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SHAVING BRUSH MECHANISM

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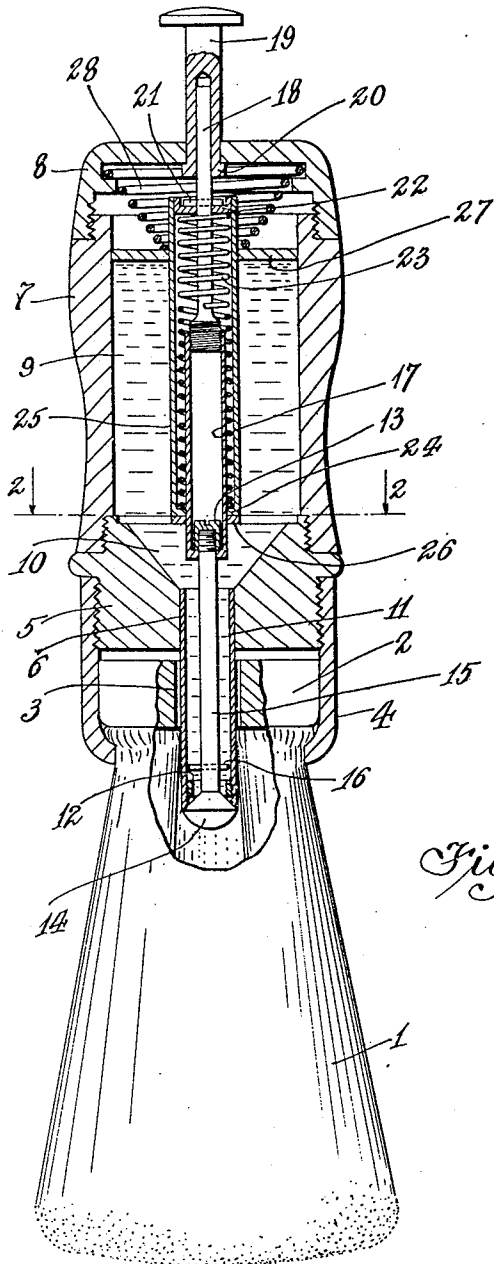


Fig. 1.

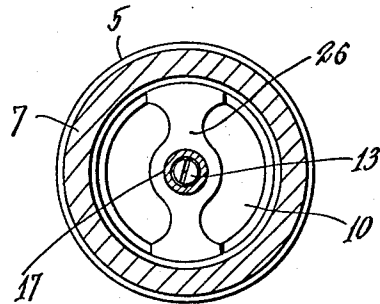


Fig. 2.

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UNITED STATES PATENT OFFICE

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SHAVING BRUSH MECHANISM

Cornelius P. O'Keefe and Lyle R. Mallette, Los Angeles, Calif., assignors, by direct and mesne assignments, of three-fourths to Edna Beatrice Mallette and one-fourth to Thomas W. Sukumlyn, both of Los Angeles, Calif.

Refiled for abandoned application Serial No. 345,970, March 11, 1929. This application November 9, 1932, Serial No. 641,880

5 Claims. (Cl. 15—138)

The application is a substitute for our abandoned application Ser. No. 345,970, filed March 11, 1929.

This invention relates to a shaving brush and mechanism by which a shaving brush is provided which contains the necessary soap and mechanism for feeding the soap to the brush as required.

It is a primary object of the present invention to provide a shaving brush which will operate also as a soap holder and which is provided with a suitable mechanism for feeding the soap to the brush.

Various further objects and advantages of the present invention will be understood from the preferred form or example of a shaving brush embodying the invention. For this purpose, there is hereafter described a preferred form or example of a shaving brush embodying the invention.

In the drawing:

Figure 1 is an elevation mainly in vertical section of the shaving brush; and

Figure 2 is a section on the line 2—2 of Figure 1.

Referring to the drawing, 1 indicates the bristles of the brush which are secured to a head 2 which is provided with a hollow opening 3. The head 2 is provided with a cover member 4 to which is threaded a coupling 5. The coupling 5 has a hollow bore 6. The coupling 5 is in turn threaded to an upper covering member 7 which is shaped to provide a handle for the brush, and the upper cover member 7 is in turn threaded to a cap member 8.

The upper cover member 7 is hollow and provides a soap chamber 9 which connects with a funnel shape recess 10 in the coupling member 5. The funnel shape recess 10 in turn connects with a feeding tube 11 held in the coupling member 5 and extending through the head 2, down into the upper part of the bristles 1. There, the tube 11 is threaded to a stop 12 and at the end of the tube there is provided a valve head 14 which is normally held against the end of the tube 11 so as to prevent the passage of soap from chamber 9 into the bristles of the brush.

The valve head 14 is on a shank 15 which carries a pin 16 which is adapted to engage with the stop 12 and limit the downward motion of the valve head 14 and shank 15. The upper end of the shank 15 is screwed to a nut 13 which is located within the bore of a hollow piston 17, the shank 15 entering an opening in the end of the piston 17 and being slidable relative to the piston 17.

The piston 17 is normally held with its lower end somewhat above the upper end of the tube or force feed chamber 11, but slightly smaller than the inner diameter of the tube 11, so that when it is pressed downwardly into the tube, it is operated as a piston to force soap in the tube 11 out by valve head 14, into the brush bristles 1.

The piston 17 at its upper end is threaded to a rod 18 which is provided at its upper end with an operating extension 19 which passes through the cap 8. Said operating extension 19 is provided with a flange 20 to limit the motion of such extension 19 by contacting with the cap 8 in the upper position. The rod 18 is provided with a pin 21 engaging a head 22 normally urged upwardly by a spring 23, the lower end of which spring 23 presses against an inturned flange 24 of a spring chamber 25. The spring chamber 25 is supported at its lower end by a spider 26 which also operates as a guide for the piston 7.

Within the soap chamber 9 there is provided a soap presser 27 in the form of an annular disc engaging the walls of the upper cover member 7, and the walls of the spring chamber 25, and said soap presser 27 is normally urged downwardly by a coil spring 28 engaging the top of said presser and the cap 8.

In operation of the brush of the present invention, the brush is first filled with soap by removing the cap 8 and soap presser 27 and filling the soap chamber 9 and the spaces down to the valve head 14 with soap. The soap used may be a cream or powder, although cream is found preferable. The soap presser 27, spring 28 and cap 8 are then reassembled. The soap presser 27 operates to place a constant pressure on the soap within the soap chamber 9, so that the soap is forced down to the valve head 14. When it is desired to supply soap to the brush bristles, the extension 19 is pressed downwardly. This forces the piston 17 into the piston chamber or lower soap tube 11, ejecting soap by the valve head 14 which, under the pressure placed on the soap by the piston 17, opens to permit the escape of the soap. Only a limited motion of the head 14 is permitted due to the stop 12 and pin 16, but the sliding connection between the shank 15 and piston 17 permits the piston 17 to continue on downwardly through the tube 11 to eject various desired quantities of soap.

On release of the extension 19, spring 23 forces the piston 17 and operating extension 19 back into the elevated position, uncovering the tube 11, whereupon the soap presser 27 presses a further charge of soap down into the piston chamber 11. Thus, repeated charges of soap may be fed to the

brush bristles, as operations require, until the supply of soap within the chamber 9 is exhausted.

While the particular form of brush herein described is well adapted to carry out the objects of the present invention, various modifications and changes may be made without departing from the principles of the invention, and the invention includes all such modifications and changes as come within the scope of the appended claims.

We claim:

1. A brush comprising bristles, a handle connected to said brush having a soap reservoir, a piston chamber leading from said soap reservoir to said bristles, a valve for closing the outlet to said bristles, a piston operating within said piston chamber, an operating member connected with said piston, a spring and means connecting said spring with said piston and said valve whereby said spring normally maintains the valve in the closed position and the piston in the retracted position, and a casing enclosing said spring against entrance of soap from said soap reservoir.

2. A brush comprising bristles, a handle providing a soap reservoir, a reduced piston chamber leading from said reservoir to said bristles, a valve member for closing the outlet in said piston chamber, a piston and operating handle therefor, a sliding connection between said valve and said piston, and a common spring for maintaining the piston in the retracted position and the valve in the closed position.

3. A brush comprising bristles, a handle providing a soap reservoir, a reduced piston chamber leading from said reservoir to said bristles, a valve member for closing the outlet in said piston cham-

ber, a piston and operating handle therefor, a sliding connection between said valve and said piston, a common spring for maintaining the piston in the retracted position and the valve in the closed position, and means entirely enclosing said spring from contact with soap in said reservoir or piston chamber.

4. A brush comprising bristles, a handle providing a soap reservoir, a reduced piston chamber leading from said reservoir to said bristles, a valve member for closing the outlet in said piston chamber, a piston and operating handle therefor, a sliding connection between said valve and said piston, a common spring for maintaining the piston in the retracted position and the valve in the closed position, means entirely enclosing said spring from contact with soap in said reservoir or piston chamber, and means for limiting the extent of opening of the valve whereby the valve travels a less distance than said piston in operation.

5. A brush comprising bristles, a handle providing a main soap reservoir and a piston chamber leading to said bristles, a piston to operate into and out of said piston chamber and provided with an operating handle, a valve for said piston chamber having a limit stop and a shank, a sliding connection between said shank and said piston, a spring normally urging the piston to the retracted position and the valve to the closed position, and a central enclosing casing enclosing said spring from contact with soap in said reservoir or piston chamber.

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