HEAVY LIQUID APPLICATOR

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This invention relates to applicators, and is particularly adapted to applying wavy set solutions to hair that are heavy and sluggish liquids.

An object of the invention is to provide a relatively large casing or reservoir on the applicator that is capable of holding a considerable quantity of liquid without replenishing, and further to provide relatively large orifices in the applying fingers to prevent clogging thereof.

Another feature of the invention is to provide for applying pressure to the applicator to force the liquid therefrom as desired, and further to provide a relatively flat face on the tips of the applying fingers to distribute the liquid with ease and dispatch.

Further objects of the invention are to provide an applicator of the character referred to that is strong, compact and durable, very simple in its method of assembly, highly efficient for its intended purpose, and comparatively inexpensive to manufacture and operate.

With the foregoing and other objects in view, the invention consists of a novel construction, combination and arrangement of parts, as will be hereinafter more specifically described and illustrated in the accompanying drawings, wherein is disclosed an embodiment of the invention, but it is to be understood that changes, variations and modifications may be resorted to without departing from the spirit and scope of the claim hereto appended.

In the drawings, wherein like reference characters denote corresponding parts throughout the several views:—

Figure 1 is a side elevational view of the applicator in accordance with the present invention, partly broken away.

Fig. 2 is a transverse, detailed section taken substantially on the line 2—2 of Fig. 1.

Fig. 3 is a section taken substantially on line 3—3 of Fig. 1.

Fig. 4 is a cross sectional view through one of the applying fingers taken substantially on line 4—4 of Fig. 1.

Figure 5 is a detail sectional view through the air intake portion of the collapsible bulb.

Referring to the drawings in detail, 5 indicates generally the hollow, rigid, elongated casing or reservoir that is formed of hard rubber or other non-corrosive materials. The hair wave set solution to be applied is placed in this casing 5. The casing 5 is closed at its outer end 6 and is open at its inner end as will be seen from the drawings.

The major portion 7 of the casing 5 is substantially ovate in cross section, as illustrated to advantage in Figure 2 of the drawings and the open end portion 8 of the casing is of circular cross section, as best seen in Figure 3 of the drawings.

Formed integral with, and depending from the bottom of the substantially ovate portion of the casing is a series of spaced, rigid, longitudinally aligned, applying fingers 10 that are substantially ovate in cross section. The leading edge of each of the fingers is rather sharp as indicated at 11. The fingers terminate in relatively blunt tips 12, the leading faces 13 of which are flat and inclined.

A relatively large orifice 14 extends thru the axis of these fingers of the series 10, from a point intermediate the inclined leading faces 13, which are spaced from the ends of the fingers, and communicates at its inner end with the hollow interior of the casing 5.

The portion 9 of the casing 5 is internally threaded as at 15 and threadably seated therein is an annular removable plug 16. Only a portion 17 of the periphery of the plug, at the inner end thereof, is threaded and the balance of the periphery is formed to provide a smooth, reduced portion 18 over which telescopes the neck 19 of the flexible, rubber bulb 20. A metal band 21 secures the neck 19 to the reduced portion 18 to prevent the escape of air from the bulb at this point when pressure is applied to the casing 5.

Extending through the axis of the plug 16, is a circular passage 22 about the inner end of which is disposed a valve seat 23. The passage 22 communicates with the bulb 20 and the interior of the casing 5. A ball valve 24 is urged outwardly against the valve seat 23 by the outer end of a helical coil spring 25, the inner end of which is secured to a
cross rod 26 and is anchored in the walls of the plug 16 about the passage 22.

The bulb 20 is provided with an air intake neck 27 which is formed integrally therewith and which extends outwardly therefrom. The air passage in the neck 27 is controlled by a flap check valve 28 which is mounted in the bulb and which is engageable over the inner end of the air intake passage in a manner illustrated to advantage in Figure 5 of the drawings. Obviously, when the bulb 20 is collapsed, the flap check valve 28 will prevent the escape of air through the neck 27 but when the bulb 20 is returning to its normal shape the flap check valve will permit the passage of air thereinto.

It will be apparent that the valve 24 prevents liquid from escaping from the casing 5 into the bulb 20.

It is to be understood that by describing in detail herein any particular form, structure, or arrangement it is not intended to limit the invention beyond the terms of the claim, or the requirements of the prior art.

Having thus described my invention, what I claim as new is:

A heavy liquid applicator comprising an elongated hollow casing closed at one end and open at its other end, a plug threadably secured in said open end, an axial passageway in said plug, said passageway reduced in area toward one end to provide a valve seat, a spring pressed valve disposed within said passageway and normally abutting said seat, a flexible bulb mounted on the plug and having an air intake passage communicating therewith, and a check valve controlling the air passage in a manner to prevent the escape of air therethrough from the bulb.

In testimony whereof I affix my signature.

WILLIAM S. SINCLAIR.