

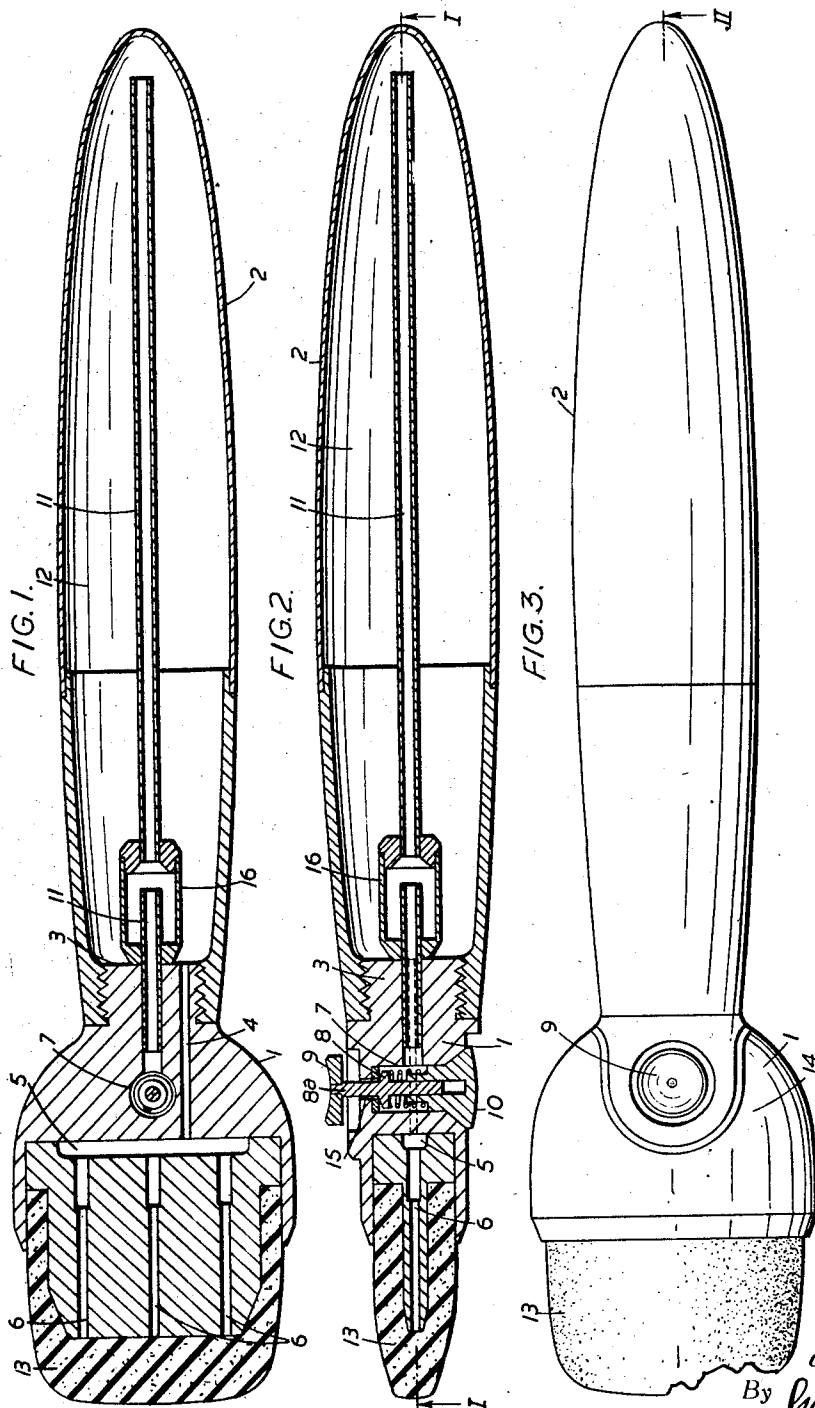
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APPLICATOR WITH RESERVOIR FOR LIQUIDS

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APPLICATOR WITH RESERVOIR FOR LIQUIDS

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This invention relates to means for feeding a brush with liquid and particularly a liquid for dyeing hair of the head or a liquid for bleaching hair, of the type in which the handle of the brush forms a reservoir from which liquid is permitted to flow by admitting air to the reservoir by way of a finger operated valve. It is one of the objects of the invention to provide means for controlling the flow of liquid with great precision by the hand holding the brush and during the actual application of the brush to the head of hair.

Another object of the invention is to provide means preventing liquid to reach the control means for the liquid flow.

According to another feature of the invention, the brush head may have flat surfaces on opposite sides for being held between the thumb and fingers.

These and other objects of the invention will be pointed out in the following description and claims and illustrated in the accompanying drawing which discloses, by way of example, the principle of the invention and preferred modes which have been contemplated for applying said principle.

Referring now more particularly to the drawing:

Figure 1 is a longitudinal section of an applicator on line I—I of Figure 2.

Figure 2 is a longitudinal section on line II—II of Figure 3, and

Figure 3 is a side elevation.

According to one convenient form of the invention, the brush head 1 has a handle 2 detachably fixed thereto and the handle is hollow to form a reservoir for hair dye, hair bleach, or the like. The brush head has a screw threaded stem 3 and the brush handle may be in the form of a transparent tube closed at the outer end and screw threaded at the inner end for engaging the said screwed stem. The brush head has an unobstructed liquid conduit 4 passing lengthwise thereof for communication with the hollow handle when the latter is attached to the brush head. The conduit 4 further communicates with a transverse channel 5 from which pass a number of ducts 6 into the brush proper so that an evenly distributed feed of liquid to the base of the hair dye applying member or applicator 13 is obtained. The diameter of passageway or conduit 4 and of the liquid ducts 6 is approximately the same but comparatively small in respect to channel 5 and tube 11, so that air is normally prevented from entering through ducts 6 into the handle

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reservoir and consequently liquid will not normally be discharged therefrom. The brush head has flat faces 14 on opposite sides so that the brush head can be conveniently held between the fingers and thumb of the hand holding the brush. A valve is mounted in a cylindrical air chamber 7 passing transversely through the brush head, the chamber 7 being of reduced diameter on one side to provide a hole 15 passing through the wall of the chamber and a shoulder forming the valve seat. The valve head 8 is located below the seat and a stem passes therefrom through the hole and such stem has a head or finger piece 9 thereon. A helical spring is located between the valve head 8 and a plug 10 for closing the inner end of the air chamber 7 in the brush head, so that the valve is normally spring pressed into the closed position. The finger piece lies above a flat surface 14 so that it is conveniently placed for being depressed by a finger of the hand holding the brush. Passing from the chamber 7 below the valve seating is an air pipe 11 which passes down the stem of the brush head and into the reservoir 12. When the valve is depressed air can enter through said hole 15 of larger diameter than the stem 3a of the valve into the recess 7 below the seating from which the air pipe passes and into such pipe 11. When therefore the valve is depressed, air is allowed to enter the reservoir permitting liquid to be discharged into the applicator 13. The amount of air allowed to flow into the reservoir is regulated by the valve and thus the discharge of liquid is also regulated and the flow can be instantly stopped by releasing pressure on the head of the valve. Thus by this invention a very delicate control of the feed to the brush head is obtained thereby enabling the operator to apply the hair dye or the like exactly as required. Skillful treatment of the hair can thus be obtained and hair dye or the like can be applied with great safety and great delicacy of control.

The reservoir handle 2 may be transparent and graduated so that the required amount of liquid or proportions of liquids are placed in the handle. A liquid trap 16 is provided in the air tube 11 to trap any liquid which might leak down the tube 11, thereby preventing hair dye reaching the valve which would quickly damage the valve. The brush applying material or applicator 13 may be sponge rubber, or bristles, fixed in a recess in the brush head.

The brush is held in the hand with fingers on the flat side of the brush head opposite the head 9 of the valve so that the thumb can be applied

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to head 9 to manipulate the discharge of hair dye, and therefore the flow of liquid can be controlled whilst the brush is applying dye to the hair of the head, which is very important to secure the necessary delicacy of application of the dye.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. An apparatus for applying hair dye and other liquid substances to a surface; comprising a brush head having an applicator projecting therefrom, a container for receiving liquid fixed to said brush head and forming a handle, an air inlet tube extending from said brush head into the interior of said container and adapted to communicate with the atmosphere, a finger-operated valve mounted on said brush head and adapted to control inlet of air into said inlet tube, a transverse channel in said brush head, an unobstructed conduit arranged independently of said valve and extending for communication between said container and said channel of said brush head, and feed ducts extending between

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said channel and said applicator and in communication with the latter, each duct having a diameter which prevents air passage through said ducts during use of said applicator but permits supply of liquid to said applicator upon entry of air through said valve into said air inlet tube.

2. An apparatus according to claim 1, including a liquid trap incorporated in said air inlet tube to prevent access of liquid through said air inlet tube to said valve.

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