May 19, 1964 G. F. CLAYPOOL 3,133,308

APPLICATOR

Filed March 29, 1962

Fig. 1

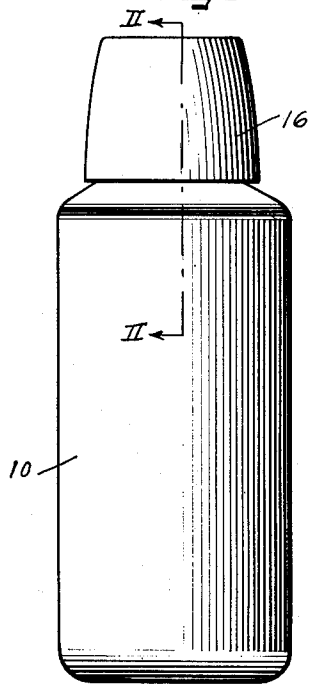


Fig. 2

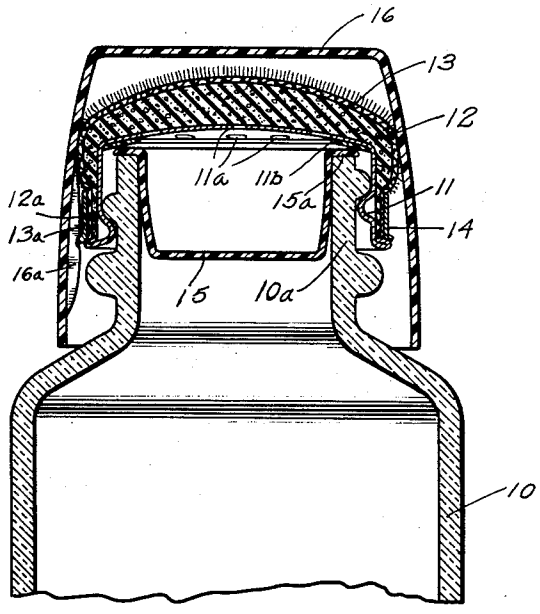
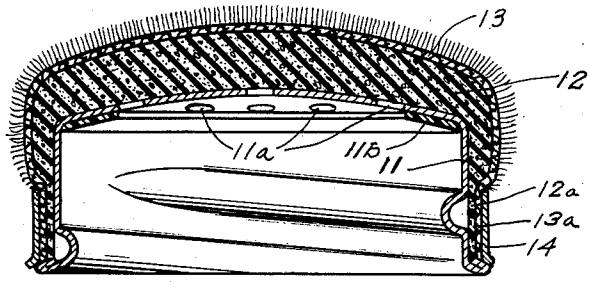


Fig. 3



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APPLICATOR

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This invention pertains to an applicator which is particularly designed for the application of pre-shave lotions to the skin preparatory to the use of an electric shaver. Such lotions are used to condition a beard for operation thereon by the rapidly moving cutter blades in the shaver and usually combine an astringent and lubricating action which make the shaver operate more efficiently, and at the same time leaves the skin of the user in an antiseptic condition.

In order to attain these results, it is desirable that the lotion be evenly applied over the surface to be shaved. Heretofore, this application has usually been effected by spreading the liquid over the skin by the fingers of the user. This has required subsequent hand washing operations, thus preventing convenient use of pre-shave lotions in automobiles or other places which do not have washing facilities, but where the electric razor, which does not require such facilities, conveniently may be used.

It is an object therefore of the present invention to provide an applicator which forms a part of the closure of the container for liquids and which may be conveniently used in application of the contained liquid without such liquid contacting the hands of the user.

It is a further object of this invention to provide such an applicator which includes resilient absorbent means for holding the liquid to be applied during the application procedure and which also includes a distributing means in liquid transfer contact with said absorbent means for applying said liquid to the surface to be treated.

It is also an object of this invention to provide removable means whereby the applicator may be rendered ineffective so that liquid within the container will not escape therefrom when the applicator is not in use as for example, when traveling.

Other and further important objects of this invention will be apparent from the following specification and the accompanying drawings.

On the drawings:

FIG. 1 is an elevation view of a container for liquids equipped with the applicator of this invention with the removable cap member in use.

FIG. 2 is a side view partly in sections showing the applicator of this invention as applied to the liquid container, such as a bottle, designed to contain pre-shave lotion or other liquids.

FIG. 3 is an enlarged section of the present perforated cap, with velvet-like fabric applicator, the resilient porous sponge-like member and a securing ring for holding such parts in association with the container cap.

As shown in the drawings:

The reference numeral **10** indicates a bottle or a similar container for liquids which is provided with an externally threaded neck portion **10a** adapted to threadedly recive a metal cap **11** the end of which is provided with a plurality of portions **11***a* through which the liquid may be discharged from the container or bottle **10**.

Engaging the cap **11** outside of the perforations **11***a* is a sponge-like member **12** which is preferably made of resilient sponge rubber or plastic composition, and which has a depending portion **12***a* extending downwardly alongside the outer wall of the cap **11** for a purpose to be described hereinafter.

Tightly engaged with the outer surface of the porous resilient member **12** is a velvet-like applicator fabric **13** which is in liquid transfer contact with said porous resilient member and which has a depending portion **13***a* extending downwardly around the neck of the cap **11** outside of the depending portion **12***a*.

The resilient porous member **12** and the applicator fabric **13** are held in permanent association with the cap **11** by a band **14** of metal which is forced downwardly and which is of such internal diameter as to compress the depending portions **12***a* and **13***a* into engagement with the wall of the cap **11**, and thus hold such parts in firm association with the cap.

As will be seen from the foregoing, the cap **11** with the porous resilient member **12** and the outer applicator fabric **13** is secured in removable association with the container **10** due to screw-threaded relationship between the cap and the neck **10***a* of said container. In order to prevent liquid from escaping from the container when the applicator is not in use, the cup-like member **15** having a flange **15***a* engaging the end of the neck **10***a* of the container may be removably positioned between the container and the cap held in liquid sealing relationship by screwing the cap down so that the inner face thereof engages said flange **15***a*. To facilitate this sealing, the inner face of the cap **11** may be provided with an annulus washer **11***b* of plastic or similar material which contacts the flange **15***a* when the cap is screwed down. When it is desired to use the applicator, the cap is unscrewed, the member **15** removed, and whereupon liquid may be removed through the perforations **11***a*, as for example by shaking the container so that the liquid flows through those perforations and is absorbed by the porous resilient member **12**. Since the resilient member **12** is in liquid transfer relationship with the appliactor fabric **13**, the latter becomes uniformly moistened with the liquid, and when the applicator fabric **13** is rubbed over the skin, contents of the container **10** are evenly applied to the skin thereby.

The resilient porous member **12** performs an important function. By being resilient, it permits movement of the applicator fabric so that liquid is evenly applied. By affording a temporary storage for the liquid discharged from the container through the perforations **11***a* (as for example, by shaking the container) excess application of liquid is prevented, and at the same time means are provided whereby the applicator fabric **13** is kept uniformly moist.

For purposes of appearance, the entire cap and applicator assembly may be covered when not in use by a removable cup-like cap member **16** which is provided with notched internal ribs **16***a* that engage the band **14** of the container or the outside of the applicator cap or both. This cup-like member **16** also serves the function of preventing undesired contact of the moist applicator fabric with adjacent objects, such for example, when the container and its applicator are placed in a traveling bag after use. It is understood, of course, that before being put away the member **15** would be replaced in sealing position as shown in FIGURE 1.

It will be understood from the foregoing that this invention provides an applicator whereby fluids such for example as pre-electric shaving lotion readily may be applied to the skin without coming in contact in any way with the hands of the user. Furthermore, by providing the resilient porous member **12** the applicator fabric is uniformly moistened and a smooth and even application of the liquid to the skin is assured.

While I have shown and described the embodiment of this invention as particularly designed for use in connection with the applicaton of pre-shave lotion, it is understood that this applicator may have many other uses, and I, therefore, do not purpose limiting the scope of the patent granted hereon otherwise than by the structure defined in the appended claims.

I claim as my invention:

1. In an applicator for liquid,

a container having a screw-threaded neck portion defining an opening,

a one-piece cup-shaped cap of essentially uniform thickness having an axial side wall having a radially inwardly bulged spiral rib comprising a screw thread threadingly engaged with an outside annular wall of said screw-threaded neck portion and having a perforated cup bottom overlying said neck portion through which liquid may be removed from the container,

the radially inwardly bulged spiral rib also defining a radially outwardly opening spiral-shaped groove,

a porous resilient sponge-like member engaging the cap outside the perforations for receiving liquid passing therethrough and having a first depending portion extending over the outer wall of the cap and in lapped engagement over said spiral shaped-groove, a velvet-like applicator fabric engaging the outer surface of said porous resilient member in liquid transfer relationship thereto,

a removable liquid retaining cup-like member being telescoped into said neck portion and having a flange portion engaged in supporting relation on an upper end of said neck portion and with said cup-like member being positioned between the cap and the end of the container neck portion to prevent escape of liquid through said perforations,

said applicator fabric also having a depending portion extending over the outer wall of the cap in lapped relation over said spiral-shaped groove outside of said first depending portion,

a circular band in frictional engagement with said depending portions holding the said resilient member and said applicator fabric snugly against said axial side wall of said cap over said spiral-shaped groove in unitary assembly therewith, and

a removable cup-like cap member telescoped over said applicator fabric and having snap means securing the same in detachable assembly over said applicator fabric.

2. The applicator of claim 1 further characterized by said snap means comprising notched internal ribs detachably engaged with said band securing said cap member in assembly therewith.

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