HAIR CURLER AND METHOD FOR THE PRODUCTION THEREOF

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ABSTRACT OF THE DISCLOSURE

A hair curler consisting of a pile fabric rolled up in such a way to form a cylindrical body open at its ends, said pile fabric being possibly rolled up on a cylindrical perforated inner support, said pile fabric comprising in the ground thereof noninterwoven areas which do constitute free passageways for any liquid or gaseous fluid, and the method for manufacturing the before-said hair curler.

Cross-reference to a related application

This is a continuation-in-part of the U.S. application Ser. No. 449,039, filed on Apr. 19, 1965, now abandoned.

Background of the Invention

The present invention concerns a new hair curler, suitable for rolling up the hair in order to give it a wave, and a method for the manufacture thereof.

In the U.S. Patent No. 3,123,080, it is disclosed such a hair curler comprising a cylindrical hollow support, the outer surface of which is covered by rolling up a pile fabric having pile threads protruding in a pliers jawline configuration.

A similar hair curler is shown in the U.S. Design Patent No. 200,284, wherein the ground of the pile fabric consists of uniformly mutually spaced weft threads, which are interwoven with groups of warp threads.

All these prior art hair curlers have the disadvantage that gaseous or liquid fluids can only with difficulty pass through the walls thereof.

Summary of the invention

The present invention aims to provide a hair curler which permits any fluid, particularly any aeriform fluid to pass in both senses through the walls thereof, such as to obtain, by means of this aeration, a more prompt and satisfactory drying of the hair with respect to the prior art hair curlers.

As a matter of fact, with such a hair curler, which permits said aeration, the hair lock, being rolled up on the hair curler, is promptly dried even only through the natural air circulation which is established due to the capability of freely passing in both senses through the walls of the hair curler.

The hair curler according to the present invention consists of a pile fabric rolled up in such a way to form a cylindrical hollow body, open at its ends, said pile fabric comprising: a plurality of warp threads and a plurality of weft threads, groups of said warp threads being interwoven with groups of said weft threads so as to generate alternating interwoven and nonwoven areas; a plurality of looped pile threads interwoven with said warp threads and said weft threads, the looped portions of said pile threads protruding from the surface defined from said warp thread groups, said looped portions of said pile threads being staggered in adjacent groups of warp threads; and a plurality of pairs of additional warp threads arranged in a leno-formation to stabilize the pile threads and separate the interwoven areas from those nonwoven.

The method of manufacturing the hair curler of the present invention comprises the steps of alternately interweaving groups of warp threads with groups of weft threads so as to create alternating interwoven and nonwoven areas; interweaving a plurality of pile threads with the said warp threads, thus forming looped portions of said pile threads which extends over the groups of warp threads in such a way that said looped portions are staggered in adjacent groups of warp threads; interweaving pairs of additional warp threads in a leno-formation with the above referred warp threads and with the weft threads so that said additional warp threads do stabilize said looped portions in an upright position and press the above said groups of warp threads and weft threads into said interwoven areas; thermosetting said looped portions in a predetermined shape and size; sizing the pile fabric so formed and rolling up a piece of said pile fabric upon itself so as to form a hollow cylindrical body, open at its ends, said looped portions protruding outwardly.

In a particular embodiment of the present invention, the pile fabric, the ground of which is provided with free passageways for any liquid or gaseous fluid, is rolled up upon a hollow cylindrical support, having a perforated side wall.

The pile threads are preferably nylon monofilaments and the said looped portions of said pile threads are preferably cut so as to form hook-like ends or pliers jaw-like ends or merely upstanding ends or so as to finally form on the cut ends spherical enlarged portions, in accordance with the well known fusion process.

The invention will be hereinafter more detailedly described with reference to a preferred and only exemplifying embodiment shown in the appended drawings.

Brief description of the drawings

In the drawings:
FIG. 1 is a schematic cross-sectional view taken transversely with respect to the weft threads of the pile fabric used for the manufacture of the hair curler according to the invention;
FIG. 2 is a schematic plan view of a piece of the pile fabric of FIG. 1;
FIG. 3 is a schematic profile view of the pile fabric of the preceding figures;
FIG. 4 is a perspective view of a support for the hair curler; and
FIG. 5 is a similar perspective view of the finished hair curler according to the present invention, and formed by scribed with reference to a preferred and only exemplifying embodiment shown in the appended drawings.

Description of the preferred embodiment

Referring firstly to the FIGURES 1 to 3 of the drawings, the manufacture of the pile fabric used for producing the hair curler will be described.

In the embodiment shown, there are provided groups of three warp threads 4 which are interwoven with groups of four weft threads 2 and, as it is clearly viewable particularly in FIG. 2, this interweave is done in such a way as to alternatively form interwoven areas 3 and nonwoven areas 4, in a dress-like pattern.

With the said warp threads 1 and the said weft threads 2, there are moreover interwoven in a leno-formation pairs of additional warp threads 5 and, as it is clearly shown, these additional warp threads do press said groups of weft threads 2 and of warp threads 1 into said interwoven areas 3, so as to separate the latter from said nonwoven areas 4.

There is thus formed in correspondence of said nonwoven areas 4 a plurality of free passageways through the pile fabric.
With the warp threads 1 and the weft threads 2 there are, moreover, interwoven pile threads 6 which form looped portions 7 by means of metal bars 8 in the parts of said pile threads which extend upon the groups of warp threads 1. As clearly shown in FIG. 2, the looped portions 7 are staggered in adjacent groups of warp threads 1, so that in one group said looped portions are always positioned onto the areas 3 wherein the warp threads 1 are interwoven with the weft threads 2, whereas in the next adjacent group these looped portions are positioned onto the areas which separate said interwoven areas 3 and in correspondence with the interweaving points of said pairs of said additional warp threads 5. The pile threads 6 are nylon monofilaments and their looped portions 7 are stabilized in an upright position with respect to the ground of the fabric by means of said additional warp threads 5 in said leno-formation.

In FIG. 2, some of the looped portions 7 of the pile threads 6 are shown after a cutting step, the cutting being performed at the top of the looped portions themselves, so as to form pliers jaw-like parts 9, as better shown in FIG. 3.

In order to better stabilize the shape and the size of the looped portions 7, it could be advisable to subject them to a heat treatment. The fabric is then in a so known way sized, in order to better set the mutual distance and the positions of the different threads of which the pile fabric is comprised.

The so-obtained pile fabric is utilized for the manufacture of the hair curler. Thus a suitable piece of said pile fabric is taken and is rolled up upon itself so as to form a cylindrical body, open at both its ends, with the looped portions 7 or the pliers jaw-like parts respectively protruding from the outer surface of said body.

To give a greater mechanical strength to the above said cylindrical body, it is advisable to provide a hollow cylindrical support of any suitable material, as shown at 10 in FIG. 4. This support 10 is provided with uniformly spaced apertures 11 over all the cylindrical wall thereof, so as to form free passageways through the wall itself. Onto the said hollow support 10 it is then rolled up and secured in a well-known manner, the pile fabric so forming, as illustrated in FIG. 5, the required hair curler.

It is thus clear that this hair curler is thoroughly pervious to any gaseous or liquid fluid due to the said apertures 11 of the support 10 and to the said nonwoven areas 4 of the pile fabric. Obviously the rolling up of the pile fabric onto the support is done, bearing in due account the relative positions of said nonwoven areas 4 and of said apertures 11.

When a lock of hair is rolled on the hair curler of the present invention, there is obtained the worthwhile advantage, with respect to already known hair curlers, of a prompt and thorough drying, even only as a consequence of the mere natural air circulation, which can take place in both senses through the body of the hair curler.

Obviously, the number of the weft and/or warp threads indicated in the above, is only illustrative and may anyhow be varied.

I claim:

1. A hair curler comprised of a pile fabric, positioned about an open ended cylindrical support having a perforated side wall, and said pile fabric being rolled up so as to conform to said hollow support, said fabric comprising a plurality of warp threads and a plurality of weft threads, groups of said warp threads being interwoven with groups of said weft threads so as to form interwoven and nonwoven alternating areas; a plurality of looped pile threads interwoven with said warp threads and with said weft threads, the looped portions of said pile threads protruding from the surface defined from said groups of warp threads, and said looped portions of said pile threads in adjacent groups of warp threads being staggered; and a plurality of pairs of additional warp threads, which are arranged in a leno-formation in order to stabilize said pile threads and separate said interwoven areas from those nonwoven.

2. A hair curler according to claim 1, wherein the looped portions of said pile threads are cut at the top and are pliers jaw-like formed.

References Cited

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