Oct. 14, 1969 FUMIHIKO ABE 3,472,245

HAIR CURLER

Filed Jan. 11, 1967

FIG. 1

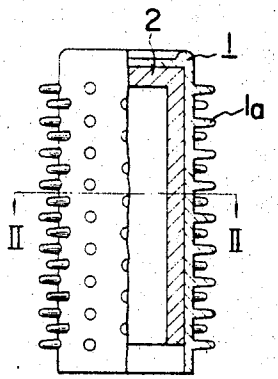


FIG. 2

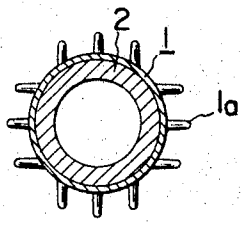


FIG. 3

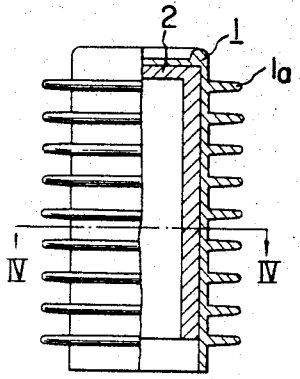
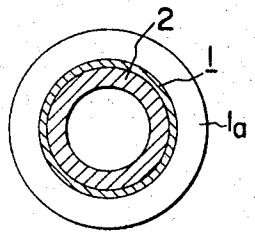


FIG. 4



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HAIR CURLER

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U.S. Cl. 132—33 2 Claims

ABSTRACT OF THE DISCLOSURE

A hair curler having a solid heat retaining member in intimate contact with the inner wall of a cylindrical main body with numerous projections or fins, the heat retaining member having a central hollow hole open at one end for receiving a heating stud whereby the heat retaining member is heated and caused to store sufficient heat for curling and setting of hair on the outside surface of the main body.

The present invention relates to hair curlers in which heat is stored in each curler, and curling of hair is thereby effectively carried out.

Heretofore, hair curlers of a type wherein an electrical heater is sealed inside the curler body, and hair is wound and clamped on the outside surface of the curler so as to be set to a desired curled configuration are known. In this type of hair curler, although the hair forming and setting effect are great, electrical cord or the like attached to the curler for furnishing electrical power from the outside is required, and much restriction is thereby imposed on the freedom of the user.

Also known is a type of hair curler in which a heat retaining granular substance is contained in the main body of the hair curler, a metal tube having an opening at one end being extended longitudinally along the central axis of the hair curler inside of the heat retaining substance, and, at the time of use, a heater bar is inserted into the metal tube through the opening to heat the heat retaining granular substance disposed therearound and, when the heat retaining substance has stored enough heat energy conducted from the heater bar, is removed from the metal tube, hair being then wound around the outside surface of the hair curler main body for curling and setting.

However, this type of hair curler requires additional production processes to encase the heat retaining substance inside of the curler main body to provide and insert the metal tube, and also to seal the gap between the open end of the metal tube and the curler main body so that the heat retaining substance will not escape out of the gap. Accordingly, this type of hair curler is excessively complicated and uneconomical.

Moreover, this type of hair curler is comparatively heavy and difficult in handling.

Accordingly, the primary object of the present invention is to provide a hair curler in which the above mentioned drawbacks are completely overcome.

Another object of the present invention is to provide a hair curler of much simpler and lighter construction which is readily adaptable to mass production.

A further object of the invention is to provide a hair curler in which no heating element such as an electrical heater is contained inside of the curler, and which has reliable operation and is easily handled.

According to the present invention, there is provided a hair curler comprising a cylindrical main body made of a synthetic resin and having numerous projections on the outside cylindrical surface thereof for catching and holding hair on this surface and a heat retaining

member consisting a heat-resistant heat retaining substance formed in integral and registered relationship to the inside wall of the main body, the heat retaining member having a hollow interior at its central portion along the longitudinal axis and having an opening at one end. The hair curler according to the present invention can be mounted temporarily, on a heating stud of a heating device, the hollow interior of the curler engaging the heating stud of the heating device, which is inserted through the opening provided at one end. Thus, the heat retaining member is heated by the heating stud and stores sufficient heat for curling and setting hair on the outside surface of the main body.

The nature, utility, and details of the invention will be more clearly apparent from the following detailed description with respect to preferred embodiments of the invention, when read in conjunction with the accompanying drawing, in which like parts are designated by like reference numerals.

In the drawing:

FIG. 1 is a side view, partly in longitudinal section, of a hair curler in accordance with the present invention;

FIG. 2 is a cross-sectional view of the hair curler shown in FIG. 1 taken along the line II—II;

FIG. 3 is a side view, partly in longitudinal section, of another embodiment of the hair curler according to the present invention; and

FIG. 4 is a cross-sectional view of the hair curler shown in FIG. 3 taken along the line IV—IV.

Referring to the figures, the main body **1** of the hair curler in accordance with the present invention is made of a synthetic resin such as nylon and provided with numerous projections **1***a* for winding and holding hair on its outside cylindrical surface, a cuplike heat retaining member **2** made of a heat-resistant material such as Bakelite, glassfibre, or heat-resistant rubber and having an opening at one end being accommodated inside of the main body **1** of the hair curler for registration with inside wall of the main body **4**. The heat retaining member **2** can be formed by direct moulding within the main body **1** of the hair curler.

At the time of use, each hair curler is placed on a heating device (not shown) so that a heating stud of the heating device is inserted into the opening at one end of the heat retaining member **2**, and after sufficient heat has been stored in the heat retainer **2**, the curler is applied to the user's head, where hair is wound on the outer surface of the hair curler main body **1** and held in wound position by means of a suitable clip or clips (not shown), whereby disarray of the hair is prevented.

FIGS. 3 and 4 illustrate another embodiment of the present invention in which the large number of projections **1***a* on the hair curler main body **1** in FIG. 1 is substituted by a plurality of circular rings or fins **1***a*.

By the above described construction and arrangement, the hair curler in accordance with the present invention can be used independently, separated from the heating stud after sufficient heat energy has been stored therein. By reason of its simple construction and very few component parts, the principal advantageous feature of the present invention of easy manufacturing and economical production can be obtained.

According to the present invention, particularly because of the fact that the heat retaining member **2** is made of a heat-resistant material such as Bakelite, glass-fibre, heat resistant rubber and the like the purpose of providing simple construction can be achieved, rendering it fully applicable to various configurations of hair curlers.

It should be understood, of course, that the foregoing disclosure relates to only preferred embodiments of the invention and that it is intended to cover all changes and modifications of the examples of the invention herein

chosen for the purposes of the disclosure, which do not constitute departures from the spirit and scope of the invention as set forth in the appended claims:

What I claim is:

1. A hollow annular hair curler comprising a main inside annular body made of a synthetic resin and an outside thin sleeve having a plurality of outwardly extending projections on the outside peripheral surface for catching and holding hair wound on the surface and said inside body being a heat retaining member consisting of a solid material sleeve, and formed of a solid non-meltable non-granular heat resistant heat retaining substance formed in integral and registered relation along the inside wall of said outside thin sleeve, said thin sleeve being nylon and said heat resistant member including a glass fibrous material.

2. The hair curler of claim 1, in which said heat retaining member has a hollow interior with an opening

at one end to receive a heating stud inserted through said opening, the heat retaining member thereby being heated at the time of use and being removed from said stud when sufficient heat energy has been stored in said heat retaining member, said curler thereby being freely usable separately from the heating device, said outside peripheral surface being relatively thin and said heat retaining member being annular and being relatively thick.

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