The present invention relates to hair brushes. An object of this invention is to provide novel and improved hair brushes affording mechanical action to penetrate thick tresses, dig to the scalp and cause drag on the hair and scalp to accomplish the effects of massage and which brushes by their automatic manipulations give users a new hair-brushing sensation.

It is to be noted that a hair grows from the bottom of a little pit or follicle; the part which lies within the follicle being known as the root. Connected with each follicle are small muscles of plain muscular tissue. The ducts of what are known as the sebaceous glands, open into the hair-follicles and secrete a fatty oily substance (sebum) which lines the discharge into the hair-follicles, which action in the opinion of medical authority occurs upon actuation of said muscles. The sebum lubricates the hairs and renders them glossy. All hair, except at the roots, are not alive.

Therefore, the action of a brush passed through the hair merely wiped the hair and scratched the scalp. The wiping of the hair spread any oily substance, evenly therealong. Only the dead part of the hair got any action from the brushing. The live part got none.

It is therefore another object of this invention to provide a novel and improved hair brush which will agitate the root of the hair and its associated muscle tissue and envision to bring additional sebum to the hair and thus, after repeated brushings, there would be a material increase in the luster of the hair.

If hairs are tightly entwined or knotted, would any attempt to brush them cause them to be pulled. Brushing hair through which a comb can easily be passed, does not pull the hair. There is nothing to intercept the brush bristles and there is nothing to make the brush bristles to tug the hair. There is nothing to bring exercise to the hair roots and their environments. Still a further object, therefore to provide a novel and improved hair brush of the character described, which is easily cleanable, simple in construction, reason-able in cost to manufacture and efficient in carrying out the purpose for which it is designed.

Other object and advantages will become apparent as this disclosure proceeds.

For one practice of this invention, the brush back consists of a central resilient elongated spine in extension of a handle and having a series of closely spaced ribs extending laterally therefrom in the manner of fingers from its opposite side edges and there brush tufts extending from the undersides of said spine and its ribs. Said spine is flexible in the general plane of the fingers and in directions perpendicular to said plane as well to some degree in torsion.

It will be evident from the drawings in detail several embodiments of this invention, for which I shall refer to the accompanying drawings forming part of this specification, in which drawings, similar characters of reference indicate corresponding parts in all the views.

FIG. 1 is a perspective view of a hair brush embodying the teachings of this invention.

FIGS. 2, 3 and 4 are pictorial views showing the brush in use and various conditions assumed by its structure due to its movement or handle manipulation. These views are drawn to a reduced scale.

FIG. 5 shows the underside of a modified form of brush back including the sockets in the spine and ribs in which bristle tufts are to be mounted. FIG. 6 shows the upper side of another form of brush back.

FIG. 7 shows the upper side of still another brush back design.

FIGS. 5-7 are drawn to a smaller scale than that of FIG. 1.

In the drawing, the numeral 15 designates generally a hair brush of the type comprising a brush back indicated generally by the numeral 16 having a handle 17 integral therewith. This unitary member may be of any suitable flexible plastic as polypropylene for instance. Said brush back consists of a spine element 18 which is centrally of the handle and extends therefrom as a canti-lever having a series of ribs or fingers which are closely spaced and extend laterally therefrom from both side faces thereof. All the elements comprising said brush back and the handle are generally coplanar. The fingers along side of said spine element 18 are designated by the numerals 19-24 respectively while the fingers along the other side are denoted by the numerals 19'-24' respectively. Said spine and all its fingers, on their undersurface, have closely spaced sockets as in the manner shown in the modified embodiment of FIG. 5 and indicated by the numeral 25. Even the handle part may have some sockets 26, into all of which sockets are mounted bristle tufts as 27, to extend therefrom. The numeral 28 denotes a hole which may be provided through the handle portion. The spine element 18 is bendable and resiliently flexed when moved so its distal end moves sidewise in either direction, up or down and even permits some torsional stressing thereof for twisting movement. This brush of FIG. 1, has its fingers arranged in pairs which as shown, diverge towards the handle 17. In the embodiment shown in FIG. 6, corresponding fingers as indicated at 29, 29' are in alignment and perpendicular to the spine element 30. In FIG. 7, the fingers as shown, are arranged in a combination of such relationships with respect to the spine element 31 thereof.

The several embodiments are given as examples of various designs the brush may have, in order to function in accordance with this invention.

It is evident that the extensive openwork of the brush back offers easy cleaning of the entire brush structure by merely allowing a flow of water therethrough, but such openwork has been provided to allow various other manipulations and thus accomplish various actions of the brush, which will be explained by referring to the FIGS. 2, 3 and 4 of the drawing. In FIG. 2, the bristles have been dug into the hair at the back of the head 33 and the brush 15 is being moved downwardly as indicated by the arrow "A." What happens, is that the spine element 18 becomes bent so it is convex on its leading side whereby the tips of the fingers of the series 19-24 will spread apart and of course, said spine element 18 will be concave at its trailing side, hence the tips of the fingers of the series 19'-24' will come towards each other, causing the bristle tufts to pinch the hair between them, for the bristles are of generally stiff material. The attendant movement of the brush will cause the pinched hair to be tagged, dragged or otherwise handled. The thicker the hair mass is, the sharper will be the curvature assumed by the spine element 18. In FIG. 3, upon upward movement of the brush as indicated by the arrow "B," or in any direction for that matter, the tips of the brush fingers on the trailing side will always approach each other and hence pull the hair, by the action of their bristles. In FIG. 5, the pinching and pulling of the hair is by action
of the series 19-24. Augmented penetrating action is imparted to the brush as well as to the pressure of the bristles against the scalp, by bending the handle 17 away from the head as in FIG. 4, and further brushing effectiveness can be had by a twist of the wrist to twist the handle a bit as it indicated by the rotational arrow "C" in FIG. 4. Of course, when the brush is free of flexing forces, it will assume its normal straight condition as is shown in FIG. 1.

This invention is capable of numerous forms and various applications without departing from the essential features herein disclosed. It is therefore intended and desired that the embodiments shown herein shall be deemed merely illustrative and not restrictive and that the patent shall cover all patentable novelty herein set forth; reference being had to the following claims rather than to the specific description and showings herein to indicate the scope of this invention.

I claim:

1. In a hair brush of the character described, a handle, a brush back comprising a flexible spine element extending as a cantilever from said handle, a first series of closely spaced fingers extending laterally from one side and a second series of closely spaced fingers extending laterally from the opposite side of said spine element and tufts of relatively stiff bristles extending downwardly from at least the fingers of said brush back whereby when the brush is pulled through hair through which a comb can pass, said spine will bend so that the distal ends of the fingers on the trailing side of the brush will approach each other.

2. A hair brush as defined in claim 2, wherein said spine element is stressible in torsion.

3. A hair brush as defined in claim 1, wherein the handle is elongated and said spine element extends from an end of said handle.

4. A hair brush as defined in claim 1, wherein the fingers of the first series and those of the second series extend from opposite regions of the spine element respectively.

References Cited by the Examiner

UNITED STATES PATENTS

831,493 9/1906 Wilcox ____________ 132—156
1,860,924 5/1932 Cooke ____________ 15—167
2,185,050 12/1939 Chiracello __________ 15—160 X
2,796,620 6/1957 Bressler ____________ 15—201

CHARLES A. WILMUTH, Primary Examiner.

PETER FELDMAN, Assistant Examiner.