Aug. 22, 1950 G. R. CALL 2,519,740

COMBINATION CONVENTIONAL AND BALL POINT TOOTHCOMB

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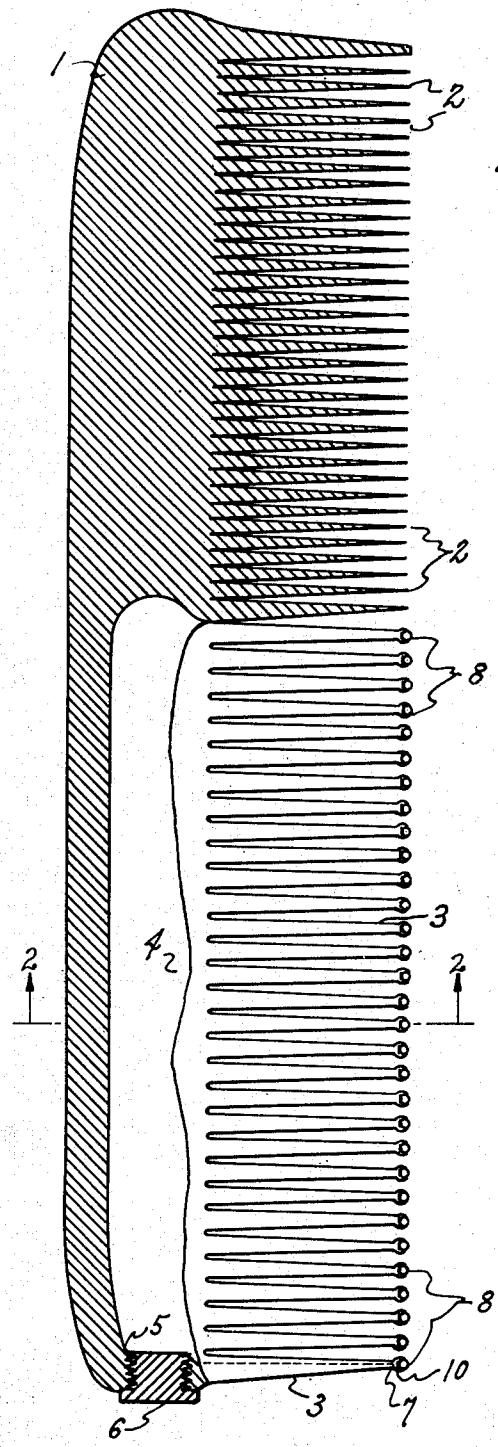


FIG. 1

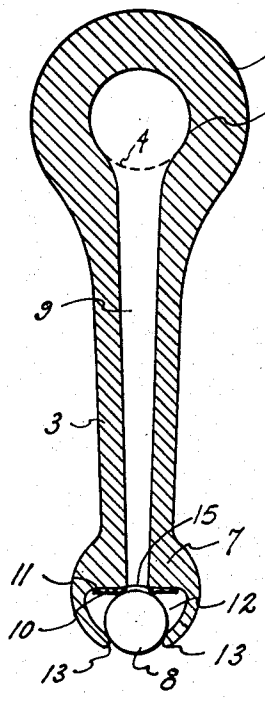


FIG. 2

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COMBINATION CONVENTIONAL AND BALL POINT TOOTH COMB

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5 Claims. (Cl. 132—13)

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This invention relates to a comb and more particularly to a comb of the type having in addition to a series of conventional teeth, a series of hollow teeth having ball points and so connected by cavities in said hollow teeth that there will be means for supplying from a reservoir in the handle of the comb various medicines, oils, tonics, liquids or other ingredients directly to the ball points at the ends of the hollow teeth of the comb.

It is preferable but not necessary that my new combination comb have an equal number of ball point teeth as there are conventional teeth, but this however may be varied as desired. The purpose of this hollow tooth comb is to permit the ingredients from the reservoir to be placed directly upon the skin or scalp, along with means for massaging the scalp and roots of the hair by a rolling motion, while the conventional teeth on the comb may be used for the final combing or placing of the hair.

Among the objects of my invention is to accomplish a means of combing the hair without the scratching or damaging of the scalp by the sharp points of the conventional teeth of combs and in lieu thereof, to permit the treating of the scalp by a rolling motion, or the combing of the hair with the ball points on the end of the hollow teeth of the comb.

A further object is to provide a means of depositing directly on the skin or scalp various oils or medicines or tonics without these ingredients being primarily worked into or deposited in the hair.

A still further object of my invention is to so provide a comb of the type described which will expend a very thin coating of medicine or oils on the scalp by a rolling or rubbing motion.

In this way the comb minimizes any surface scratching of the scalp and accomplishes a direct massaging and medicinal treatment of the scalp by the ball pointed teeth directly at the hair roots or follicles and scalp.

Another object is to provide a comb in which the cavities from the teeth having the ball points, are connected with a reservoir in the handle of the comb, said reservoir having means of opening at the end of the comb where the various medicines, oils, ointments, or tonics may be poured into the reservoir, replaced or changed as desired.

In order to insure the even flow of the oils or other ingredients in the reservoir so that there shall be an even deposit on the scalp or skin, the ball at the end of each hollow tooth is supported

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only along two contact circles whereby the gap between the ball and its supporting contact circles is reduced to a minimum and results in the production of only a thin coating during the combing of the hair or contact of the ball with the scalp, skin, or roots of the hair.

A further object is to provide a comb in which a means is provided for the filling of the reservoir in the handle of the comb with various ingredients which flow freely from the reservoir through the cavities of the various hollow teeth to the ball point of each hollow tooth. In each ball point is a spring leaf in the ball enclosure which has for its purpose the pressing of the ball with proper pressure into contact with the curled forward edge of the ball enclosing walls or cup, and by this process reducing the flow of the various oils or ointments through the cavity in each hollow tooth to a substantial even flow to the inner edge of the ball and hence the movement of the ball against the scalp will deposit said medicines, ointments, or oils evenly and freely upon the skin or scalp.

A still further object is to provide a simple means for either filling or removing the various ingredients from the reservoir in the handle of the comb and the refilling of the reservoir with other types which may be indicated as desirable.

A further object is to provide a means of treatment of the scalp where the various ingredients from the reservoir of the comb shall be deposited directly on the roots of the hair or the scalp with a minimum of depositing of the ingredients in the remaining part of the hair, thus concentrating the medicinal treatment and depositing of ointments at the base or roots of the hair and on the scalp.

My invention further resides in the combination, construction, and arrangement of the parts of the comb as illustrated in the accompanying drawing and in which I have shown a preferred embodiment, but I wish it understood that the same is subject to modification, size, and change without departing from the spirit of my invention.

After the ball point tooth section of the comb has been used in the normal or daily treating of the roots of the hair and the massaging of the scalp, the final parting or placing of the hair may be then completed by the use of the conventional teeth usually constructed on the opposite end of the comb handle. The number of ball point teeth of the comb or the number of conventional teeth on the opposite end of the comb handle may be

of various size or number without departing from the basic principles or objects of my invention.

The general method, mode of operation and construction of the comb will be apparent as the following description proceeds with reference to the accompanying drawing in which:

Figure 1 represents an enlarged longitudinal cross section of the entire comb, partly in elevation, showing the ratio and construction of the ball point teeth in elevation, and the combination of both the conventional and the hollow ball point teeth.

Figure 2 is a cross-sectional view of the comb along line 2—2 of Fig. 1 showing the construction of the hollow ball point teeth and the reservoir in the handle of the comb.

In the embodiment according to Figure 1, the handle of the comb 1 is constructed with a hollow body or reservoir 4 on one end of which is a closing member 6 which is fastened in the handle of the comb by threads 5. The other end of the comb comprises a series of conventional comb teeth 2, for example, and which can be of varying numbers.

The hollow point teeth 3 of which there can be any additional number added, are each connected by cavity 9 at right angles to reservoir 4, thus permitting the ingredients that may be placed in reservoir 4 to freely flow down the cavities of the various teeth 3 to ball 8 at the end of each hollow tooth.

At the end of the channel or cavity in the tooth is a substantial ball shaped depression of the head portion 7 in which is placed a small ball 8 and said ball can freely rotate in any direction. The end portion of the cavity 9 is sufficiently tight and flanged to be able to hold leaf spring 10 which presses against ball 8.

At the end of the reservoir 4 in the handle of the comb 1 is a threaded opening 5 into which is screwed a cap 6 to properly and tightly close the opening to reservoir 4.

As shown in Figure 2, I have provided a thin, narrow, circular leaf spring 10 having a central hole 15 and of less diameter than the diameter of the opening of cavity 12 and so that said leaf or flat spring will be received in and extend across said cavity 12 and seat on the two shoulders 11 which shoulders in effect form the inner end of cavity 12. By constructing the teeth of the comb in this manner the ball is constantly spring urged to contact with the outer circular contact edge 13 while the comb is at rest but the ball is permitted to move slightly away from the contact edge during the act of combing or applying pressure on the scalp or skin so as to allow the passage onto the scalp or skin of the proper ointment, medicine or other liquid which is deposited on the ball surface only through the hole 15 in the leaf spring 10 as the ball rotates during the combing or pressing operation. This rotation thus permits the depositing of an even amount of the various liquid ingredients or oils from the reservoir through each of the hollow teeth to the scalp as said ball 8 of each hollow tooth is placed in motion by the movement of the comb against the skin.

Referring to Figure 2 the main portion of the reservoir 4 is shown in relation to the cross section of the comb 1 which relation may vary in percentage and style as desirable. Through the hollow duct 9 in each hollow tooth of the comb 1 there will flow the various ingredients deposited in the reservoir 4 to the ball 8 which is retained in the cavity 12 at the end of the tooth, as has been more completely described in the paragraph above and in reference to Figure 1.

Very little of the ointment or liquids in the reservoir will penetrate to the outer edge of the ball through cavity 12 when the comb is in a position of rest, due to the functioning of spring 10 and the snugging of the ball 8 against the opening of the outer circular edges 13 to thereby minimize the seepage of ingredients with which the reservoir may be filled until such time when the comb is in actual use.

There is further shown on Figure 1 the threaded section 5 into which may be screwed cap 6 as shown in Figure 1, thus closing the opening in the handle of the comb and sealing in the ingredient in the reservoir until such time as the action of combing or the massaging of the scalp is commenced and then the ingredient will be withdrawn through the cavity 9 in each of the hollow teeth 3 of the comb 1 to the ball 8.

The above description and illustration of the function of one hollow tooth of the comb and its appropriate reference by number to the diagram in both Figure 1 and Figure 2 is by this reference made applicable to all the other ball point teeth of the comb which are shown by reference 3 and the number of said teeth may be of any multiple or number or ratio to the number of the conventional teeth of the comb. It will be apparent to those skilled in the art that there are various modifications possible in the construction of my novel comb and although I have hereinabove described a preferred embodiment, I wish it understood that the same is susceptible of modification in size, and number of teeth, and other changes, without departing from this spirit of my invention.

Having now described my invention, I claim:

1. A fountain comb comprising a comb body having a recess providing a reservoir and a tooth having a channel in communication with said reservoir for passing fluid from said reservoir to the extremity of said tooth, said extremity of the tooth being provided with a cavity forming a shouldered portion at the outlet opening of said channel and an annular inturned flange extending from said shouldered portion, and a ball positioned in said cavity over said shouldered portion and in line with said outlet opening of said channel and rotatably retained in said cavity by said inturned annular flange.

2. A fountain comb comprising a comb body having a recess providing a reservoir and a tooth having a channel in communication with said reservoir for passing fluid from said reservoir to the extremity of the tooth, said extremity of the tooth being provided with a cavity forming a shouldered portion at the outlet opening of said channel and an annular inturned flange extending from said shouldered portion, a leaf spring seated on said shouldered portion, said leaf spring having a hole communicating with said outlet opening of the channel, and a ball positioned against said leaf spring over the hole therein and movably retained in said cavity by said annular inturned flange.

3. A fountain comb comprising a comb body having a recess providing a reservoir and a tooth having a channel in communication with said reservoir for passing fluid from said reservoir to the extremity of the tooth, said extremity of the tooth being provided with a cavity forming a shouldered portion at the outlet opening of said channel and an annular inturned flange extend-

ing from said shouldered portion, a leaf spring seated on said shouldered portion, said leaf spring having a hole communicating with said outlet opening of the channel, said leaf spring overlying said outlet opening and preventing the passage of fluid from said outlet opening except through said hole in the leaf spring, and a ball positioned against said leaf spring over the hole therein and movably retained in said cavity by said annular inturned flange.

4. In a fountain comb comprising a unitary comb body having a portion provided with a group of conventional teeth and a portion having a recess forming a reservoir and provided with a group of hollow teeth each having a channel in communication with said reservoir for passing fluid from said reservoir to the extremity of the hollow tooth, the improvement comprising the extremity of a hollow tooth of said comb provided with a cavity forming a shouldered portion at the outlet opening of the channel therein and an annular inturned flange extending from said shouldered portion, a leaf spring seated on said shouldered portion, said leaf spring having a hole communicating with said outlet opening of the channel, said leaf spring overlying said outlet opening and preventing the passage of fluid from said outlet opening except through said hole in the leaf spring, and a ball positioned against said leaf spring over the hole therein and movably retained in said cavity by said annular inturned flange.

5. In a fountain comb comprising a unitary comb body having a portion provided with a group of conventional teeth and a portion having a recess forming a reservoir and provided with a group of hollow teeth each having a channel in communication with said reservoir for passing fluid from said reservoir to the extremity of the hollow tooth, the improvement comprising the extremity of a hollow tooth of said comb provided with a cavity forming a shouldered portion at the outlet opening of the channel therein and an annular inturned flange extending from said shouldered portion, and a ball positioned in said cavity over said shouldered portion and in line with said outlet opening of said channel and rotatably retained in said cavity by said inturned annular flange.

GEORGE RICHARD CALL.

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