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HAIR BRUSHING AND MASSAGING IMPLEMENT

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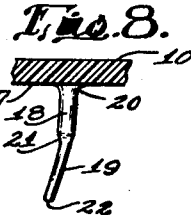
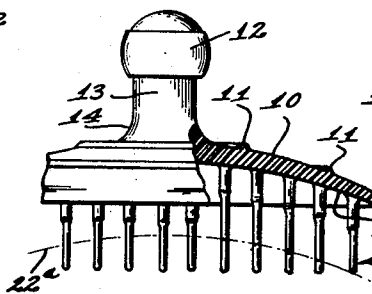
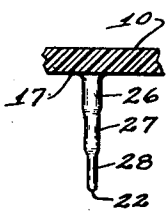
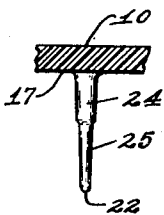
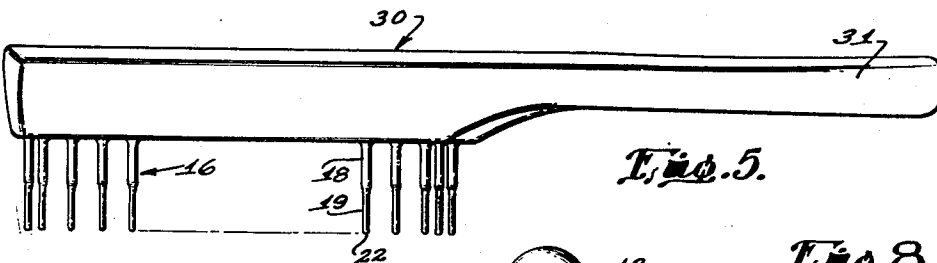
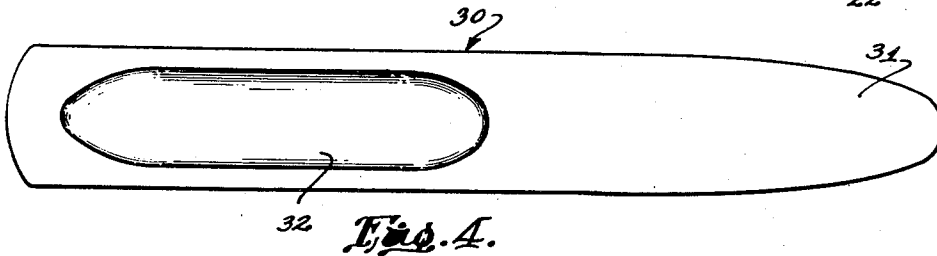
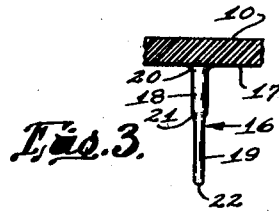
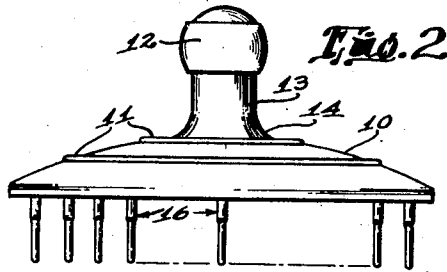
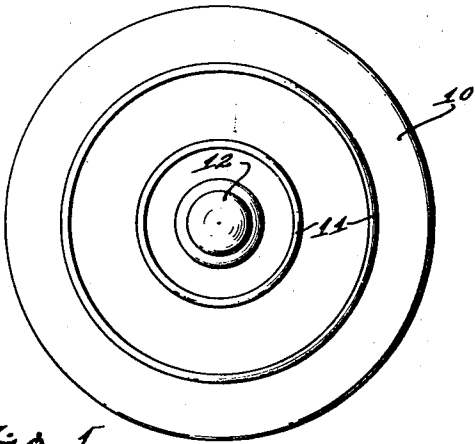


Fig. 6.

Fig. 7.

Fig. 9.

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HAIR BRUSHING AND MASSAGING
IMPLEMENT

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3 Claims. (Cl. 15—187)

1

Our invention relates to implements adapted and designed for use in hair brushing, shampooing, and massaging. An object of the invention is to provide an improved combination shampoo brush, scalp stimulator, hair brush and comb, designed and adapted for efficient care and treatment of the hair and scalp. The invention provides an implement of the character indicated consisting of a plastic, flexible, resilient material including a flexible back or handle with integral bristles or setae (to which the shop term tendrils is herein applied) of the same material and molded integrally with the back.

We have discovered that such an implement consisting of polyethylene (polythene) of suitable design as hereinafter set forth is particularly adapted for the purposes of our invention, possessing valuable properties adapting it to the specified uses.

A further object of the invention is to provide a novel form and design of flexible, resilient bristles or tendrils which when molded integrally with the flexible backing, operate in a novel manner and possess desirable features adapting them for use in hair brushing, shampooing, massaging, and the like.

Among the objects attained is the provision of a hair brushing and massaging implement having tendrils which provide improved penetration through the hair to the scalp and which provide an improved massage action, which are free from dragging on the hair, which are free from any tendency to irritate or scratch the scalp, which are effective in loosening dandruff, which operate to give the hair an annual sheen, which keep the scalp in good condition, which in use make the hair softer and fluffier. The invention provides an article which is easily cleaned and kept clean and provides a hair brushing and massaging implement which, as compared with conventional hair brushes and massaging implements, has a much less tendency to pull the hair out or break it off.

A further object of the invention is to provide a brush which clears the hair of snarls and tangles without pulling. The invention further provides an implement well-adapted for either dry or wet massaging, which is easy to use for either dry or wet hair brushing, and which is suitable and well-adapted for shampooing.

A further object is to provide an implement consisting of a material having chemical and physical properties which contribute to the unique and desirable features of the invention. We have found that polyethylene when molded

2

to the specified forms, has these desirable properties, including its flexibility and resiliency. It is practically unbreakable, is non-toxic, is chemically inert, has low specific gravity, substantially less than unity so that it floats in water, and has low water absorption so that it is unaffected by water or moisture.

Other objects of the invention will appear hereinafter.

Referring to the accompanying drawings:

Fig. 1 is a top plan view of a brush or implement adapted for hair brushing, shampooing, massaging and the like.

Fig. 2 is a side elevation of the same with some of the tendrils omitted.

Fig. 3 is a fragmentary part sectional view showing one of the bristles or tendrils integral with the back of the implement.

Fig. 4 is a top plan view of an implement particularly designed for use as a hair brush.

Fig. 5 is a side elevation of the same with some of the bristles or tendrils omitted.

Figs. 6 and 7 are views similar to Fig. 3 showing modified forms of the bristle or tendril.

Fig. 8 is a view similar to Fig. 3 but showing the tip of a tendril flexed.

Fig. 9 is a fragmentary, part sectional elevation of the implement shown in Figs. 1 and 2.

In Figs. 1, 2, and 3 we have illustrated one form of the invention which is particularly designed to serve as a combination shampoo brush, scalp stimulator, hair brush, and comb. This brush consists of a flexible, resilient, rubber-like material and preferably consists of polyethylene plastic molded in a single piece. It comprises a circular body 10, the upper surface of which is preferably convex and may be formed with a series of concentric annular ribs or bosses 11. At the center of the body 10 is an upwardly extended member comprising a knob 12 integrally united to the body by a neck portion 13 and shoulder 14. The knob may serve as a handle and also assist the operator in holding the implement while in use, the body 10 being grasped by the hand, with the fingers bearing on opposite sides of the neck 13.

The body 10 is preferably of approximately uniform thickness throughout except directly beneath the central knob 12, the under surface of said body being concave, thereby giving flexibility to said body so that it readily conforms to the contour of the scalp or surface which is being treated.

The brush is formed with a multiplicity of bristles in the form of slender, finger-like mem-

3

bers or tendrils 16 formed integral with the body 10 and depending vertically from its under surface 17 (Fig. 3). These tendrils are made of a special conformation, each tendril comprising a plurality of graduated sections or lengths of different diameters, progressively smaller from the body 10 downward. As shown in Fig. 3, the tendril comprises an upper substantially cylindrical section 18 and a lower section or tip 19 of smaller diameter. The upper section 18 is integrally united to the body 10 by a rounded or upwardly flared shoulder portion 20. A tapered shoulder 21 is likewise provided at the junction of the sections 18 and 19. The lower section 19 is formed with a rounded tip end 22.

The tendrils 16 are preferably arranged in concentric circles and uniformly spaced in the circles, the spacing of the said rings preferably being substantially equal to the spacing of the tendrils in each ring. The tendrils may be of equal or substantially equal length so that the tip ends 22 are arranged in an upwardly convex surface, or imaginary surface, indicated by the broken line 22a (Fig 9) parallel with the under surface of the body 10.

Fig. 6 illustrates a somewhat modified form of tendril wherein the upper section 24 is slightly tapered or downwardly convergent. The lower section 25 is also shown as slightly tapered.

Fig. 7 illustrates a form of tendril which comprises three sections or lengths 26, 27, and 28 of different diameters stepped downward or progressively smaller from the body 10 downward. The tendril preferably consists of at least three sections of stepped diameters as shown in Fig. 7, and it will be understood that it may comprise a greater number, depending upon the flexibility and resiliency desired and suited to the particular use for which the implement is designed. The length of the individual sections 26, 27, and 28 of the tendrils, their diameters, the length of each tendril as a whole, and the relative lengths of the different sections of the tendrils are all factors which play a part determining the resiliency, flexibility, stiffness, penetrating ability, and smoothness of action.

For brushing or shampooing of the hair and for effective massage and stimulation of the scalp, the brushing tendrils should be of sufficient stiffness to penetrate through the hair while the lower end portions or massage tips of the tendrils have sufficient smoothness and flexibility to practically eliminate scalp and skin irritation. The flexible tips 28 with their rounded ends 22 are particularly designed to minimize or eliminate scratching or injury to the scalp. The upper sections of the tendrils being of larger diameter, give sufficient stiffness and resiliency to insure effective penetration of the hair, and also to insure their return to normal vertical position following each stroke of the brush through the hair.

Fig. 8 illustrates a tendril similar to that shown in Fig. 3 but with the tendril deflected or bent to one side by the resistance which it meets during the brushing or massaging stroke. The upper section 18 is deflected through a comparatively slight angle, the bending taking place at the shoulder 20 while the body of the section 18 remains approximately or substantially straight. The lower section or tip 19 is flexed at the shoulder 21 through a comparatively large angle. The heavy sloping shoulder 20 at the base of the section 18 and the corresponding sloping shoulder 21 at the junction of the sections 18 and 19, serve effectively as wear resistance

4

against the repeated flexing of the tendril and also contribute to tendril stiffness and springiness. The lower end section or tip is designed to provide the massaging flexibility desired, while the other sections between the tip and the base serve to support the massaging tip and impart the desired stiffness or springiness to the tendril as a whole. It will be seen that the type of tendril construction above described permits varying degrees of hair brush stiffness or springiness without a corresponding and objectionable increase in the stiffness or harshness of the tip end, such as would normally occur in the use of a tendril or bristle of uniform diameter, or one of a graduating taper design.

Because of the smooth, rounded ends of the tendrils, the flexibility concentrated in the massaging tips, and the reduction of the drag or pull on the hair owing to such construction, the article is highly efficient when used as a scalp massage brush. The scalp is gently and properly stimulated without objectionable scalp or skin irritations, such as are usually noticeable after the use of ordinary stiff bristled brushes. In this connection, it should be observed that the polyethylene has a low co-efficient of friction which materially aids in the smooth and efficient operation. In this respect the material differs greatly from soft rubber and is free from the pulling action on the hair which characterizes a rubber brush. When the implement is used for brushing long hair, the design of the tendrils with their flexible tips provides an untangling and smoothing action on the hair without the pulling action which takes place with an ordinary brush.

Figs. 4 and 5 illustrate an implement which is particularly designed for use as a hair brush.

It comprises a body 30 extended to form a handle 31. Bristles or tendrils 16 are formed integrally with said body and may be of any of the conformations already described in connection with the implement shown in Figs. 1 and 2. The body 30, as shown, is formed with a recess or concavity 32. The tendrils 16 are arranged in straight rows with substantially uniform spacing throughout. This form of implement is designed primarily for use as a hair brush or combined brush and comb. It can also be used effectively as a massaging implement, having desirable characteristics for this purpose, as above pointed out in connection with the circular form of implement.

Modifications other than those herein illustrated and described may be resorted to within the spirit and scope of our invention.

We claim:

1. A brushing and massaging implement comprising a polyethylene body and, integrally formed therewith, a plurality of polyethylene bristle members depending at closely spaced intervals, each of said bristle members having a slender flexible terminal end portion of substantial length terminating with a rounded end for contacting the scalp or the like skin region of the user and an integrally formed enlarged inner portion having a substantially uniform cross-section.

2. A brushing and massaging implement comprising a plurality of polyethylene bristle members and an integral polyethylene body mounting said bristle members on a face thereof and backing the same against axial movement, each of said polyethylene bristle members having a relatively flexible slender substantially uniformly

cross-sectional elongated terminal end portion terminating with a rounded end for contacting the region massaged and a relatively inflexible enlarged substantially uniformly cross-sectioned inner portion integrally merged with the relatively flexible terminal end portion at a tapered shoulder at the root of the end portion.

3. A brush and massaging implement comprising a polyethylene body and a multiplicity of polyethylene bristle members integral with and depending from said body, each of said bristle members being united to said body by an upwardly flared tapered shoulder portion and comprising a plurality of coaxial cylindrical lengths or sections of different and constant diameters successively smaller in a downward direction, the diameter of each successive section being not less than approximately one-half that of the preceding section, the length of each section being several times its diameter, the terminal end section of each being relatively flexible and terminating with a rounded end.

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