

H. SMITH.
POLISHING BRUSH.
APPLICATION FILED AUG. 23, 1920.

1,374,772.

Fig. 1.

Patented Apr. 12, 1921.
2 SHEETS—SHEET 1.

Fig. 2.

1,374,772.

Patented Apr. 12, 1921.
2 SHEETS—SHEET 2.

Fig. 3.

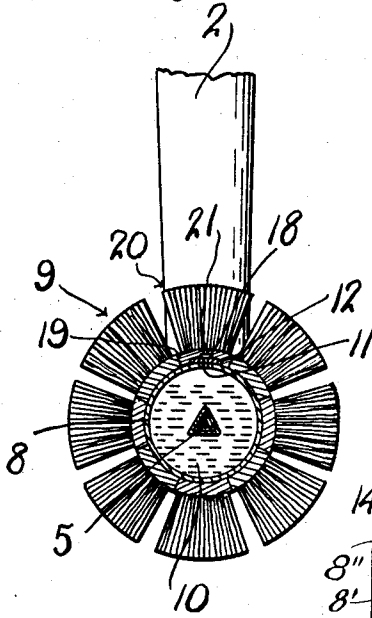


Fig. 4.

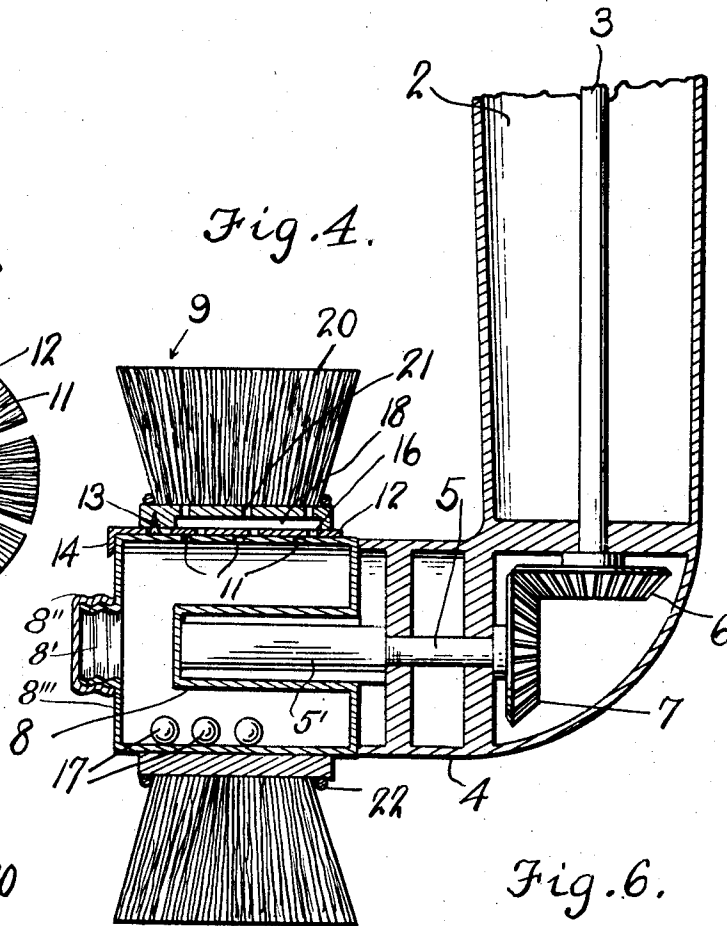


Fig. 5.

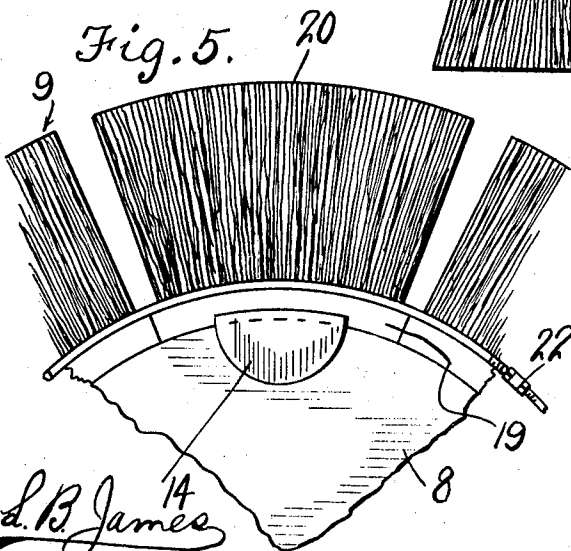
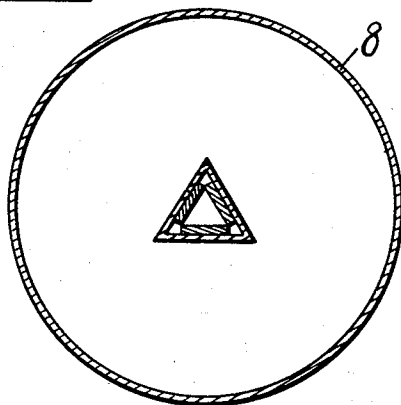


Fig. 6.



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WITNESS:

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HENRY SMITH, OF HAMTRAMCK, MICHIGAN.

POLISHING-BRUSH.

1,374,772.

Specification of Letters Patent.

Patented Apr. 12, 1921.

Application filed August 23, 1920. Serial No. 405,292.

To all whom it may concern:

Be it known that I, HENRY SMITH, a citizen of the United States, residing at Hamtramck, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Polishing-Brushes, of which the following is a specification.

My present invention has reference to a motor operated polishing machine.

10 The object is the construction of such machine in which the brush thereof is arranged in detachable sections, whereby any of such sections, when worn may be readily replaced.

15 A further object is to provide the hub of the brush with a reservoir containing the liquid blackening, and provide the said reservoir with means whereby the blackening can be dispensed therefrom on to the brushes in predetermined quantities.

20 A still further object is the provision of a motor operated polishing machine in which the brush has its hub in the nature of a liquid polish reservoir that is provided with means whereby the polish may be supplied in desired quantities to the brush and that is also provided with means for continuously agitating the polish so that the same will be thoroughly stirred and retained in a liquid state. A further object is the construction of a shoe polishing machine which includes a rotary brush made up of sections, means for applying a predetermined quantity of blackening to one of the brush sections, and means whereby this section 35 may be employed as a dauber for applying the blackening to the shoe to be cleaned, and the remaining sections of the brush employed as polishing elements.

40 The foregoing, and other objects which will appear as the nature of the invention is better understood, may be accomplished by a construction, combination and operative arrangement of parts, such as is illustrated by the drawings which accompany and form part of this application.

In the drawings:—

Figure 1 is a side elevation of a motor driven polishing machine constructed in accordance with this invention.

50 Fig. 2 is a front elevation thereof.

Fig. 3 is a sectional view approximately, on the line 3—3 of Fig. 1.

Fig. 4 is an enlarged sectional view approximately on the line 4—4 of Fig. 2.

55 Fig. 5 is a greatly enlarged fragmentary front elevation illustrating the manner in

which the sections are removably sustained on the liquid polish reservoir that provides the hub of the brush.

Fig. 6 is a greatly enlarged sectional view 60 through the hub for the brush which also comprises the liquid blackening receptacle.

Fig. 7 is a perspective view of the brush section that has its head portion channeled and apertured to receive the liquid blackening and to deliver the same to the bristles thereof. 65

My improvement contemplates the employment of a casing 1 that has its upper portion enlarged for the reception of a 70 motor. The motor is preferably electrically operated. The lower portion of the casing is in the nature of a hollow arm, which is indicated by the numeral 2, and in this arm there is journaled a shaft 3 that receives 75 motion from the motor. The lower end of the arm has an offset extension 4 provided with suitable bearings for a longitudinal shaft 5. The shaft 3 has on its free end a beveled gear 6 that meshes with a similar 80 gear 7 on the shaft 5.

The shaft 5 is received in the bore of the hub 8 of a rotary brush 9. The means sustaining the hub on the shaft permits of the removal of the brush from the said 85 shaft. The hub 8 has its outer end provided with an opening surrounded by a threaded flange 8', whereby liquid may be fed into the hub or reservoir. The numeral 8'' indicates a screw cap for closing the 90 opening. The opposite or rear end of the hub or reservoir has a triangular pocket 8''' which is designed to receive therein the triangular end 5' of the shaft 5. The frictional engagement of the portion 5' of the 95 shaft with the walls provided by the pocket is sufficient to retain the combined brush hub and reservoir on the shaft.

The hollow combined brush head and liquid blackening reservoir is provided with 100 a series of apertures 11 which are controlled by a slidable valve 12, the latter having its outer end offset over the outer face of the combined blackening receptacle and hub, providing a finger hold 14 whereby the valve 105 may be operated. The valve is, of course, provided with spaced apertures 16, which, when the said valve is moved to one position will register with the apertures 11. In the combined reservoir and hub there are 110 weighted spheres 17. These spheres are in the nature of agitating elements and will,

when the brush is rotated constantly agitate the liquid blackening to retain the same in fluid condition.

The brush 9, as previously stated, is made up of sections, the head portions 19 thereof being concavo-convex in cross section whereby the inner disk portions thereof will be snugly arranged on the round periphery of the combined hub and blackening reservoir. When so arranged, the edges of the brush heads are disposed in contacting engagement, and are held on the hub by adjustable bands 22.

One of the brush sections, illustrated in detail in Fig. 7 of the drawings, and indicated by the numeral 20 has its head provided with a longitudinal depression or channel 18, and the inner wall provided by this channel is formed with apertures 21 that communicate with the brush or bristles of the section. This section 20 is arranged directly over the apertured valve, and when the valve is actuated to bring its openings in register with the openings 11 in the combined hub and liquid blackening receptacle 8, the blackening will flow through the said openings and through the apertures in the brush section on to the brush or bristles thereof. The quantity of blackening can be regulated by properly adjusting the valve. The blackening saturated brush section is employed as a dauber, applying the blackening to the boot or shoe to be shined. The remaining brush sections serve as polishing elements. As a matter of fact, after a desired quantity of blackening has been supplied to the boot or shoe, the valve may be regulated to close the combined hub and receptacle and as the blackening will soon dry on the section 20, this section, in addition to the remaining brush sections may be also employed as polishing means.

By reference to the drawings, it will be noted that the head portions of the brush sections have their confronting edges disposed in contacting engagement and suitable means, such as indicated by the numeral 22 are provided for holding the sections assembled around the hub and connected together. The means 22 is adjustable, and may be removable, so that any one of the sections may be removed from the hub and replaced by a new section.

It is thought that the foregoing description, when taken in connection with the

drawings will fully set forth the construction and advantages of the improvement without further detail description.

Having thus described the invention, what I claim, is:—

1. In a polishing device, motor operating means, including a shaft, a brush having a hub to which the shaft is secured, said hub being hollow and providing a reservoir for a liquid polish, said hub having peripheral apertures, a slidable valve normally closing the same, the brush comprising sections having head portions which are arranged around the hub and which have their confronting ends contacting, one of said heads having a channel in a line with the apertures of the hub, and having apertures between the bristles and the said channel.

2. A polishing device, including an operating shaft, a hollow hub to which the shaft is connected, and said hub providing a receptacle for a liquid polish, weighted agitators in the hub, said hub having peripheral apertures, a slidable valve closing the said apertures, a brush comprising sections each having segmental heads that are arranged over the hub and the confronting edges thereof disposed in contacting engagement, means for removably securing the brush sections on the hub, one of said sections having a channel in a line with the apertures in the hub and having apertures between the bristles and the channel.

3. A polishing device, as herein described, including a shaft and means for revolving the shaft, a hollow hub removably secured to the shaft and providing a reservoir for a liquid polish, weighted spheres in the hub, said hub having apertures in the periphery thereof, a flat valve slidable over the apertures and having openings which register with the apertures when the valve is moved to one position, a brush comprising a plurality of sections each having a segmental head, and said heads being arranged on the hub in contacting relation therewith and with each other, removable means for sustaining the sections locked together on the hub, one of said heads having a longitudinal groove in a line with the apertures of the hub and having openings between the grooves and the bristles thereof.

In testimony whereof I affix my signature.

HENRY SMITH.