L. H. & G. C. DUNLAP.

FOUNTAIN BRUSH.

APPLICATION FILED OCT. 23, 1916.

1,218,534.

Patented Mar. 6, 1917.

Fig. 1.

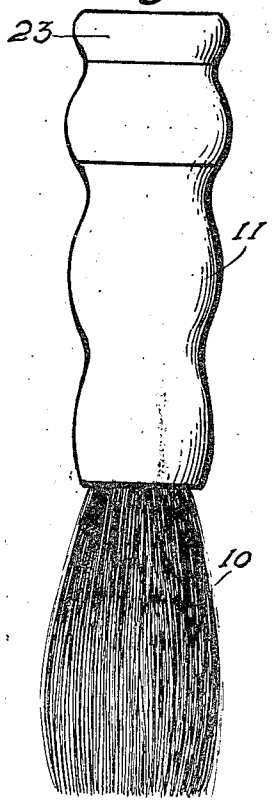


Fig. 2.

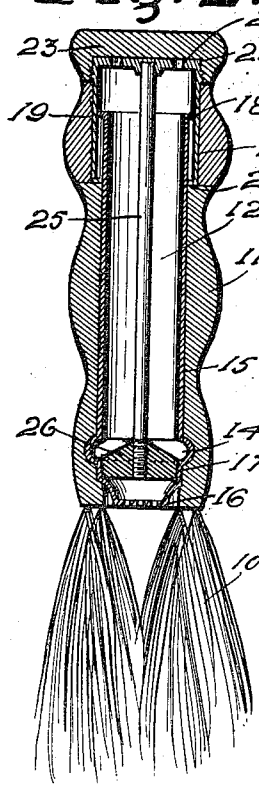


Fig. 3.

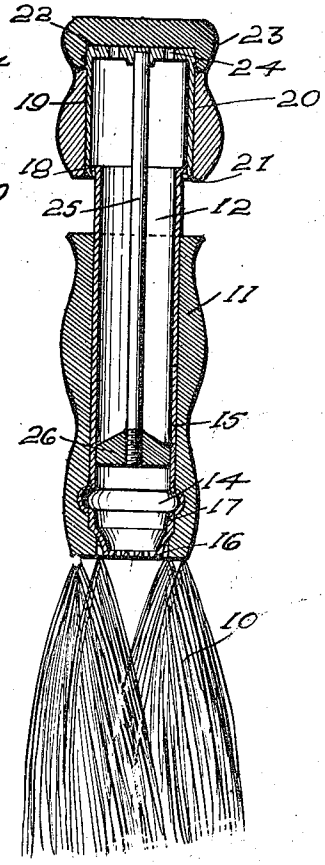
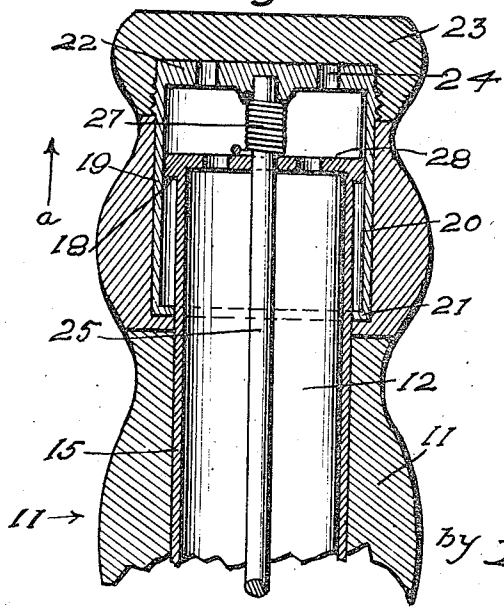


Fig. 4.



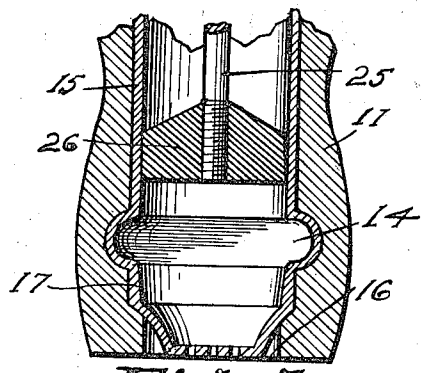


Fig. 5.

INVENTORS

Leo. H. Dunlap

Gustav C. Dunlap

by Hazard Berry & Miller

ATTYS.

UNITED STATES PATENT OFFICE.

LEO H. DUNLAP AND GUSTAV C. DUNLAP, OF LOS ANGELES, CALIFORNIA.

FOUNTAIN-BRUSH.

1,218,534. Specification of Letters Patent. Patented Mar. 6, 1917.

Application filed October 23, 1916. Serial No. 127,145.

To all whom it may concern:

Be it known that we, LEO H. DUNLAP and GUSTAV C. DUNLAP, citizens of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Fountain-Brushes, of which the following is a specification.

This invention relates to a shaving brush and particularly pertains to a brush of the fountain construction.

It is an object of this invention to provide a shaving brush within the handle of which is incorporated a container for shaving soap and to further provide means for discharging the soap from said container into the brush.

Another object is to provide simple means for measuring the quantity of soap to be discharged at each operation of the discharging mechanism, and to insure that there will be no leakage of the remaining soap within the container.

It is a further object to provide a shaving brush and soap container which will be compact in its construction and may be readily operated to produce the results desired without danger of breakage or wear of the parts involved.

Other objects will appear hereinafter.

The invention is illustrated, by way of example, in the accompanying drawings in which:

Figure 1 is a view in side elevation illustrating a shaving brush constructed according to the spirit of the present invention.

Fig. 2 is a view in longitudinal cross section as seen through the brush illustrated in Fig. 1, and particularly discloses the normal closed position of the plunger valve.

Fig. 3 is a view in section similar to that disclosed in Fig. 2 and illustrates the plunger valve in its open position during the discharge operation.

Fig. 4 is a view in vertical section shown on an enlarged scale to illustrate a modified form of container head adapted to be automatically restored to its normal position after actuation.

Fig. 5 is a view in section illustrating the valve portion of the container incorporated within the brush handle and particularly discloses the formation of the measuring channel and the valve seat.

Referring to the drawings more particularly, 10 indicates a brush composed of bristles and suitably set within the end of a handle body 11 so as to be of convenient size for shaving purposes. The body 11 is substantially cylindrical in shape and may be of any desired configuration to provide a suitable grip for the user. The handle body 11 is formed with a longitudinally extending bore 12 which extends the entire length of the member and has an annular channel 14 cut from the wall of the bore at a point adjacent the brush end of the handle. The bore 12 and the channel 14 are lined with a suitable metallic or other non-corrodible material 15. The lower end of the lining is closed to form an end wall 16 which is perforated to permit a liquid soap to flow to the brush when desired. This end portion is of a smaller diameter than the bore of the handle and is enlarged at a point adjacent the measuring groove 14 to form a slightly tapered valve seat 17. The upper end of the lining 15 extends from the end of the handle a distance equal to the movement of the discharge mechanism and is formed with an out-turned flange 18 which limits the movement of a reciprocating head 19 which forms a continuation of the brush handle. This head is lined with a lining 20 having an inturned annular flange 21 adapted to engage the out-turned flange 18 of the lining 15. The lining 20 is cup-shaped and its closed end 22 extends outwardly from the head 19 and is threaded to receive a cap 23 which covers the end of the lining cup 20 and filling perforations 24 which extend through the end of the cup.

Secured to the end 22 of the cup 20 is a plunger rod 25 which extends downwardly into the bore 12 and is fitted at its lower end with a valve member 26 which snugly fits within the lining 15 and may be reciprocated therealong by movement of the head 19. The main portion of the valve member 26 is cylindrical and is of a width slightly greater than the width of the annular recess 14 and is so arranged as to clear the recess when positioned upon its seat 17.

In the modified form of the invention disclosed in Fig. 4 of the drawings, a spring 27 is provided and is secured at one end to the end of the cup 20 and at its other end to an auxiliary end wall 28 formed integral with the lining 15. It will be seen that when the head is drawn outwardly in the direction of the arrow —*a*— and released, it will be instantly restored to its normal position

and cause the valve member 26 to seat upon the seat 17 to positively prevent the flow of liquid to the brush.

In operation, the cap 23 is unscrewed to give access to the lining cup 20 which may be filled with a liquid soap through the perforations 24. This will allow the bore 12 to be entirely filled with the soap, it being understood that the valve member 26 is in the position indicated in Fig. 2 of the drawings during the filling operation. After filling, the cap 23 may be screwed in place and the brush will be ready for use. The soap will flow into the annular recess 14 and when a quantity is desired to be discharged into the brush the head 19 is drawn upwardly and the valve member 26 drawn past the annular channel 14. Due to the fact that the width of the valve body is greater than the width of the recess 14, a given quantity of soap will be trapped within this annular groove and will be emitted therefrom as the valve member rises within the bore to a clearance position in relation to the groove. This will allow the soap to flow through the perforations in the end of lining 15 and pass into the brush. After the quantity of soap contained within the annular recess has passed into the brush, other soap cannot flow to the brush until after the valve member has again been seated upon the valve seat 17 and retracted the second time. This is due to the fact that the soap cannot flow from the container except after having been measured within the annular recess and emitted therefrom as described.

In the modified form of the device a convenient means for automatically restoring the head and valve to their normal positions is provided by the spring 27 which will normally draw the head downwardly toward the handle body 11, as will be understood.

It will thus be seen that the shaving brush, as here set forth and described, is simple in its construction, compact in design, and positively acts to supply a shaving brush with a given quantity of soap at each actuation.

We claim:

1. A shaving brush, comprising a handle, a brush affixed thereto, a longitudinal soap compartment formed within said handle, an annular measuring groove formed around the inner wall of said soap compartment, a valve seat within said compartment and adjacent said groove, and a valve fitting the inner walls of said compartment and adapted to be reciprocated within said compartment, whereby the reciprocation of said valve will act to emit a given quantity of soap from said compartment and discharge it within said brush.

2. A shaving brush, comprising a handle, a brush affixed to the end thereof, a longitudinally extending soap compartment formed in said handle, an annular measuring groove formed in the inner wall of said compartment, a plunger valve for preventing the flow of soap from said compartment, means whereby said valve may be reciprocated to release a measured quantity of soap from the compartment and thereafter discharge it into the brush, and a spring tending to move said valve between said groove and the outlet orifice of said compartment.

3. A shaving brush, comprising a tubular handle, a brush affixed to one end thereof, a filling cap mounted upon the other end thereof and adapted to permit liquid soap to be placed within the tubular handle, a soap measuring recess in the inner wall of said tubular handle, a valve for normally preventing the flow of soap to said brush, means for raising said valve, and automatically acting means whereby the valve will be restored to its normal position and a given quantity of soap emitted from the handle and into the brush.

4. A shaving brush comprising a handle, a brush affixed to the end thereof, a longitudinal soap compartment in said handle having a measuring recess in the wall thereof, a tubular head slidably mounted on said handle, said head being provided with a filling aperture, a reciprocable plunger valve in said compartment and connected to said slidable head, and a closure cap detachably mounted on said head.

5. A shaving brush comprising a handle, a brush affixed to the end thereof, a cylindrical soap compartment in said handle having an annular measuring groove in the wall thereof, a tubular head provided with a filling aperture slidably mounted on the upper end of said handle, a reciprocable plunger valve connected to said head, a closure cap detachably mounted on said head, and a spring tending to move said plunger valve between the outlet orifice of said soap compartment and said measuring groove.

In testimony whereof we have signed our names to this specification.

LEO H. DUNLAP.
GUSTAV C. DUNLAP.