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BRUSH AND THE BRISTLE FORMED THEREWITH

Original Filed Feb. 13, 1948

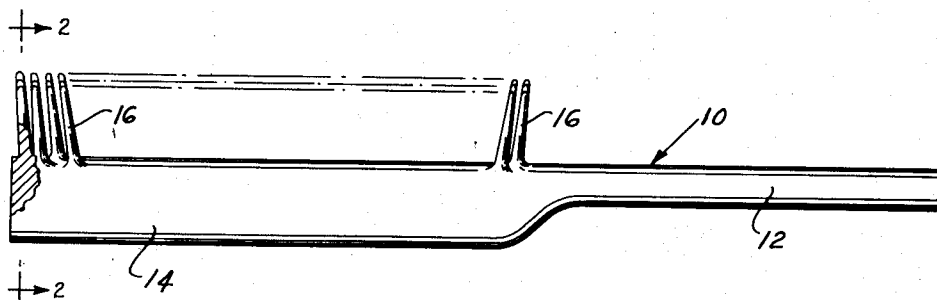


FIG. 1

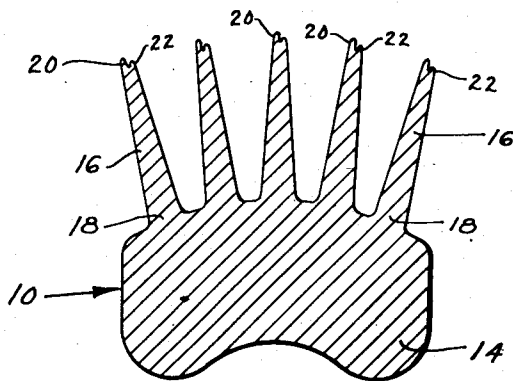


FIG. 2

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BRUSH AND THE BRISTLE FORMED
THEREWITH

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Original application February 13, 1948, Serial No.
8,098. Divided and this application May 20,
1950, Serial No. 163,184

6 Claims. (Cl. 15—187)

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The present invention relates to a brush and the bristle formed therewith. The present application is a division of our co-pending application, Ser. No. 8,098, filed February 13, 1948, now Patent No. 2,631,369, December 16, 1952, for Hair Brush and Method of Making the Same.

In the prior art, it was customary to make the bristles of certain hair brushes from a plurality of fibers, the lengths of which varied in the bristle which they formed. By the use of fibers having different lengths, it was sought to reach different levels of hair with each bristle when the hair was brushed, it having been found that when fibers of the same length formed the bristles of the brush, the bristles did not penetrate to the scalp and the hair was not thoroughly brushed out.

The present invention therefore contemplates the provision of an artificial brush which is made from a suitable plastic material or any other pliable material and which bristles comprise a plurality of integral elements, preferably two in number, the ends of which elements are located at different heights from the handle or back of the brush.

Thus, by the invention contemplated here, a bristle is provided having at least one element long enough to penetrate to the scalp of the user and at least one shorter element which serves to brush the top level of the hair on the user's head.

In certain brushes of the prior art, the bristles thereof (sometimes referred to as pins) were made from metal and thus were relatively rigid.

The present invention contemplates the provision of a brush that is made in one piece from a plastic material and the bristles of which, because of the comparative cross sections of the bristle and the base of the brush, may bend on the base to give a massaging action by the brushing movement.

The present invention still further contemplates the manufacture by an injection molding process, of a brush, all elements of which are integral and made from the same plastic resin and in which the handle and base are relatively rigid because of the thicker cross-section and larger dimensions whereas, the integral bristles, although made from the same material but because of the thinner cross section and relatively smaller dimensions are comparatively flexible.

To make these, other and further objects and advantages clear and to enable those skilled in the art so fully to comprehend the underlying features of our invention and the other and further objects thereof so that they may embody the same in any modifications in the structure and

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relative arrangement of the parts thereof and the steps of the method or either contemplated by our invention, as a part of this disclosure, drawings depicting certain forms of our invention have been annexed hereto, in which drawings

Fig. 1 is a longitudinal elevation of a brush according to our invention, partially in section and bristles being omitted for ease in drawing

Fig. 2 is a section on the line 2—2 of Fig. 1.

Referring now to the drawing, the brush 10 may be formed in an injection molding apparatus from a suitable plastic material.

The entire brush 10 including the handle 12, the back or base 14 and the bristles 16 are formed in one piece as an integral unit from the same plastic material. In practice, we have found that polyethylene resins or polythene resins have provided excellent results.

The desired characteristic of flexibility of the bristles 16, we have found, may be obtained by making the bristle relatively thin and narrow in cross section as compared with the comparatively thicker lateral and longitudinal cross sections of the back 14 of the brush from which they extend upward as an integral part thereof.

The brush is made from a plastic resin having the characteristic of being flexible when made in a thin or narrow section and rigid when made in a thick section, which characteristic is provided by the resins referred to above.

The injection dyes or the injection apparatus need not be shown since they are conventional and are shaped so that a brush having a relatively thick handle 12 and base 14 from the latter of which relatively thin or narrow bristles 16 extend, is formed.

As the brush is passed through the hair of the user, by reason of its relatively thin cross section as compared with the thicker lateral or longitudinal cross section of the base 14 of the brush from which it extends and the characteristic property of the plastic resin chosen, which we have described, the bristles 16 of the brush bend and flex primarily at their bases 18 to properly brush the hair, and massage the scalp.

It will of course be understood that the handle 12 may be omitted and a brush having only a base and the bristles extending therefrom formed.

The upper end of each bristle is formed in the shape of preferably two spaced fingers, one 20 of which is longer than the other 22. We have found that satisfactory results are obtained when the finger 20 is made approximately one-eighth of an inch longer than the other finger.

Because each bristle 16 is provided with fingers

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of different length, the bristles penetrate to all levels of the hair and to the scalp as the hair is brushed.

The base 14 of the brush 10 preferably has imparted to it a concave in cross section shape so that it will flex with the bristles which extend from it as an integral part thereof.

While we have described in detail a specific embodiment of our invention, we do not intend to be limited thereto but intend to claim the invention as broadly as the following claims and the state of the prior art will permit, since further modifications therefore will now readily occur to those skilled in the art.

We claim:

1. A brush comprising a back portion and bristles integrally extending therefrom, said back and bristles being made of plastic material as a single member, said bristles having at the ends thereof a pair of spaced fingers.

2. A brush comprising a back portion and bristles integrally extending therefrom, said back and bristles being made of plastic material as a single member, said bristles having at the ends thereof a pair of spaced fingers, one finger of each bristle extending beyond the other finger of said bristle.

3. A one piece brush of plastic material comprising a back member and bristles extending therefrom and formed with spaced fingers at their outer ends.

4. A one piece brush of plastic material comprising a back member and bristles extending therefrom and formed with spaced fingers at their outer ends, one finger of each bristle extending beyond another finger of said bristle.

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5. A brush comprising a back portion and bristles integrally extending therefrom said back and bristles being made of plastic material as a single member, said bristles having at the ends thereof a pair of spaced fingers, one finger of each bristle extending beyond the other finger of said bristle, said bristles tapering longitudinally and being thicker nearer the back and becoming thinner toward their outer ends.

6. A brush comprising a back portion and bristles integrally extending therefrom said back and bristles being made of plastic material as a single member, said bristles having at the ends thereof a pair of spaced fingers, one finger of each bristle extending beyond the other finger of said bristle, said bristles tapering longitudinally and being thicker nearer the back and becoming thinner toward their outer ends, said back having a concave underside and a convex upper side.

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