagement with said core by a spring *q* set into a suitable recess in the spindle *e*. The engagement of the latch  
 15 *p* with the core *h'* prevents the brush *h* from slipping off of the spindle *e*, and the connections between the pin *n* and the collar *m* completes the arrangement by which said brush and spindle are locked together and caused to  
 20 revolve coincidentally. By forcing the latch *p* against the spring *q* until said latch is disengaged from the core *h'*, the brush is released and can be slipped from the spindle without difficulty; and it may be mounted on  
 25 the spindle again by pressing it over the inclined hooked end of the latch, care being taken that the pin registers with the slot *m'*.

The cover *j* will wear out in time and must be replaced with a new one. Such substitution is effected by loosening and removing  
 30 the bottom of the cover from the flange *k* and taking said cover off of the brush, after which a new cover is drawn onto said brush and its bottom tightly secured to said flange.

35 As before intimated, I do not wish to be confined to the specific manner herein shown of confining the covers about the lower end of the brush, as this may be done in various ways.

40 A brush *h* without covers may be used to remove mud or dust from the shoes and from the trousers or other clothing, but the device which I herein term the cleaner *D* and which is described below is found to be a better  
 45 medium for this purpose. Said cleaner comprises a central core *r* bored out to receive the spindle *e*, which latter can be used interchangeably with both devices, a plurality of fabric disks *s* on said core, and a cover *t*, preferably of plush, over all. The disks *s* are  
 50 confined between a flange *r'* at the top of the core *r* and a flange *u* at the base of said core, said flange serving as a support for said disks just as the flange *k* does for the bristles of the brush. The top of the cleaner *D* is preferably  
 55 semi-spherical, like that of the polisher *C*, which form is produced by curving the top of the flange *r'* and decreasing the diameter of the upper disks *s*, as will be readily under-

stood. The rag wheel thus formed provides 60 a comparatively rigid foundation for the plush cover, which is at the same time sufficiently yielding as not to injure the fabric or leather to which the cleaner is applied. The open end of the cover *t* is gathered in and confined by means of a cord or elastic band *l* to 65 the flange *u* screwed on to the base of the core *r*, said flange being grooved like the flange *k*, or it may be secured in any other convenient manner. The core *r* is provided with an 70 opening to receive the hooked end of the latch *p* and with a collar *m''* having a slot *m'* to receive the pin *n*, so that the spindle *e* may be attached to, or detached from, the cleaner  
 75 *D* in the same manner as described in connection with the polisher *C*. Although the rag wheel is suitable for cleaning purposes, it is not so practical as when covered with plush.

*f* is a hole in the outer end of the spindle *e* placed there to facilitate connecting said 80 spindle with a flexible motor shaft.

The nature and functions of the cleaner or rag wheel are similar in many respects to those of a brush and more particularly of the brush *h*, hence the term brush is broad 85 enough to include both devices and is intended so to do in claim 1.

Changes in shape and size of the different parts may be made without departing from the nature of my invention. Furthermore, I 90 do not wish to be restricted to the use of plush for the cover of the cleaner, or to two covers in every case.

What I claim as my invention, and desire to secure by Letters Patent, is:— 95

1. A device, of the class designated, comprising a brush provided with a core having a flange at its base extending beneath and supporting adjacent portions of the brush, such brush being cylindrical and round at the 100 top, and a cover on said brush, said cover being attached to said flange.

2. The combination, in an apparatus of the class designated, with a cylindrical brush rounded at the top, and a core having a peripherally grooved flange at its base extending 105 beneath and supporting the bristles of the brush, of two covers upon said brush, and cords one outside of the other in the flange groove to fasten said covers at the bottom to 110 the flange.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EZRA HASKELL.

Witnesses:

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A. L. STEVENS.