Oct. 23, 1962 A. T. THOMAS 3,059,652

LIQUID APPLICATOR

Filed Dec. 28, 1959

Fig.1

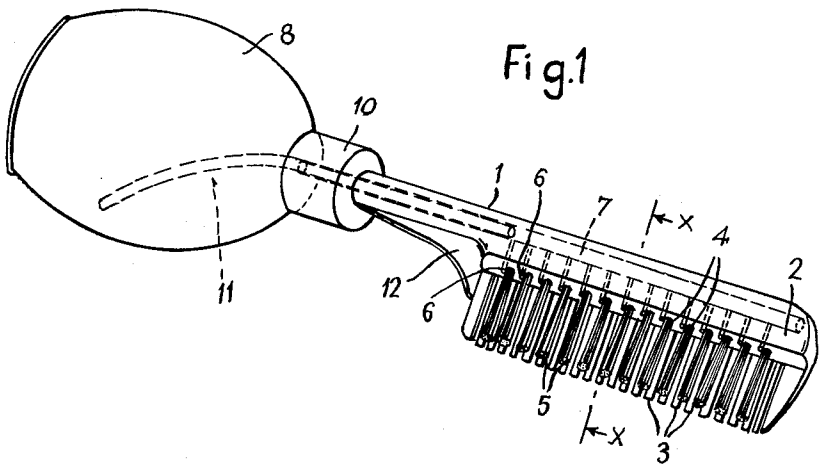



Fig.2

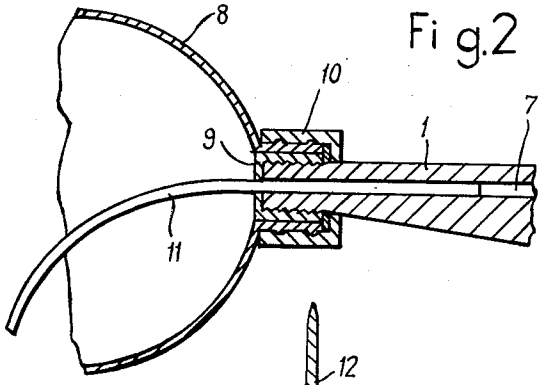
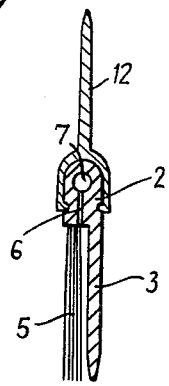



Fig.3




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# LIQUID APPLICATOR

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The present invention relates to an applicator for applying liquids or oils, such as dyes, bleaches or insecticides to the hair or scalp of human beings or animals. It may also be used for applying creams, emulsions, pastes and semi-liquids. For convenience, these materials are herein referred to as "liquids and the like."

The present invention consists in a liquid or like applicator comprising a row of teeth and, arranged therebehind, at least one row of brushes, tufts or the like, means being provided for feeding a liquid or the like to the brushes, tufts or the like. Preferably the brushes or tufts are inserted into a row of apertures formed in a body part which carries the teeth, the rows of teeth and apertures being arranged substantially parallel and spaced slightly away from each other. The liquid or the like may be fed to the brushes or the like through a passage in the said body part which connects with the said apertures or with separate apertures adjacent the brushes or the like.

In order that the invention may be more clearly understood, reference will now be made to the accompanying drawing, in which:

FIG. 1 is a perspective view of one embodiment of the invention,

FIG. 2 is a fragmentary section, on an enlarged scale, showing the connection between the applicator, and the bottle containing the liquid or the like to be applied,

FIG. 3 is a section on the line X—X in FIG. 1 but showing an additional row of teeth.

Referring to the drawing, the applicator comprises a hollow stem or handle **1**, formed from plastic or other suitable material, which is provided at its outer end with a generally rectangular body portion **2** from one edge of which project a plurality of teeth **3**, which are preferably of tapering shape, arranged in a row. Along the bottom face of the body part are formed a plurality of apertures **4** arranged in a row and substantially parallel to and slightly spaced from the row of teeth. Within each aperture is fitted a small brush or tuft **5** made of bristle, nylon, hair or other suitable material, the tuft projecting from the aperture so that it is approximately the same length as the teeth **3**. Adjacent each tuft a further small aperture **6** is also provided in the body part **2**, each of which connects with a passage **7** which extends through the body part **2** and stem **1**, the end of which remote from the teeth is provided with means for attaching a container **8** for liquid or the like. This container **8** may have flexible walls, and conveniently comprises a flexible polythene bottle, so that liquid or the like contained therein can be forced out through the passage **7** and apertures on to the brushes by manually pressing the container.

The end of the stem **1** is conveniently threaded and screws into a bush **9** of metal or other suitable material which pushes into the neck of the bottle **8** and is retained therein by the screwed cap **10**. The bush carries a tube **11**, conveniently of metal or other rigid material, one end of which projects into the passage **7** and the other end of which extends so as to lie adjacent the side of the bottle **8** which is lowermost, when the applicator is in the horizontal position it assumes when in use.

A web **12** may be moulded so as to extend between the stem **1** and the body part **2** and the end tooth thereon.

In use the teeth are drawn through the hair, the liquid or the like being applied to the hair or scalp by the brushes and along the channels made by the teeth of the applicator as it is moved through the hair.



Whilst a particular embodiment has been described it will be understood that various modifications may be made without departing from the scope of the invention. For example, instead of using brushes or tufts, the liquid or the like applying means may comprise liquid or the like permeable pads. Further, the body part carrying the teeth may be separable from the part constituting a handle. Instead of applying the liquid or the like to the tufts through separate apertures, the liquid or the like may be fed thereto through the apertures in which the tufts are fitted, said apertures being connected to the passage **7**.

The brush portion of the applicator can be made wider, for example comprising two or three rows of tufts, or it may comprise a larger number still and may resemble a conventional hair brush having a row of comb teeth along one side thereof and means for feeding the liquid or the like to some or all of the tufts forming the brush.

In another modification the liquid container can be pressurised and a valve provided for controlling the liquid or like supply.

In a further modification, the body part may be provided with a second set of comb teeth projecting therefrom in a direction different from the teeth **3**, for example projecting away from the back of the body part in a direction opposite to the teeth **3**, as indicated at **12** in FIG. 3. This further set of teeth may be moulded integrally with the body part or may be made as a separate unit which is detachably secured to the body part. With this modification the applicator comprises also a normal comb which can be brought into use by merely turning the applicator around in the hand.

I claim:

1. An applicator for applying liquids and the like to the hair or scalp, comprising an elongated body part having a face extending therealong, a stem extending from one end of said body part, a set of teeth integral with said body part, said teeth projecting in a row along and adjacent one edge of said face and forming a comb, a plurality of brush tufts each comprising a bundle of bristles projecting from said face in a direction substantially parallel to said teeth and with the ends of the teeth and tufts substantially level, said tufts being arranged in a single row extending substantially parallel to said row of teeth and spaced a short distance behind said comb teeth, so that bristles from the tufts enter deeply into the parts formed by said teeth in the hair as said comb is passed therethrough, said body part being formed with a plurality of apertures along said face each respectively adjacent a tuft and all said apertures connecting with a common passage through said body part and stem, said common passage opening into the free end of said stem, and a liquid container having a flexible wall connected to said free end of the stem.

2. An applicator as claimed in claim 1 comprising also a second set of comb teeth arranged in a second row along said body part and projecting therefrom in the direction opposite to that in which the tufts and first row of comb teeth project.

3. An applicator as claimed in claim 2, wherein said second row of teeth is carried on a member which is separate from and secured to the body part.

4. An applicator for applying liquids and the like to the hair or scalp, comprising an elongated body part having a face extending therealong, a stem extending from one end of said body part, a set of teeth integral with said body part, said teeth projecting in a row along and adjacent one edge of said face and forming a comb, and said face having a plurality of blind apertures therein arranged in a row substantially parallel to and slightly spaced from the row of teeth, a plurality of brush tufts each comprising a bundle of bristles secured respectively in said blind aper-

tures and projecting from said face in a direction substantially parallel to said teeth, said teeth and tufts each projecting by approximately the same distance from the body part so that their ends are substantially level, and said tufts being so positioned a short distance behind said comb teeth that bristles therefrom enter deeply into the parts formed by said teeth in the hair as said comb is passed therethrough, said body part also being formed with a plurality of further apertures along said face each respectively adjacent a tuft and all said further apertures connecting with a common passage through said body part and stem, said common passage opening into the free end of said stem, a squeeze bottle connected to said free end of the stem, and a pick-up tube connecting with said passage and projecting into said squeeze bottle.



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