Hairstyling hammer with light applicator

Harold V. Daniels, Natick, and John B. Adrian, Medford, Mass.

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1. This invention relates to brushes, and especially to hair brushes, and has for its principal objects to provide a brush which may be used during hair dressing operations for brushing and/or setting waves in the hair, which assists in drying the hair after washing and during setting, which tends to enhance the natural luster of the hair by inducing emission of the natural hair oils from the scalp and which has beneficial therapeutic value. Other objects are to provide a brush capable of effecting the foregoing objects which will have comparatively few parts, preferably such as to be capable of easy molding in plastic and of easy assembly and disassembly, in which worn parts may be replaced and parts of several different brushing characteristics may be substituted in accordance with the several uses of the brush, and which will be wholly safe for use even though the hair and/or the hands are moist or wet.

As herein illustrated, the brush has a back from a portion of which project bristles, and there is associated with the back a lamp arranged to project infra-red and/or ultra violet rays in the direction that the bristles project from the back so as to impinge upon the scalp during the brushing operation. To this end the back is made hollow, affording thereby a chamber in which the lamp is mounted, and one or more openings are formed in that portion of the back from which the bristles project through which rays from the lamp emanate. On the inside of the chamber back of the lamp there is a gold or otherwise suitably plated parabolic reflector for redirecting the rays from the lamp predominantly through the opening and the opening defined by the bristles surrounding the opening. The back has a handle at one end and preferably the handle is removably fastened to an end of the back through which there is an opening extending into the inner chamber. The end of the handle has a lamp socket therein into which the base of the lamp is screwed, the latter when screwed into the socket, lying within the chamber above the opening. By removing the handle from the back the lamp may be withdrawn from the chamber for renewal of the lamp or replacement for use of a different kind. In one form of the invention that portion of the back in which the bristles are fastened may also be removable from the remainder of the back so as to permit substitution of a new set of bristles for worn bristles or of bristles of different character depending upon the use contemplated. The lamp is supplied with current by way of a conductor connected thereto and the latter passes through the handle and has a coupling element at its free end for attachment to some convenient source of electric power. A suitable ballast may be included in the circuit when a lamp emitting predominantly ultra-violet rays is to be used.

The invention will now be described in greater detail with reference to the accompanying drawings wherein:

Fig. 1 is a plan view of the brush, looking at the bristle side thereof;
Fig. 2 is a vertical longitudinal section taken on the line 2—2 of Fig. 1;
Fig. 3 is a vertical transverse section taken on the line 3—3 of Fig. 1;
Fig. 4 is a detail elevation showing the detachable connection between the handle and the back;
Fig. 5 is a plan view of the bristle side of a modified brush in which the bristle-containing portion is removable; and
Fig. 6 shows a fragmentary section of a different arrangement of the bristles.

Referring to the drawings, the brush is of conventional shape, having a substantially rectangular back 10, a handle 12 and bristles 14 anchored to one side of the back. While the brush may be made of any conventional material such as wood, hard rubber, Lucite, transparent or translucent plastic, metals, etc., as illustrated herein, the brush is made of molded plastic, the bristles being set into the back either during the molding operation or into holes drilled into the back after molding in accordance with conventional bristle attaching practice. Bristles of any suitable kind may be used, for example natural pig bristles, artificial fibers such as nylon, and possibly metal.

In the preferred form of the invention the back 10 is molded of plastic so as to have a hollow chamber 16 therein, a bristle carrying wall 18 overlying the chamber 16 which has in it an elongate opening 20 to the chamber and at one end a boss 22 through which there is an opening 24 into the chamber 16. The bottom back of the chamber 16 within the back is molded or otherwise shaped so as to be substantially parabolic and has applied thereto a reflecting surface 26 which may be in the form of a coating plated on the inner surface of the chamber or a thin sheet of highly polished metal, for example gold, aluminum or tin-foil.

The handle 12 will usually but not necessarily be made of material similar to the back and if plastic will be molded so as to have at one end
a hollow open socket 28 adapted telescopically to receive the boss 22. The handle is removably attached to the back by cooperating fastener elements in the form of a spring backed pin or ball 30 contained on the inside of the socket with depressions 32 formed in the surface of the boss 22. Two or more of these fasteners are sufficient to hold the handle securely in place and yet will permit easy removal therefrom by rotation of the handle about its long axis or by breaking the handle at the joint. Within the open socket 28 of the handle there is a conventional lamp socket 36 for reception of the base of a lamp L which is to occupy the chamber 16. When the handle is attached to the back and the lamp screwed into the socket 36 it will project into the chamber 16 so as to lie along the opening 20 and emit its rays therefrom. A passage 38 is molded or drilled in the handle 12 through which conductors attached to the lamp base pass and the free end of the cord is provided with a conventional plug for connection to a house current outlet. As thus constructed, it is necessary to remove the lamp because it is burned out or to replace it for a lamp of different kind or strength, it is only necessary to rotate the handle 12 sufficient to disengage the fastening elements and then to separate the handle from the back by drawing it away so as to withdraw the lamp from the chamber 16.

While the opening 20 in the bristle-retaining wall portion 18 of the back is shown as rectangular and as being a single opening extending lengthwise of the back, it is of course possible to make a number of openings of smaller size, for example, a series of spaced openings between which are located imperforate portions carrying bristles or tufts of bristles.

Brushes used in hair dressing establishments are subjected to severe wear and hence it may be desirable to replace the bristles and under certain circumstances to use bristles of different kinds and different grouping. Accordingly in an alternative form of the invention, the bristle-carrying wall portion 18, as illustrated in Fig. 5 is made removable. To this end the bristle-carrying portion is in the form of a flat or curved plate having beveled edges 40 for slidably engaging grooves 42 formed at opposite sides of the back. In this case the opening 20 will be in the sliding wall portion 18 and the latter may be held in engagement with the grooves solely by frictional engagement therewith or by a suitable catch. Provision of this removable bristle-retaining wall portion makes it possible to use bristles of different kind and disposition in the same brush. The bristles shown in Figs. 1 to 3 are arranged in tufts. However it may be desirable to have fewer and stiffer bristles with greater spacing between tufts, for example as shown in Fig. 6.

The lamp L is preferably of a kind which will produce predominantly infra-red rays and/or ultra-violet rays. A mercury lamp will produce the ultra-violet rays while an ordinary carbon or tungsten filament lamp will produce in addition to visible light, the infra-red rays. The use of radiant infra-red rays dries the hair without embrittling it, while ultra-violet radiations have a therapeutic value in toning the scalp and bringing about a generally healthy condition of the hair so that it will be restored to its natural luster and/or retain the same. By combining the drying effect of the lamp with the brush, waves may more easily be set in the hair than in the conventional practice now used wherein the operator brushes and attempts to set the hair beneath a drier. Moreover, it is much more convenient to use a brush without interference from the drying unit, which considerably hampers the movements and manipulation of the operator.

While the brush illustrated has a handle, it is within the scope of the invention to use a lamp in any conventional brush, for example a handleless brush such as military brushes.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

We claim:

1. A brush comprising a back and handle, said back having a centrally located elongate recess therein within which may be located a lamp, a lamp socket at one end of the recess for receiving the base of a lamp, a lamp set into the socket, a removable bristle plate covering said recess and the lamp therein, said bristle plate having an elongate opening through it corresponding substantially in area to at least the projected area of the lamp on a plane surface through which the lamp shines, bristles set into the removable plate about the opening therein, and a reflector located in the recess behind the lamp so as to direct rays from the lamp through the opening.

2. A brush according to claim 1, wherein the bristle plate is slidably removable from the back.

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