Feb. 26, 1935. H. DE MILLE 1,992,607

FOUNTAIN SHAVING BRUSH

Filed Aug. 2, 1933

Fig. 1.

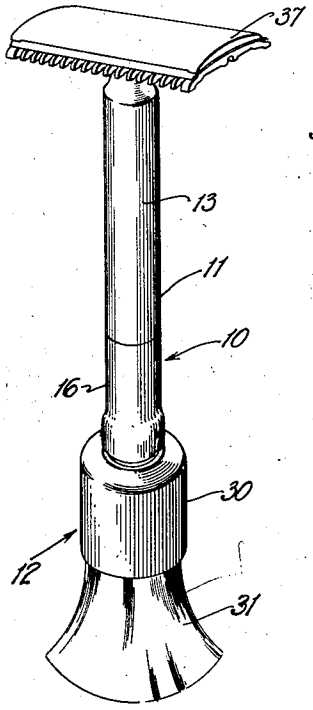


Fig. 7.

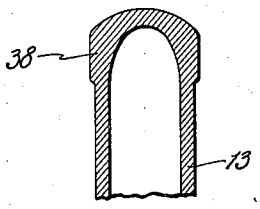


Fig. 4.

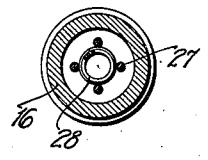


Fig. 2.

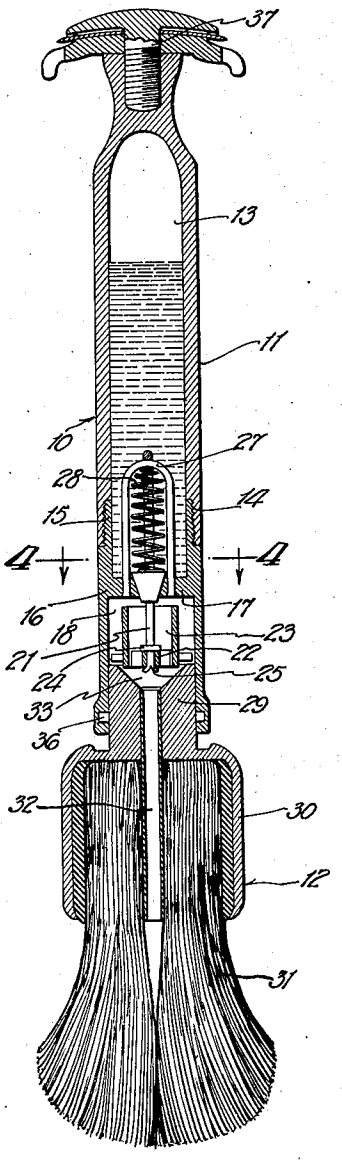


Fig. 5.

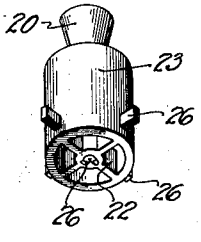


Fig. 3.

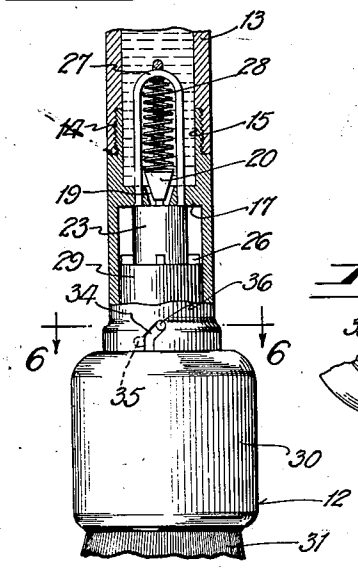
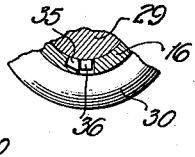


Fig. 6.



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FOUNTAIN SHAVING BRUSH

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Application August 2, 1933, Serial No. 683,250

5 Claims. (Cl. 15—139)

This invention relates to improvements in shaving brushes and more particularly to shaving brushes of the fountain or self feeding type.

One of the main objects of the invention resides in a shaving brush in which the handle constitutes a reservoir for a supply of liquid or semi-liquid soap which may be fed to the bristles of the brush in pre-determined amounts as and when needed. Thus a convenient shaving appliance is provided especially for use by travellers as it is unnecessary to carry a separate container of soap or shaving cream, and if desired, a safety razor may be carried by the free end of the brush handle to complete a compact shaving outfit.

Another feature of the invention is to provide a self-feeding shaving brush in which the working parts are easily accessible for thorough cleaning for the maintaining of the device in a clean and sanitary condition.

A further object is the provision of a self-feeding shaving brush which is simple and inexpensive of construction and manufacture, and positive of operation.

With these and other objects in view, the invention resides in a certain novel construction, combination and arrangement of parts, the essential features of which are hereinafter fully described, are pointed out in the appended claims and illustrated in the accompanying drawing, in which:—

Figure 1 is a perspective view of the invention,

Figure 2 is an enlarged vertical longitudinal sectional view showing the control valve in closed position,

Figure 3 is a fragmentary side elevational view with parts in section and showing the control valve in open position,

Figure 4 is a horizontal sectional view on the line 4—4 of Figure 2,

Figure 5 is a detail perspective view of the valve element,

Figure 6 is a detail horizontal sectional view on the line 6—6 of Figure 5, and;

Figure 7 is a detail vertical sectional view of a slight modification.

Referring to the drawing by reference characters, the numeral 10 designates my improved fountain shaving brush in its entirety which includes broadly a handle member 11 and a detachable brush element 12. The handle member 11 includes a tubular or hollow barrel section 13 which is closed at one end and open at its opposite end, the open end being internally screw threaded as at 14 to threadedly receive the threaded nipple 15 formed on one end of a valve section 16. The valve section 16 forms part of the handle member 11 and is formed intermediate its ends with a transverse partition 17 which acts to close the open end of the barrel 13. The valve section 16 is cylindrical in shape and forms a continuation of the barrel section 13 and the outer end of the same constitutes a socket 18 for a purpose to be presently explained.

The partition wall 17 is formed centrally with a discharge opening 19, the walls of which are bevelled to provide a seat for a conical valve member 20, which valve member is movable inwardly. A stem 21 fixed to the outer end of the valve member extends therefrom into the socket 18 and the free end passes through a spider 22 arranged within a sleeve 23. The stem 21 is formed with a flange 24 against which one side of the spider abuts while the extreme free end of the stem is split and bent in opposite directions as at 25 for the purpose of swivelly connecting the sleeve 23 to the outer end of the valve stem 21. Extending outwardly and radially of the sleeve 23 are lugs 26.

Fixedly supported upon the partition wall 17 and extending within the barrel 13 is a wire cage 27 which is built around the valve member 20. One end of a coil spring 28 seats against the end of the cage 27 while the opposite end bears against the inner face of the valve member 20. The cage 27 in addition to serving as an abutment for one end of the coil spring 28 also serves to confine the spring to maintain the same in bearing engagement with the valve member 20 for the purpose of normally urging the valve member seated against the bevelled walls of the discharge opening 19.

Fitting into the socket 18 is the reduced cylindrical neck 29 of the brush element 12, and which neck extends from the brush head 30 in which the bristles 31 are supported. A discharge tube 32 extends through the neck 29 and is supported thereby, the outer ends of the tube opening in the center of the bristle tufts while the opposite end of the tube opens through an outwardly flared or bevelled wall 33 provided at the inner end of the neck 29.

The outer free end of the valve member 16 is provided with inwardly extending angular slots 34, the same opening through the edges of the side walls of the socket 18 while formed within the side walls of the socket and communicating with the slots 34 are offset slots 35, the side wall of each being cut at an angle for a purpose to be presently explained.

Extending from opposite sides of the neck 29

of the brush element are pins 36 which enter the slots 34 and which are of a length to also enter offset slots 35 when moved thereinto, and which when moved into the slots 35 frictionally or wedgingly engage the inclined walls of the said slots for a purpose to be presently mentioned.

In practice, the hollow barrel section 13 of the handle 11 is filled with a supply of soap of a semi-liquid consistency, that is, the same will not flow by gravity and must be forced to move. The barrel may be filled by removing the valve section 16 and when replaced, said valve section serves to close the reservoir. Normally, the valve member 20 is in closed position as shown in Figure 2 of the drawing at which time the pins 36 are disposed within offset portions 35 of the slots. When the valve is closed, the tubular sleeve 23 is in a loosely depending position and the inner end is spaced from the partition walls 17. Assume that it is desired to dispense a predetermined quantity of the soap contained within the barrel 13. The operator turns the handle 11 relative to the brush element 12 or vice-versa pushing inwardly one upon the other which causes the pins 36 to move to a position against the walls of the closed ends of the angular slots 34, or to that position shown in Figure 3 of the drawing. During the inward movement of the neck 29 within the socket 18, the end wall of the neck strikes the lugs 26 and moves the sleeve member 23 inwardly to a position in bearing contact with the partition wall 17 and which movement causes the valve member 20 to unseat against the action of the spring 28. It will now be seen that the sleeve member 23 forms a continuous passage between the reservoir and the outer discharge end of the tube 32, whereupon the operator may impart a sudden shake to the device causing a pre-determined amount of the soap to pass from the reservoir and be discharged through the tube 32 on to the bristles 31 of the brush. After a sufficient amount of soap has been discharged, the handle 11 and brush element 12 may be turned relative to each other to return the parts to normal position at which time the valve member 20 will close by reason of the action of the spring 28.

By reason of the construction shown and described, the parts may be periodically cleaned to maintain the device in a sanitary condition, for by unscrewing the valve section 16 from the barrel section 13 and detachably connecting the brush section 12 from the valve section 16, both the valve section and the brush section may be individually cleaned by rinsing the same under a faucet and if desired the barrel 13 may be cleansed.

In Figures 1 and 2 of the drawing, I have illustrated the invention in use with a safety razor construction 37, the same being mounted or carried by the outer closed end of the barrel section 13. Thus the handle 11 in addition to serving as the handle for the brush, also constitutes a handle for the safety razor, it being, of course, understood that the brush element 12 is detached from the handle 11 when the razor is in use.

In Figure 7 of the drawing I have illustrated a slight modification wherein the outer end of the barrel 13 is closed and formed with a knob 38 instead of it being shaped to receive a safety razor construction as illustrated in the preferred form.

While I have shown and described what I deem to be the most desirable embodiment of my invention, I wish it to be understood that various changes as come within the scope of the appended claims may be resorted to if desired.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent of the United States, is:—

1. A fountain brush comprising a hollow handle, a brush element having a duct leading to the bristles of said brush element, releasable interlocking means slidably connecting said brush element and said hollow handle together, valve means operable to an open position by movement of said hollow handle in one direction relative to said brush element, and spring means acting upon said valve means to close the same upon release of said hollow handle.

2. A fountain brush comprising a hollow handle, a brush section, releasable interlocking means for detachably connecting said brush section to said hollow handle and for permitting sliding movement of the same relative to each other, said brush section having a feed passage leading from within said hollow handle to the bristles thereof, and valve means operable to locked open and closed positions upon the respective inward and outward sliding movement of said hollow handle and said brush element when turned relative to each other.

3. A fountain brush comprising a tubular handle member, a transverse partition provided in said tubular handle member inward of and adjacent one end thereof, a discharge passage provided in said partition, a sliding valve member, spring means tending to normally hold said valve member in sealing engagement with the walls of said discharge passage, a brush element provided with a neck slidable into one end of said handle member, and having a feed passage therethrough, means for releasably connecting said brush element and said handle member for sliding movement, and a sleeve carried by said valve member normally free of said partition and said neck and disposed in the path of inward movement of said neck for sealing engagement against said partition and said neck when said valve member is in open position by reason of the inward movement of said neck relative to said tubular handle to form a sealed passage between said discharge passage and said feed passage.

4. A fountain brush comprising a handle member embodying a barrel section and a socket section detachably connected to said barrel section, a sliding valve mounted in the end wall of said socket section, a stem depending from said valve spring means tending to normally hold said valve in closed position, a brush section provided with a neck slidable into said socket section, said brush section having a passage opening through said neck and into the bristles thereof, releasable means for slidably connecting said socket section to said neck, and a sleeve member loosely carried by said stem and disposed in the path of inward movement of said neck to coact and form a continuous closed passage between the interior of said barrel and the bristles of said brush element.

5. A fountain brush comprising a tubular handle embodying a pair of threadedly connected sections, one of said sections constituting a reservoir section and the other a closure section therefor, said closure section having a transverse partition intermediate the ends thereof, a brush section slidably connected to the free end of said closure section and having a duct therein leading

from the interior of the closure section to the bristles of the brush section, a passage provided in said partition, the walls of the passage constituting a valve seat, a valve member, spring means tending to yieldingly hold said valve member upon said valve seat, and a valve actuating element depending from said valve member and engageable by said brush element upon inward sliding movement of the same to move said valve member away from said seat against the action of said spring means.

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