April 1, 1952 O. A. BRAUN 2,591,125

COMBINATION COMB AND LIQUID DISPENSER

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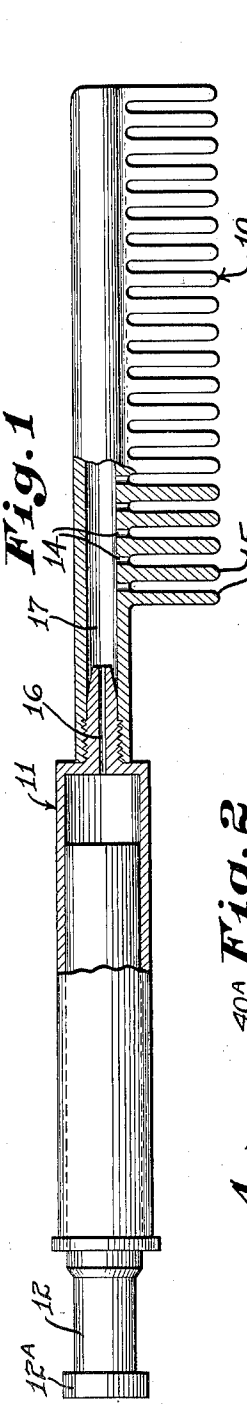


Fig. 1

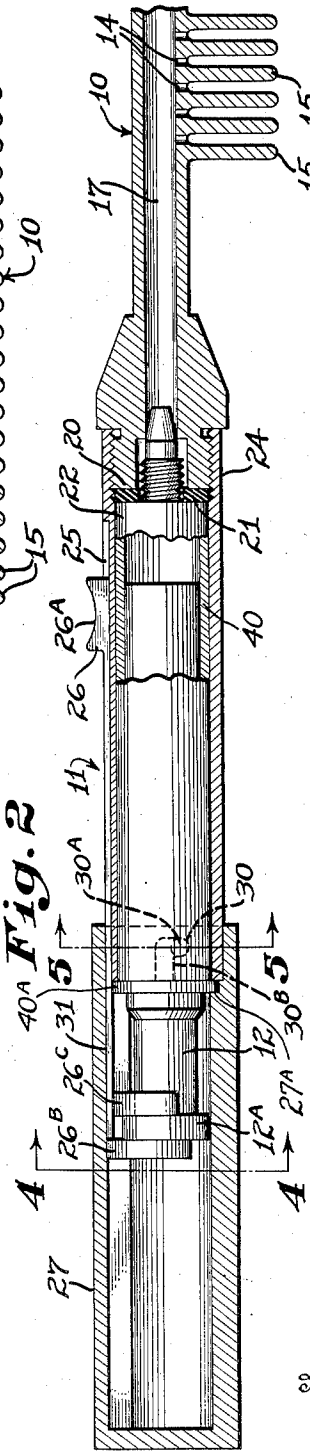


Fig. 2

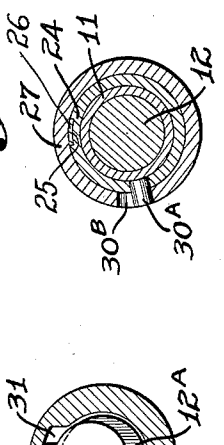


Fig. 5

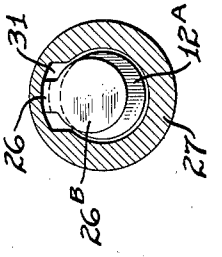


Fig. 4

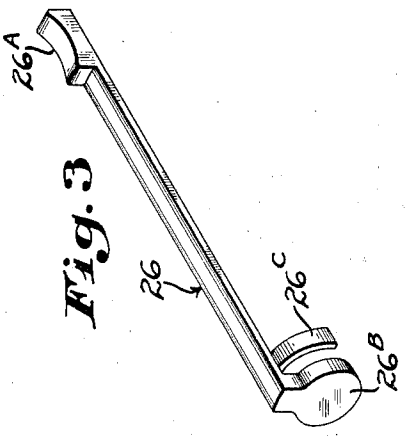


Fig. 3

Inventor

Orville A. Braun

By Lyon & Lyon

Attorneys

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## COMBINATION COMB AND LIQUID DISPENSER

Orville Arthur Braun, Los Angeles, Calif.

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6 Claims. (Cl. 132—13)

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The present invention relates to an improved combination comb and liquid dispenser.

An object of the present invention is to provide an improved fountain comb incorporating an improved handle construction from which liquid may be dispensed in a new and novel manner.

Still another object of the present invention is to provide an improved fountain comb of the character specified which is leak-proof and in which the parts may be manufactured and assembled in accordance with present day mass production methods.

Still a further object of the present invention is to provide an improved fountain comb having a handle arranged as a liquid reservoir from which fluid may be dispensed adjacent the teeth of the comb by improved mechanism having as one of its subsidiary features a structure which may be made of transparent plastic material.

Still a further object of the present invention is to provide an improved combination comb and liquid dispenser which may be used, as desired, with or without an auxiliary housing assuring a leak-proof structure.

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. This invention itself, both as to its organization and manner of operation, together with further objects and advantages thereof, may be best understood by reference to the following description taken in connection with the accompanying drawings in which:

Figure 1 is a view in side elevation, partly in section, of an improved combination liquid dispenser and comb embodying the present invention.

Figure 2 shows a modified combination liquid dispenser and comb embodying the essential features of the comb shown in Figure 1 but mounted in a leak-proof structure embodying other features of the present invention.

Figure 3 is a view in perspective of the manually operable member which is arranged for slidable movement on the combination comb and liquid dispenser shown in Figure 2.

Figures 4 and 5 are sectional views taken respectively on the lines 4—4 and 5—5 in Figure 2.

In the drawings, corresponding parts have identical reference numerals even though such corresponding parts may be shaped somewhat differently in the structures shown in Figures 1 and 2.

In Figure 1, the combination comb and liquid dispenser comprises a comb 10 screw threadedly

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mounted on the syringe type member 11 which has a manually operable piston or plunger member 12, the interior of the syringe 11 within which liquid, such as hair tonic, water or hair dressing in general, may be disposed being in communication with the plurality of channels 14 disposed by the adjacent comb teeth 15. Upon movement of the plunger 12 to the right in Figure 1, liquid flows from the interior of the syringe 11 through the channels 16 and 17, channel 16 being formed in the screw threaded projection of the syringe and channel 17 being formed in the comb itself.

Under some circumstances, the combination comb and liquid dispenser may comprise only those parts shown in Figure 1, but in other circumstances, where it is desirable to assure a leak-proof structure the arrangnement shown in Figure 2 is preferred. In Figure 2, the syringe member having the general reference numeral 11 is screw threadedly connected by means of sleeve 24 which has one of its ends internally threaded to the comb 10, which has an externally threaded projection cooperating with the internal screw threads on the sleeve 24, but in this case the comb 10 is provided with an annular shoulder 20 which forms a seat for the resilient sealing washer 21 arranged to be squeezed by the shoulder 20 and the adjacent end 22 of the tubular member or cylinder 40. The cylinder 40 has an external flange 40A on one end thereof cooperating with an internal shoulder 27A on the outer sleeve member 27 whereby the opposite end of the tubular member 40 may be pressed into engagement with the washer 21. Also, this shoulder 20 has external threads thereon for attachable and detachable connection with the sleeve member 24. This sleeve member 24 is the inner one of a pair of telescoping sleeves 24, 27 and has a rectangular shaped external groove 25 extending longitudinally thereof which serves as a guide for sliding motion of the manually operable member 26. This member 26 is releasably secured at one end thereof to the piston or plunger member 12. For this purpose, the manually operable member 26 has, as shown perhaps best in Figure 3, a thumb grasping portion 26A at one end thereof and at the other end thereof, an abutment 26B adjacent the spring clip 26C, the abutment 26B and integrally formed spring member 26C being spaced to snugly receive therebetween the enlarged head 12A of the plunger member 12. The plunger member 12 itself is covered by the quickly attachably and detachably mounted outer sleeve member 27 which is releasably fastened to the other sleeve member

24 by means of the bayonet type of connection 30 in Figure 2. This sleeve member 27 snugly fits over the inner sleeve member 24 and has an internally grooved part 31 for receiving and guiding the manually operable member 26. Such grooved part 31 extends longitudinally of the outer member 27 and is aligned with the external groove 25 in the sleeve member 24. Thus, the member 26 is guided not only in the groove 25 but also in the internal groove 31 in sleeve member 27.

The bayonet slot 30 may comprise in conventional manner a radially extending projection 30A cooperating with the bayonet slot 30B in sleeve 27.

In the operation of the combination comb and liquid dispenser shown in Figure 1, liquid is initially placed in the syringe member 11 after removing the plunger member 12. Thereafter, the liquid may be dispensed from the syringe 11 while combing the hair by moving the piston or plunger member 12 to the right in Figure 1. Of course, the amount of movement of the plunger 12 determines the amount of fluid flowing from the syringe 11 and out through the channels 14 and between the adjacent comb teeth 15.

The combination comb and liquid dispenser shown in Figure 2 is initially filled in the same manner as is the arrangement shown in Figure 1, but in this case, it is essential to first remove the outer sleeve member 27 by uncoupling the bayonet type of connection 30 and then removing the plunger 12 with or without the manually actuated member 26 attached thereto. After the syringe 11 is filled, the plunger 12 is reinserted in the reservoir of the syringe 11 with the manually actuating member 26 attached thereto and then the outer sleeve member 27 is mounted on the inner sleeve member 24. Thereafter, the liquid may be dispensed from the syringe 11 while combing the hair upon movement of the thumb grasping portion 26A of the manually operable member 26 to the right in Figure 2. The amount of such movement determines, of course, the amount of liquid flowing from the syringe 11 and through the openings 14 between adjacent comb teeth 15.

While the particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made without departing from this invention in its broader aspects and, therefore, the aim in the appended claims is to cover all such changes and modifications as fall within the true spirit and scope of this invention.

I claim:

1. In a combination liquid dispenser and comb structure of the type described, a comb having a fluid channel therein extending to a point in proximity to the spacing between adjacent comb teeth, a syringe comprising an outer tubular member and an inner cooperating plunger arranged to force fluid through said channel under pressure developed upon movement of said plunger, a first sleeve member forming a part of said syringe and snugly receiving said tubular member and releasably connected to said comb, a manually operable member slidably mounted in a longitudinally extending external groove in said sleeve member and attached to said plunger to produce movement thereof, and a second sleeve member telescoped over said first sleeve member and releasably connected thereto, said second sleeve member having an internal longitudinally extending groove to receive said manually operable member with said internal and external grooves aligned.



2. In a combination liquid dispenser and comb of the character described, a comb having a fluid channel therein terminating in a region between adjacent comb teeth, a syringe comprising an outer tubular member with a cooperating plunger member movable therein, and arranged to force fluid through said channel under pressure developed upon movement of said plunger, said syringe being releasably connected to said comb in communication with said channel, a first sleeve forming a part of the syringe and telescoped over said tubular member and releasably secured to said comb, a manually operable member attached to said plunger member and mounted for sliding movement in a longitudinally extending external groove in said first sleeve member, and a second sleeve member telescoped over said first sleeve member and releasably connected thereto, said second sleeve member having an internal longitudinally extending groove therein to receive said manually operable member with said internal and external grooves aligned.

3. In a combination comb and liquid dispenser of the character described, a comb having a fluid channel therein extending to a region between adjacent comb teeth, a syringe having a plunger and arranged to force fluid through said channel under pressure developed upon movement of said plunger, said syringe including a pair of inner and outer telescoped tubular members releasably secured together, a releasable connection between the inner one of said telescoping members and said comb and a manually operable member slidably mounted on said inner one of said tubular members in the longitudinal direction of said inner member and extending within the other outer tubular member to a point where it is releasably secured to the plunger.

4. The invention defined in claim 3 in which said releasable connection comprises an internally threaded projection on said inner tubular member cooperating with an externally threaded portion of said channel.

5. In a combination comb and liquid dispenser of the character described, a comb having a fluid channel therein extending to a region between adjacent comb teeth, a syringe including a movable plunger and arranged to force fluid through said channel under pressure developed upon movement of said plunger, said syringe comprising a pair of releasably secured inner and outer telescoping tubular members which are releasably secured to each other, means securing one end of the inner one of said tubular members to said comb, a manually operable member sliding on the inner one of said tubular members in the longitudinal direction of said inner member and extending into the other outer tubular member to a point where it is releasably secured to said movable plunger.

6. In a combination comb and liquid dispenser of the character described, a comb having a fluid channel therein extending to a region between adjacent comb teeth, a syringe including a movable element arranged to force fluid through said channel under pressure developed upon movement of said element, a tubular member within which said element slides, a washer disposed between one end of said tubular member and said comb, a pair of telescoping sleeves

releasably secured together, the inner one of said telescoping sleeves being releasably connected to said comb, the outer of said sleeves cooperating with the other end of said tubular member to press said one end of said tubular member into engagement with said washer, a manually operable member slidably mounted in a longitudinally extending external groove in said inner telescoping member and slidably mounted in an internal longitudinally extending aligned groove in said outer sleeve member, and said manually operable member being releasably attached to said movable element.

ORVILLE ARTHUR BRAUN.




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