March 26, 1946. L. O. LEACH 2,397,321

LIQUID DISPENSER

Filed Jan. 12, 1945

FIG. 1

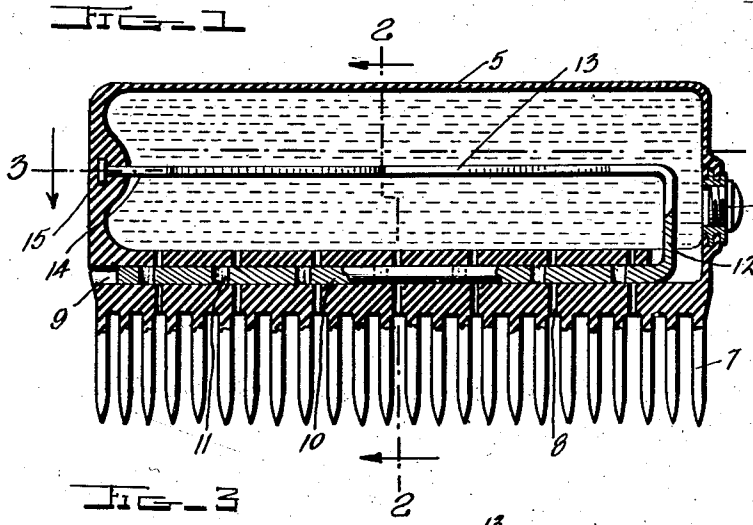


FIG. 2

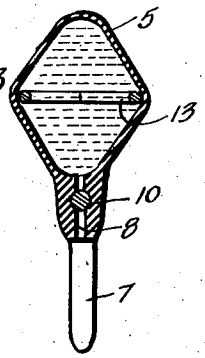


FIG. 3

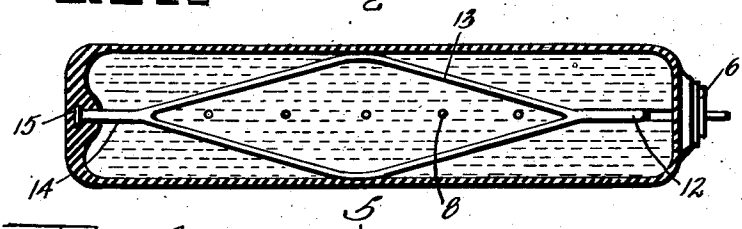


FIG. 4

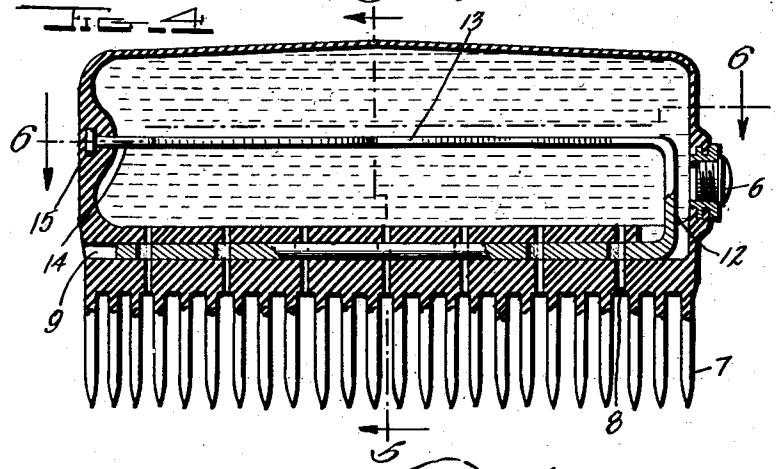
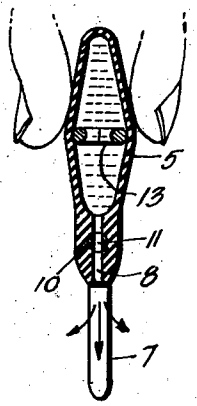


FIG. 5



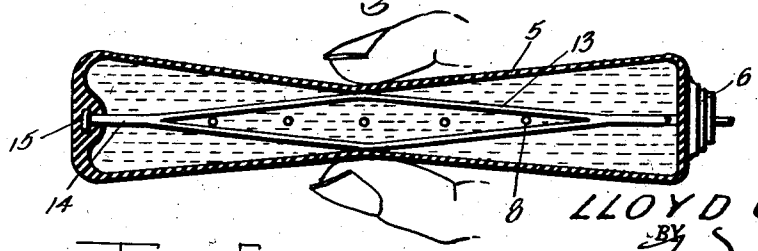


FIG. 6

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LIQUID DISPENSER

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Application January 12, 1945, Serial No. 572,481

4 Claims. (Cl. 132—13)

The present invention relates to new and useful improvements in liquid dispensers designed primarily for use in applying oil, hair tonic and the like to a person's scalp and the invention has for its primary object to provide a device of this character formed as a hair comb and by means of which a desired liquid may be applied to the scalp while combing the hair.

An important object of the present invention is to provide a fountain comb of this character embodying a novel valve construction for regulating the flow of the liquid from the comb.

A still further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in operation, and which at the same time is neat and attractive in appearance and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a longitudinal sectional view.

Figure 2 is a vertical transverse sectional view taken substantially on a line 2—2 of Figure 1.

Figure 3 is a longitudinal sectional view taken substantially on a line 3—3 of Figure 1.

Figure 4 is a longitudinal sectional view showing the valve in open position.

Figure 5 is a vertical transverse sectional view taken substantially on a line 5—5 of Figure 4, and

Figure 6 is a longitudinal sectional view taken substantially on a line 6—6 of Figure 4.

Referring now to the drawing in detail wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates an elongated container preferably constructed of relatively thin rubber or other flexible material and having a filler plug 6 threaded in one end by means of which a suitable liquid, such as oil, hair tonic or the like may be placed in the container.

One edge of the container is formed with a plurality of teeth 7 to form a comb and between certain of the teeth the walls of the container 5 are formed with passages 8 for supplying liquid from the container to the teeth by means of which the liquid may be applied to the scalp of a person while combing the hair.

A longitudinally extending slot 9 is formed in the wall of the container at its edge provided with the teeth 7, the slot intersecting the passages 8 and slidably mounted in the slot 9 is an elongated valve 10 having transversely extending longitudinally spaced openings 11 therein adapted to register with the passages 8 to control communication through said passages.

The slot 9 communicates with the interior of the chamber 5 at one end of the slot and the valve 10 extends laterally at one end as indicated at 12 into the container and is formed with oppositely extending spring arms 13 having intermediate portions bearing against the opposite side walls of the container 5.

The spring arms 13 converge at their ends opposite from the lateral extension 12 and are connected by an extension 14 having a head 15 thereon embedded in the end wall of the container opposite from the plug 6.

The pair of arms 13 combine to form a substantially elliptical spring as will be apparent from an inspection of Figures 3 and 6 of the drawing, the spring being anchored at one end by the head 15 embedded in the end of the container and the other end of the spring being free to cause a sliding movement of the valve 10 during expanding and contracting action of the spring. Accordingly, when the spring is in its expanded position as shown in Figure 3 of the drawing, the openings 11 of the valve 10 will be maintained out of registry with the passages 8 and the passages thus will be closed. However, when the spring is contracted by the pressure of the fingers of a person engaged with the opposite side walls of the container 5 in a manner as indicated in Figure 6 of the drawing, the valve 10 will be moved longitudinally in the slot 9 to bring the openings 11 into registry with the passages 8 whereby to open the passages and permit liquid from the container to flow through the passages between the teeth 7 of the comb.

While I have shown the invention adapted for use as a valve for a fountain comb it will be apparent that the valve structure may be used in conjunction with other types of liquid dispensing devices.

It is believed that the details of construction, manner of operation and advantages of the device will be readily understood from the foregoing without further detailed explanation.

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

1. A liquid dispenser comprising an elongated container having flexible side walls and provided with a passage in its bottom wall, and a valve slidably mounted in the container to open and close said passage and including an elliptical spring formed as a part of the valve and parallel-

ing the valve, said spring being in contact with said side walls and operable upon a collapsing movement of the side walls to flex the spring and slidably actuate the valve.

2. A liquid dispenser comprising an elongated container having flexible side walls and provided with a passage in its bottom wall, and a valve slidably mounted in the container to open and close said passage and including an elliptical spring paralleling the valve and connected at one end thereto, and means for anchoring the other end of the spring in the container, said spring being in contact with said side walls and operable upon a collapsing movement of the side walls to flex the spring and slidably actuate the valve.

3. A fountain comb comprising a liquid container forming the back of the comb and having flexible side walls, passages in the wall of the container communicating with the teeth of the comb, a slot in said wall intersecting the passages, a valve slidably mounted in the slot and having openings adapted to register with said passages to open and close the latter, an elliptical spring paralleling the valve and connected to one end thereto, and means for anchoring the other end of the spring in the container, said spring being in contact with said side walls and operable upon a collapsing movement of the side walls to flex the spring and slidably actuate the valve.

4. A liquid dispenser comprising an elongated container having flexible side walls and a bottom wall coincident with the back of a comb, said bottom wall and coincident comb back being provided with a transverse passage establishing communication between said container and the tooth base on the comb back, a reciprocatory valve slidably mounted in the container bottom wall and coincident comb back and operative intersectingly crosswise of said transverse passage so as to open and close said passage, said valve in one of its positions normally closing said passage, and an elongated spring element within said container paralleling said valve and connected thereto whereby to normally hold the valve yieldably in its passage closing position, said spring element being transversely deformable and constantly in contact with at least one of said container side walls and operable upon a collapsing movement of the side wall to flex and change the length of the spring element and thereby slidably actuate the valve to passage opening position.

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