R. J. D. FISHER AND I. DE A. HOLT.

FOUNTAIN BRUSH.

APPLICATION FILED JAN. 24, 1921.

1,374,294. Patented Apr. 12, 1921.

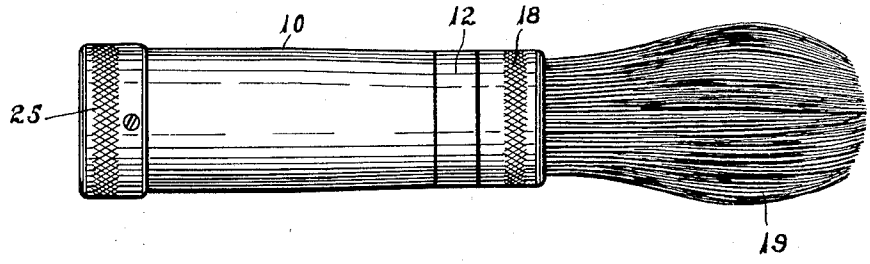


Fig. 1.

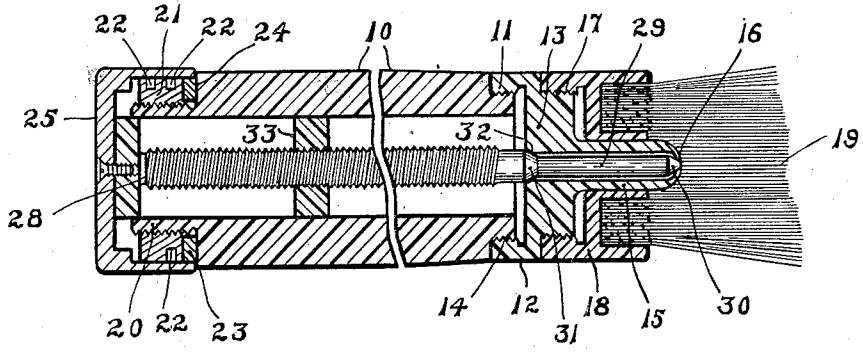


Fig. 2.

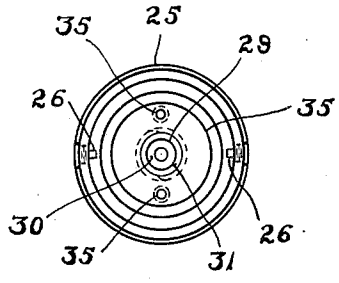


Fig. 3.

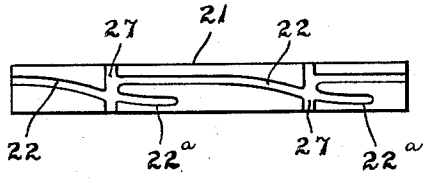


Fig. 4.

R. J. D. Fisher.
&
I. de A. Holt.
INVENTORS

BY Victor J. Evans
ATTORNEY

John W Babis. Jr.
WITNESS.

UNITED STATES PATENT OFFICE.

RICHARD J. D. FISHER, OF PHILADELPHIA, AND ISABEL DE A. HOLT, OF MOUNT AIRY, PENNSYLVANIA.

FOUNTAIN-BRUSH.

1,374,294. Specification of Letters Patent. Patented Apr. 12, 1921.

Application filed January 24, 1921. Serial No. 439,461.

To all whom it may concern:

Be it known that we, RICHARD J. D. FISHER and ISABEL DE AGUERO HOLT, citizens of the United States, residing at Philadelphia and Mount Airy, respectively, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Fountain-Brushes, of which the following is a specification.

This invention relates to fountain-brushes and it has more particular reference to that type or form of brush in which the handle portion constitutes a storage receptacle for liquid, plastic or semi-plastic material, means being associated therewith to insure an intermittent feed of said material more or less medially within the bristles.

The main object of our invention is to provide a fountain-brush of the type referred to which includes novel means for feeding the liquid, plastic or semi-plastic material or preparation forwardly into the bristles of the brush, said means being of a nature to effectively control the passage of said material or preparation from the reservoir portion or handle and thereby insure a sanitary and non-leakable article.

Another object of our invention is to provide a fountain-brush of the nature specified which embodies novel features of utility, simplicity, efficiency and convenience.

Still further our invention aims to provide more specificially a fountain or shaving-brush which consists of but few parts which are readily assembled and not liable to get out of order.

With the foregoing and other objects in view, as will readily appear as the nature of our invention is better understood, the same consists essentially in the novel features of construction, combination and arrangement of parts, hereinafter clearly described, illustrated by the annexed drawings, and more specifically defined by the appended claims.

In the further disclosure of the invention reference will be had to the accompanying sheet of explanatory drawings constituting a part of this specification, and in which like characters of reference designate the same or corresponding parts in all the views.

Figure 1— is a view or our improved fountain or shaving brush.

Fig. 2— is a broken longitudinal sectional view showing the valve in its closed position, said view being also drawn to a slightly enlarged scale for the sake of clearness.

Fig. 3— is an inside plan view of the removable cap or cover for the tubular reservoir or handle of the brush; and

Fig. 4— is a development of the threaded ring or cam like member hereinafter more specifically referred to.

According to the embodiment of our invention illustrated and which is particularly applicable for use as a shaving brush we construct a cylindric shell 10 of light and non-corrodible material, the forward end whereof is reduced and screw threaded at 11, to receive the combined valve seat and delivery member 12. This combined valve seat and delivery member 12 comprises a main or body portion 13, an internally threaded shouldered part 14, Fig. 2, for engagement on the aforesaid reduced part 11 of the cylindric shell, 10, and a longitudinally and axially projecting tube or nipple 15 which is fashioned at its forward end to constitute a valve seat 16. Externally of the body portion 13, we form a shoulder 17 on which is screw-threaded the brush head 18 of appropriate pattern to snugly encircle the tube or nipple 15, and said brush head contains the bristles 19, it being particularly noted on an examination of Fig. 2, that the tube or nipple 15 is of a length just sufficient to project centrally and slightly through or beyond the brush-head into the bristles whereby the brush can be manipulated freely without the least danger of injury or discomfort to the face of the user.

Formed integral with the rear or outer end of the cylindric shell 10 is a reduced and externally threaded extension 20 on which is screwed a durable material sleeve 21 formed exteriorly with a plurality of spiral grooves 22 constituting cam-paths of a length to substantially encircle said sleeve substantially two-thirds of its peripheral surface, a washer 23 intervening between the sleeve 21 and the shouldered part 24 of the cylindric shell 10. Adapted for coöperation with the aforesaid exteriorly grooved sleeve 21 is an exterior adjusting or manipulating cap 25 having diametrically opposed and inwardly projecting pins

26 appropriately countersunk therein, said pins 26 being adapted for engagement in the aforesaid spiral grooves 22, and it is to be here particularly noted that the said grooves are cut or broken longitudinally at diametrically opposed points as shown by the numeral 27 in Fig. 4 for the purpose later on explained.

Axially longitudinal of the cylindric shell 10 is a screw-adjusting or piston rod 28 which is formed at its forward end with a reduced extension 29 adapted to project within the aforesaid delivery member 12, and said piston rod is provided with a conical valve end 30 arranged to close tightly on the aforesaid valve-seat 16, while it is also provided with a second conical or valve like portion 31 which is arranged to close down on the correspondingly shaped rear seat 32, at the inner end of the aforesaid delivery member 12. The piston rod 28 is also formed with a left-hand thread on which is adapted to be traversed as later explained the piston or follower 33 which is made a snug working fit within the cylindric shell 10, or handle portion of our improved shaving brush. Integral with the aforesaid piston-rod 28 is a circular head 34 of a diameter to snugly fit the cylindric shell 10 and the manipulating cap 25 is securely attached thereto by countersunk screws 35.

The use and operation of our improved shaving brush may be briefly described as follows:—

Assuming the cylindric shell or handle portion 10 has been filled to the requisite extent with shaving-cream or soap of appropriate plastic nature, and the piston-rod 28 inserted as shown it will be noted that the conical valve end 30 will closely abut its seat 16 at the bristle end of the tube or nipple 15 while the valve-like portion 31 will also firmly engage its seat 32 whereby egress or discharge of the shaving-cream from the cylindric shell 10 into the tube or nipple 15 will be shut off and similarly "oozing" of the small amount of said cream contained in the tube or nipple 15 past the valve 30 to bristles 19 will also be prevented due to the tight closing of said valve 30. Now when it is desired to unseat the valves 30, 31, and open up communication for the soap through the tube or nipple 15 the manipulating cap 25 is given a half turn to the right-hand which effects a corresponding half rotation of the piston-rod 28, the diametrically opposed projecting pins 26 in said cap 25 during this movement being caused to travel upward or outward in the spiral grooves 22 until they register with the longitudinal cuts or grooves 27 whereupon the manipulating cap 25 and its connected parts will automatically move forward due to the slight compression created at the back of the piston or plunger 33; or a slight pressure against said cap 25 will effect the feeding forward of the soap outward through the tube or nipple 15 past the valve seat 16 into the body of the bristles 19. It will now be apparent that after each feed forward and discharge of a quantity of the soap that the valves 30, 31, will resume closed position on their respective seats 16, and 32 whereby further emission is stopped. Should one-half turn not result in the emission of sufficient soap into the bristles 19, it will be clearly apparent that one or more half-turns may be imparted to the manipulating cap 25 until the requisite amount of soap is obtained to meet the user's particular taste or needs. Furthermore, it is to be particularly noted that in order to lock the valves 30, 31, in closed position on their seats all the user has to do is to give the manipulating cap 25 a slight turn to the left-hand which results in the traveling of the projecting pins 26 reversely into the heel portions 22^a of the spiral grooves 22 whereby the cap 25 is effectively restrained from further movement and the valves 30, 31, securely closed whereby any further emission of soap into the bristles 19 cannot take place. This latter feature of our invention we deem of very material importance in that it insures an absolutely cleanly brush. Still further it will be readily conceded that where the materials employed which are in actual contact with the soap or other substance are of a non-corrodible nature we have provided in addition an exceptionally sanitary structure.

While we have described the best form of our invention at present known to us we wish it to be clearly understood that we do not limit ourselves to the precise pattern, proportion, material and minor details disclosed, but deem ourselves at liberty to make such changes and other modifications as may fairly be construed as falling within the scope of the appended claims.

Having described our invention what we claim and desire to secure by Letters Patent is:—

1. A fountain brush comprising a reservoir, a closure at one end of said reservoir including a feed-tube having spaced valve seats therein, a brush adapted for fitment on said closure, spiral grooves formed on the other end of the reservoir and interrupted at intervals, a threaded rod axially mounted in the reservoir, said rod including spaced valve portions for coöperation with the aforesaid valve seats, a follower on said threaded rod and a manipulating cap having inwardly projecting pins for engagement in the spiral grooves, said cap being adapted when turned in one direction to intermittently open the valves for feeding material from the reservoir to the brush and when turned in the opposite direction to lock the valves closed upon their seats.

2. A fountain brush comprising a cylin-

dric reservoir, a closure at one end of said reservoir including a longitudinally projecting feed-tube having spaced valve seats therein, a brush adapted for engagement on said closure and over the feed-tube, semi-spiral grooves formed on the other end of the reservoir and interrupted at intervals by cross grooves, a threaded piston rod axially longitudinal of the reservoir and having valve portions at the inner end for coöperation with the aforesaid valve seats, a follower on said threaded rod and a manipulating cap having inwardly projecting pins for operative engagement in the semi-spiral grooves, said cap being adapted when partially turned in one direction to intermittently open the aforesaid valves for feeding the material from the reservoir to the brush bristles, and when slightly turned in the opposite direction to lock the valves closed upon their seats.

3. In a fountain brush including a reservoir, a brush at one end thereof, and means for feeding material from the reservoir to the brush, the combination of a collar on the cylindric reservoir remote from the brush, said collar having interrupted spiral grooves on its outer peripheral surface, and a manipulating cap having inwardly projecting pins for coöperation with the aforesaid interrupted spiral grooves whereby the feeding means is intermittently actuated.

4. In a fountain brush including a reservoir, a brush at one end thereof, and means for feeding material from the reservoir to the brush, the combination of a collar on the reservoir remote from the brush, said collar having semi-spiral interrupted grooves on its outer peripheral surface, and a manipulating cap having inwardly projecting pins for operative engagement in the semi-spiral grooves, said inwardly projecting pins when traveled in one direction over the semi-spiral grooves effecting the opening of communication between the reservoir and the brush and when traversed longitudinally of the interruptions in the semi-spiral grooves effecting the ejection of the material into the brush.

5. In a fountain brush including a reservoir, a brush at one end thereof, and means for feeding material from the reservoir to the brush, the combination of a collar on the reservoir remote from the brush, said collar having semi-spiral interrupted grooves on its outer peripheral surface and the manipulating cap having inwardly projecting pins adapted for coöperation with the aforesaid semi-spiral grooves for effecting the opening of communication between the reservoir and the brush and when longitudinally moved by the projecting pins traversing the interruptions causing an ejection of material into the brush, and when slightly turned in a reverse direction serving to lock the feed means in its closed position.

In testimony whereof we affix our signatures.

RICHARD J. D. FISHER.
ISABEL DE A. HOLT.