March 12, 1929. B. AMES 1,704,959

FOUNTAIN COMB

Filed May 7, 1927

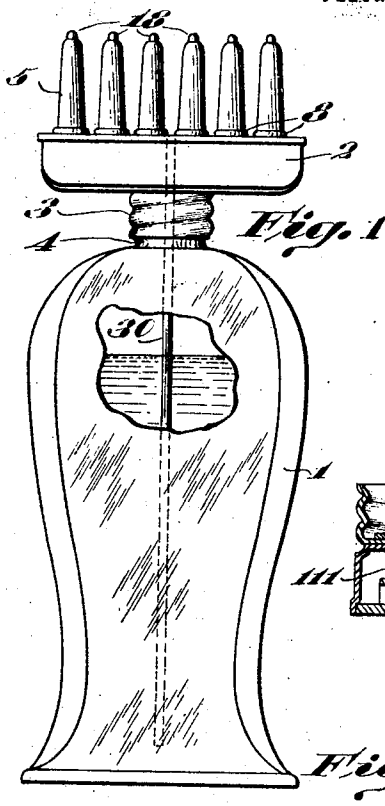


Fig. 1

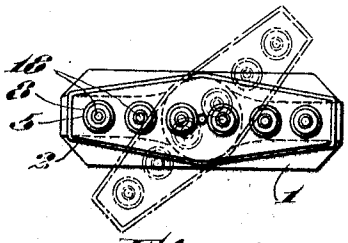


Fig. 3

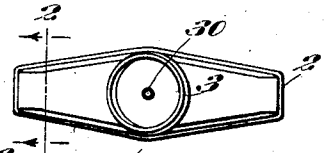


Fig. 4

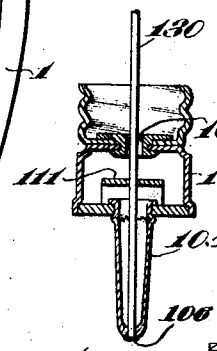


Fig. 8

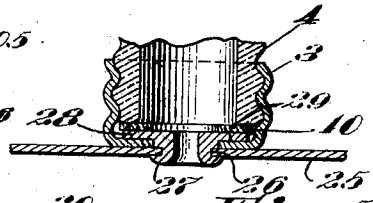


Fig. 5

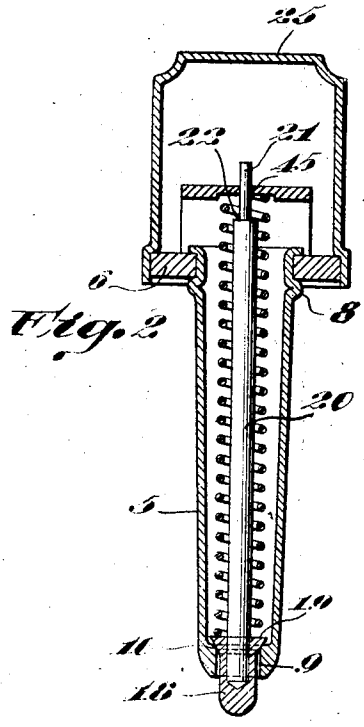


Fig. 2

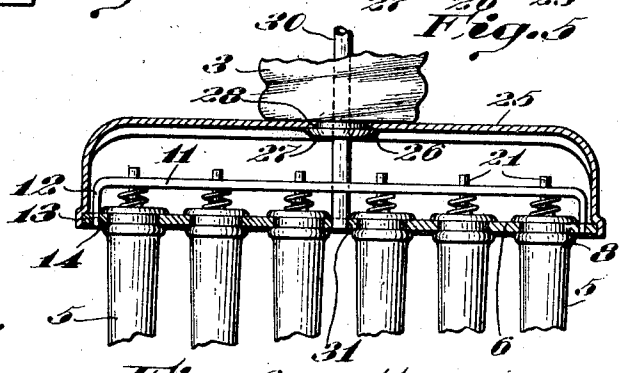


Fig. 6

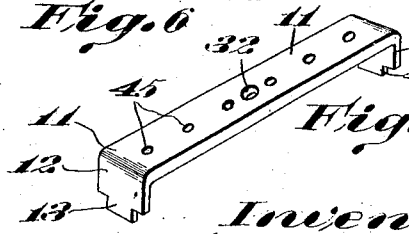


Fig. 7

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UNITED STATES PATENT OFFICE.

BUTLER AMES, OF LOWELL, MASSACHUSETTS.

FOUNTAIN COMB.

Application filed May 7, 1927. Serial No. 189,549.

This invention relates to a fountain comb or a device for treating the hair and scalp with hair tonic, massage cream and the like, and in some respects is an improvement over the comb disclosed in my copending application Serial No. 135,561 filed September 15, 1926.

The invention provides a receptacle for tonic, pomade, or the like in combination with a hollow comb having a plurality of hollow teeth which are arranged normally to prevent the emission of material from the receptacle, but which permit passage of the same when the teeth are engaged with the scalp. A device of this character is devised to apply hair tonic or other liquid to the scalp without soiling the hands of the user, while confining the application of the material closely to the scalp and the roots of the hair.

The present invention is adapted to receive a liquid such as a hair tonic and to permit the free emission of the same without any bubbling or tendency to create a vacuum due to the inverted position of the fountain comb. Furthermore, this device is arranged to have a pleasing appearance which is consistent with the properties of high quality toilet articles. Further objects of the invention pertain to structural features which are particularly advantageous in the manufacture and provision of a satisfactory, pleasing and convenient toilet article of this character at a moderate cost.

The above and further objects and advantageous features of the invention will be apparent to those skilled in the art upon the reading of the subjoined description and claims in conjunction with the accompanying drawings in which

Fig. 1 is a side elevational view of the toilet article;

Fig. 2 is a transverse section of the comb portion of the same on the line 2—2 in Fig. 4;

Fig. 3 is a top plan view of the comb portion showing the same in various positions in relation to the receptacle;

Fig. 4 is a bottom view of the comb portion;

Fig. 5 is a fragmentary section showing the swivel mounting of the comb;

Fig. 6 is a longitudinal section of a portion of improved comb;

Fig. 7 is an elevational detail; and

Fig. 8 is a transverse section of a modified form of the invention.

A toilet article or fountain comb of the class disclosed in the accompanying drawings comprises a receptacle 1 which may be in the form of a tube of ductile material from which massage cream or the like may be extruded, but which preferably, as shown in the accompanying drawings, takes the form of a bottle or jar for the reception of a tonic, pomade, astringent or the like. Oftentimes this bottle or jar may be decorated or fancifully shaped in order to provide an alluring appearance to attract the eye of the prospective purchaser. Consequently, it is desirable to have the comb portion of the device consistent with the exclusive and pleasing appearance of the receptacle 1.

For this purpose I provide a comb portion comprising a hollow outer member 2 formed of polished sheet metal or the like, and having a threaded cap or extension 3 which is adapted to screw upon the neck 4 of the bottle 1. The upper wall 6 of the body portion 2 is provided with a series of outstanding hollow teeth or tines 5. Preferably these tines are tubular sheet metal members of tapered cross section as shown more particularly in Fig. 2, having their inner ends flanged over to engage the inner side of member 2 and being provided with ribs 8 to engage the adjoining outer face thereof. The outer ends of teeth 5 are provided with openings 9, the inner portions of the walls of which merge into tapered valve seats 10.

Located within the body portion 2 of the comb and secured to the wall 6 thereof is the bridge member 11. Preferably this member comprises an elongate strip of sheet metal having downturned end portions 12, the extremities of which are reduced in width to provide tongues 13, Fig. 7, the latter engaging slots 14 at the ends of the member 6 and having their extremities pressed over or welded in place.

Each of the hollow tines 5 is provided with a closure member 18, which has a rounded outer surface normally projecting outwardly from the outer end of the tooth to engage the scalp and an enlarged valve portion 19 with a beveled face normally engaging the valve seat 10. A valve steam 20 is secured to closure member 18 and extends longitudinally through the tooth, having an end por-

tion 21 of restricted diameter adjoining its inner end in order to provide a shoulder 22, Fig. 2. A coil spring preferably surrounds the valve stem 20 and is adapted to press the closure 18 against the valve seat 10. The opposite end of this spring is adapted to engage the bridge member, as disclosed in Figs. 2 and 6, while each of the valve stem extensions 21 pass through suitable apertures 45 in the bridge member. It is thus evident that the bridge comprises a guide for the valve stems and a fixed member to be engaged by the valve springs.

Preferably the member 2 is swivelly mounted upon the threaded extension or cap 3 so that the comb portion may be readily aligned with the plane of the jar or bottle 1 which, as disclosed in Fig. 3, may be of flat or irregular contour, whereby certain transverse dimensions are considerably less than others. Swivel means of this character permits the comb portion to be brought into alignment with the plane of the jar or bottle before the cap is screwed firmly upon the bottle, and thus enhances the pleasing appearance of the article when it is awaiting use. To this end the lower wall 25 of the member 2 is provided with a central aperture 26 about which is firmly flanged the retaining ring 27, Fig. 5. Preferably this ring is provided with an outstanding flange 28 which is somewhat resilient and which swivelly engages the inturned flange 29 upon the threaded extension 3 to permit swivelling of the member 2 in relation to member 3 until the cap is firmly screwed upon the bottle. The comb will then be secured in place due to the clamping of flange 28 between flange 29 of cap 3 and the washer 40 at the end of bottle neck 4, this position of the parts serving to prevent leakage of fluid from the bottle.

In order to permit free flow of a liquid from the container or jar through the hollow comb member, I provide the air duct 30. Preferably this air duct is in the form of a tube having a central passage of restricted diameter which substantially prevents the emission of liquid therethrough even when the jar 1 is inverted.

The mouth of the tube 30 may be located in the central portion of the plate 2, the end of the tube being received in an opening 31 in this tube, Fig. 6. The tube passes through an opening 32 in the bridge member 11 and extends through the central opening in the retaining ring 27, terminating at a point close to the bottom of the receptacle 1, as disclosed in Fig. 1.

Fig. 8 shows an optional form of the invention wherein the comb portion is similar to that disclosed in Figs. 1 and 2 with the exception that the comb is provided with a middle tooth which lacks the spring controlled closure member or valve as disclosed in Fig. 2. In this form of the invention the air tube 130 extends, however, from the bottle or the jar through the opening in the cap 103 and the body portion 102 of the comb into the middle of the intermediate tooth 105 and terminates at the end of this tooth, being held in place by the bridge member 111, corresponding to bridge member 11 of Fig. 6, as well as by its engagement with the wall of tooth 105, as designated by numeral 106. It is evident that tube 130 is designed to permit or to facilitate the passage of air entering about the closure member 18 when the fountain comb is in operative position.

It is thus evident that I have provided a toilet article or fountain comb which is adapted to take its place among toilet articles and preparations of the highest quality, which is inexpensive to manufacture due to the arrangement of the tine members and the bridge 11 and the like. The swivel mounting of the comb portion permits the convenient alignment of that portion and the bottle as disclosed in the full line figure showing of Fig. 3 in contradistinction to the awkward and awry appearance which results from the comb portion at an angle of the plane to the receptacle 1 as shown in the dotted line enclosure of Figure 3.

Furthermore, provision of the air duct permits free flow of the liquid from the receptacle 1 through the hollow teeth 5 when the closures 18 are pressed against the scalp to move the valve portions 19 from their normal positions in engagement with the valve seats 10.

I claim:

1. A comb comprising a hollow body portion and hollow teeth, valves in said teeth adapted to engage the scalp and to permit emission of liquid from the comb, said valves having stems extending longitudinally of the teeth, a bridge extending along the interior of the body portion of the comb adjoining the juncture of the teeth with the same, each of said stems having a shoulder adjoining their ends, said shoulders being engageable with said bridge, and springs normally holding the valves closed.

2. A comb comprising a hollow body portion and hollow teeth, valves in said teeth adapted to engage the scalp and to permit emission of liquid from the comb, said valves having stems extending longitudinally of the teeth, a bridge extending along the interior of the body portion of the comb adjoining the juncture of the teeth with the same, each of said stems having a shoulder adjoining its end, said shoulder being engageable with said bridge, and springs normally holding the valves closed and having their inner ends bearing against said bridge.

3. An article of the class described, comprising a receptacle of unequal transverse dimensions, a hollow comb, and a threaded cap connecting the comb to the bottle and

permitting rotation of the comb, and means independent of the thread of said cap permitting the comb to be aligned with the plane of said receptacle as determined by its unequal transverse dimensions.

4. An article of the class described comprising a receptacle of unequal transverse dimensions, a hollow comb, a threaded cap for securing the comb upon the bottle, said comb being swivelly connected to the cap and being adapted to be clamped in proper alignment with the bottle when the cap is screwed firmly upon the bottle.

5. A device of the class described comprising a receptacle, a comb with hollow teeth secured to the receptacle, means permitting emission of material from said receptacle through said teeth, a bridge within the comb and adjoining the inner ends of the teeth, and an air duct of restricted dimensions mounted upon said comb and projecting into said receptacle, said duct being secured to said bridge and a wall of said comb.

6. An article of the class described comprising a receptacle of unequal transverse dimensions, a hollow comb of unequal transverse dimensions, means for detachably connecting the comb to said receptacle, and means for mounting the comb on said receptacle to permit the comb when operatively attached to said receptacle to be aligned with the plane of said receptacle as determined by their unequal transverse dimensions.

7. An article of the class described comprising a receptacle, a hollow comb, and a member adapted to be attached to said receptacle and rotatably mounted on said comb, the parts being so constructed and arranged that when said member is operatively attached to said receptacle, rotation of the member with respect to said comb is prevented.

8. An article of the class described comprising a receptacle, a hollow comb, a flanged member swivelly mounted in a part of said comb, a cup member adapted to engage a portion of said receptacle, said cup member having an aperture in its bottom to receive said flanged member, the flanges of said flanged member being received within said cup member, whereby rotation of said cup member and said receptacle is permitted relative to said comb when said receptacle is not fully engaged in said cup member, but the parts may be locked in any desired relatively rotated position by the full engagement of said receptacle within said cup member.

Signed by me at Boston, Massachusetts, this 21st day of March 1927.

BUTLER AMES.