S. SAVAGE.

FOUNTAIN SHOE BRUSH.

APPLICATION FILED OCT. 3, 1914.

1,179,338. Patented Apr. 11, 1916.

Fig. I.

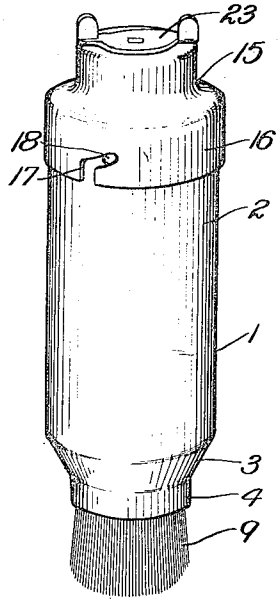


Fig. II.

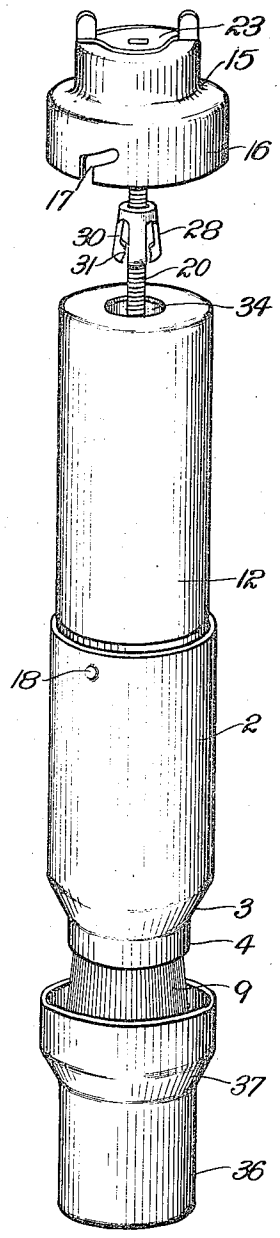


Fig. III.

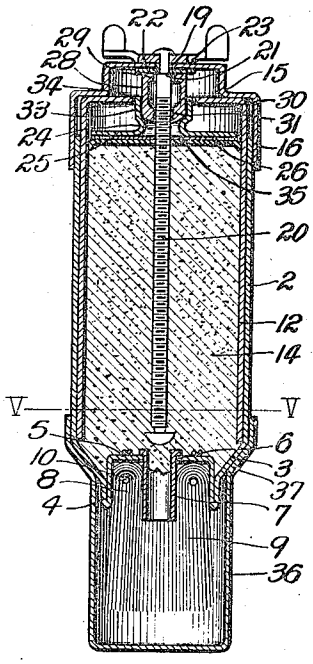


Fig. IV.

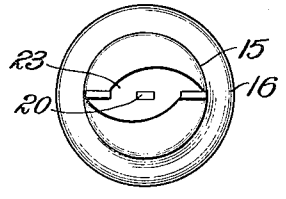


Fig. V.

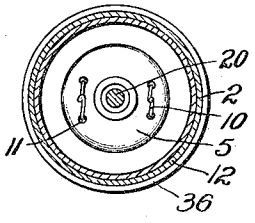
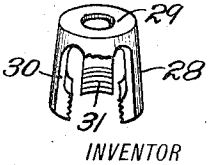


Fig. VI.



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FOUNTAIN SHOE-BRUSH.

1,179,338. Specification of Letters Patent. Patented Apr. 11, 1916.

Application filed October 3, 1914. Serial No. 864,892.

To all whom it may concern:

Be it known that I, STANLEY SAVAGE, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Fountain Shoe-Brushes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to brushes, and has for its principal object, to provide a fountain brush for containing shoe paste, shaving soap, etc., so that it may be fed to the brush bristles as required.

It is also an object of the invention to provide a brush of this character with a removable polish container or cartridge that may be removed when empty to be refilled or replaced.

A further object is to provide means whereby the feeding piston can be moved back to starting position quickly and without the necessity of rotating either it or the feed screw.

In accomplishing these objects, I have provided the details of structure hereinafter described and illustrated in the accompanying drawings, wherein:—

Figure I is a perspective view of a brush constructed according to my invention. Fig. II is a perspective view of the parts of the brush in their disassembled relation. Fig. III is a central sectional view of the brush. Fig. IV is a plan view of the top of the brush. Fig. V is a section on the line V—V, Fig. III. Fig. VI is an enlarged perspective view of the split nut on the feed screw.

Referring more in detail to the drawings:—1 designates a fountain brush constructed according to my invention, comprising an outer casing member 2 which is open at one end and has its opposite end tapered to form a shoulder 3 and an extended neck 4, which latter is turned inwardly to form a cup-shaped portion 5 that closes this end of the tube, except as specified below.

Centrally disposed in the cup member 5 is an aperture 6, and projected through said aperture and secured to said cup is an outwardly extending feed tube 7, which is concentrically located within the neck 4 to form an annular channel 8 between the tube and sides of the neck, within which are drawn bristles 9; the bristles being fastened within the channel by tie wires 10 having their ends projected through apertures 11 in the cup 5 and twisted about each other to prevent the bristles from pulling out or becoming loose.

Slidably mounted within the casing 2 is a cartridge 12, which contains the paste or polish 14, and has an open inner end and a closed outer end; the latter projecting somewhat out of the casing 2.

Over the outer end of the cartridge 12 is fitted a cap 15 that has an enlarged portion 16 which fits over the casing 2 and is tightened thereon by a bayonet joint comprising a lateral slot 17 in the cap member, and an outwardly stamped pin 18 in the casing part, that travels within the slot.

Concentrically mounted within the cap 15 and projected through an aperture 19 in the end thereof, is a feed screw 20, having a shoulder 21 on which seats a washer 22; the portion of the screw that is projected beyond the cartridge being squared and having a thumb nut 23 riveted thereon to clamp the screw in position and provide means for turning the same, and the inner end having a boss 20′ thereon to prevent the escape of the split nut 28 (hereinafter described) from the screw.

Slidably mounted on the feed screw 20, which projects through a central aperture 24 therein, is a plunger or piston 25 adapted for travel within the cartridge and carrying a leather 26 on its under face for preventing leakage around the plunger by which the polish is forced through the discharge tube 7 to the bristles on manipulation of the feed screw.

In order that the plunger may be made to travel along the feed screw, on turning the latter, I provide a spring nut 28, comprising a centrally apertured collar 29, which slides freely on the feed screw 20 and carries integrally formed, downwardly projecting, yieldable arms 30 thereon, having interiorly threaded lower ends 31 that normally do not engage the feed screw.

Formed integral with the plunger 25 on the side adjacent the split spring nut, is a flared socket or cup 33, that is concentric with and adapted to receive said nut.

When the cap 15 is tightened onto the casing 2, the nut 28 is pressed within the flared cup 33, thereby causing the arms 30 to be pressed inwardly to engage the feed screw 20, and on turning the latter, the nut becomes tight within the cup.

After the nut has thus been seated in the cup, it will travel downward on turning the feed screw and cause the downward movement of the plunger within the cartridge.

In charging the brush, the plunger is first placed in the cartridge, a piece of lead or tin-foil 35 is placed over the aperture therein, to prevent the polish from leaking therethrough, and the cartridge filled and placed within the casing. The cap carrying the feed screw is then clamped in position; the feed screw being punched through the lead-foil and the nut arms compressed within the plunger cup to engage the feed screw.

When the brush is not in use, the bristles are protected by a cap 36 that fits over the casing 2 and is provided with an annular shoulder 37 for abutment against the shoulder 3 to hold the cap in place.

It will be seen that by this construction it is not necessary when the cartridge becomes empty to discard the entire brush, but only to remove the empty cartridge and replace it with a full one, which may be quickly done as it is not necessary to screw the feed screw through the plunger. It will also be noted that a cartridge of this kind is simple and can be manufactured at a small cost.

When the cartridge has been nearly emptied, the piston will, of course, be nearly at the lower end of the screw 20. If now it be desired to effect a quick return of the piston, the cartridge 12 should be removed, and the piston pulled out against the stop (Fig. III) on the end of the screw, thereby releasing the resilient nut members 28, which recede from the screw leaving the parts free to be slid back to the opposite end of the screw. The replacement of the cap 15 then reëngages the nut and screw, as already described.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters-Patent, is:

1. In a fountain brush, a tubular casing reduced to a neck at one end, doubled back upon itself at said neck to form an annular flange, and turned inwardly from said flange to form a brush chamber head, there being a central aperture in said head, a discharge tube secured within said aperture, and bristles mounted between said tube and flange.

2. In a fountain brush, a paste reservoir, a piston adapted to travel therein, a split spring nut carried by the piston, said nut being capable of sliding upon the screw when disengaged from the piston, means normally holding said nut in mesh with said screw, and means for unmeshing the nut from the screw to permit the piston to be slid backward in the paste reservoir.

3. In a fountain brush, a paste cartridge comprising a casing having an open end and a closed, apertured end, a feed screw extending axially into the cartridge, means for turning said screw, a piston slidably mounted upon said screw within the cartridge, a split spring nut mounted on said screw and adapted to co-act therewith, and means normally holding said nut in mesh with said screw, and means to unmesh the nut from the holding means; said nut being capable when so released, of sliding longitudinally.

4. A fountain brush comprising a tubular casing tapered to a neck at one end and turned inwardly to form a cup-shaped member within the tapered end, an outwardly extended discharge tube secured within said aperture, bristles drawn within said neck and secured to the cup member, a paste cartridge inserted within said casing, and having an apertured outer end, a cap seated over said cartridge and clamped on said casing, a feed screw mounted on said cap and projected within said cartridge, a thumb nut on the outer end of said feed screw, a plunger slidably mounted within said cartridge, and having a central aperture therein, a cup-like member integrally formed on said plunger, and a nut adapted for seating within said cup to engage said feed screw, for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

STANLEY SAVAGE.

Witnesses:

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