Nov. 9, 1965 A. M. JEFFERSON 3,216,427

HAIR CURLER

Original Filed July 24, 1961

FIG. 1

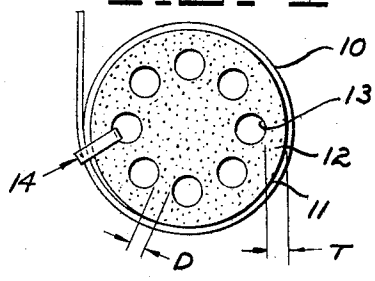


FIG. 2

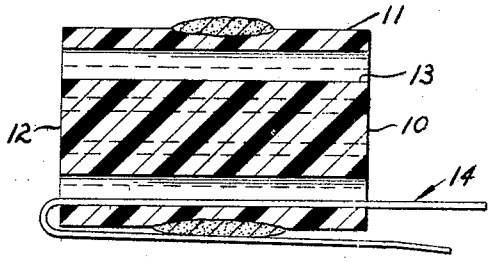


FIG. 3

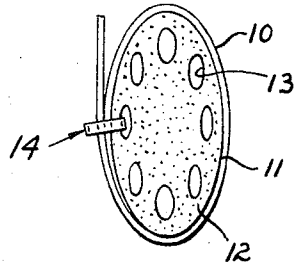
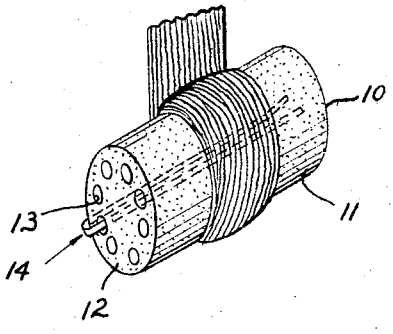


FIG. 4



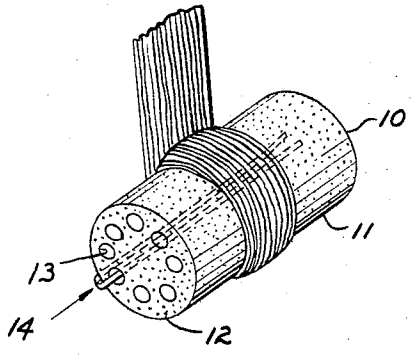


FIG. 5

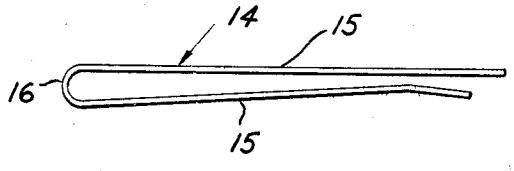


FIG. 6

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HAIR CURLER

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Continuation of application Ser. No. 126,314, July 24, 1961. This application Sept. 8, 1964, Ser. No. 395,086

7 Claims. (Cl. 132—40)

This application is a continuation of application Ser. No. 126,314, filed July 24, 1961.

This invention relates to hair curlers and particularly to hair curlers for home use.

Hair curlers of various types have always been used in the home for styling of the hair. With the advent of waving lotions that can be used in the home, the use of such hair curlers have been further extended. Such hair curlers have usually comprised some relatively rigid cylindrical member about which the hair is wound and which is thereafter fastened in position to hold the hair until it is dry or for a predetermined period of time in order to set the curl. Although some of such devices utilize a resilient portion, practically none of them are of sufficient resiliency to permit the wearer to sleep with the curlers in position on the hair. For example, in one commonly used type, a wire cylinder is formed with a plurality of radially extending teeth which facilitate gripping of the hair. Obviously, such a curler cannot be used with comfort by the wearer during sleep.

It is an object of this invention to provide a hair curler that will effectively hold the curl; that can be used by the wearer even in sleep; which is relatively low in cost; and which can be readily cleaned resulting in a long life.

Basically, the hair curler comprising the invention consists of a cylindrical body of resilient foam material, preferably polyurethane of the ester type, which is porous and has a plurality of circumferentially spaced openings extending axially therethrough adjacent the periphery. The central portion of the body is made without openings. A pin resembling a bobby pin is used in conjunction with the body with one arm of the pin extending through one of the openings and the other arm adjacent the outer periphery to hold the curl in position. By controlling the size and spacing of the openings, it is possible to control the resiliency and porosity of the hair curler. Thus, in addition to performing the function of holding the pins in position, the openings facilitate the desired function of the hair curler in holding the hair in position and facilitating the drying of the hair if it is wet.

Referring to the accompanying drawings:

FIG. 1 is a side elevation of the hair curler showing the relative relationship of the parts to a curl of hair.

FIG. 2 is a longitudinal sectional view of the curler shown in FIG. 1.

FIG. 3 is a partly diagrammatic view showing the position of the hair curler on the back of the head of the wearer when the wearer is sleeping.

FIG. 4 is a fragmentary perspective view similar to FIG. 3.

FIG. 5 is a perspective view of the hair curler in position when the wearer is not sleeping.

FIG. 6 is a plan of a modified form of bobby pin that is preferably used in connection with the invention.

Referring to the drawings, the hair curler embodying the invention comprises a body **10** of porous resilient synthetic foam material, preferably polyurethane. Body **10** is cylindrical and includes an outer surface **11** and end surface **12**. The body **10** is formed with a plurality of axially extending openings **13** adjacent the outer surface **11**. The openings **13** are preferably of the same diameter and are equally spaced about the periphery of the body **10**. The distance D between adjacent openings **13** is preferably less than the diameter of the openings. The distance T between the openings and the outer surface **11** of the body **10** is also preferably less than the diameter of the openings **13**.

The body **10** may be used in connection with a conventional bobby pin but is preferably used with a modified form of bobby pin **14** such as shown in FIG. 6. Bobby pin **14** is made of metal and comprises a pair of arms **15** connected at one end by a flexible portion **16**. Arms **15** are normally spaced from one another when the bobby pin is untensioned.

The foam material constituting the body **10** is light weight material having a relatively high porosity. A satisfactory material which has been used comprises porous polyurethane ester plastic having 20 pores per lineal inch. Such a plastic material has a density of about two pounds per cubic foot.

In use, the body **10** is brought in position adjacent the hair and the hair is wound around the body to form the curl. The pin is then brought into position as close to the head as possible, one arm being placed into an opening **13** and the other arm being placed adjacent the outer periphery of the body **10** over the curl to hold the curl in position. It can be appreciated that since there are a plurality of openings **13**, there is always an opening adjacent the head so that the curler can always be fixed in position on the head to provide a tight curl as is desired.

The openings **13** adjacent the periphery of the body **10** not only serve as a means for fastening the curler by means of the pin **14** but, in addition, provide resiliency of the outer periphery of the body **10**. Thus, when the wearer rests her head as in sleeping, the openings **13** tend to flatten out as shown in FIGS. 3 and 4. The degree of flattening depends upon how tightly the hair is wound around the body **10** and upon the resiliency of the material of the body **10**. However, the complete resiliency is not lost since the central portion **16** of the body **10** is not formed with openings **13**.

The openings **13** perform an additional function in facilitating the drying of the hair in the event that it is wet since the openings form an axial path for circulation of air and moisture.

The body **10** being made of a synthetic organic foam material that is porous, preferably polyurethane ester, can be readily cleaned whenever desired by use of luke warm water and a mild detergent.

It can thus be seen that I have provided a hair curler which will efficiently hold the curl; which can be worn by the wearer during sleep; which can be manufactured at low cost; and which will provide long service.

I claim:

1. A hair curler comprising

a body of resilient foam material having a substantially cylindrical outer surface and end surfaces,

said body having a plurality of circumferentially spaced openings comprising enclosed passages extending axially therethrough adjacent the outer surface and opening at the end surfaces of said curler,

said openings being nearer the outer surface than the center of said body and comprising the only axial openings through said body so that the central portion of the body is substantially solid,

and a holding pin comprising a pair of generally parallel arms connected at one end by an intermediate flexible portion,

said arms being spaced from one another in the untensioned state of said pin,

one of said arms extending into one of said openings in said body and the other of said arms extending along the outer surface of said body to hold a hair curl in position on said body.

2. A hair curler as set forth in claim **1** wherein said body is porous.

3. The hair curler set forth in claim 1 wherein said openings have substantially the same diameter.

4. The hair curler set forth in claim 1 wherein said body comprises resilient porous polyurethane foam material having approximately 20 pores per lineal inch.

5. A hair curler comprising

a body of resilient foam material having a substantially cylindrical outer surface and end surfaces,

said body having a plurality of circumferentially spaced openings comprising enclosed passages extending axially therethrough adjacent the outer surface and opening at the end surfaces of said curler,

said openings being nearer the outer surface than the center of said body and comprising the only axial openings through said body so that the central portion of the body is substantially solid,

whereby said curler may be used with a holding pin comprising a pair of generally parallel arms connected at one end by an intermediate flexible portion with one of the arms being adapted to extend into one of the openings in the body and the other of the arms being adapted to extend adjacent the outer surface of said body to hold the hair curled in position on said body.

6. A hair curler comprising

a body of resilient foam material having a substantially cylindrical outer surface and end surfaces,

said body having a plurality of circumferentially spaced openings comprising enclosed passages extending axially therethrough adjacent the outer surface and opening at the end surfaces of said curler,

said openings being nearer the outer surface than the the center of said body,

whereby said curler may be used with a holding pin

comprising a pair of generally parallel arms connected at one end by an intermediate flexible portion with one of the arms being adapted to extend into one of the openings in the body and the other of the arms being adapted to extend adjacent the outer surface of said body to hold the hair curler in position on said body.

7. A hair curler comprising

a body of resilient foam material having a substantially cylindrical outer surface and end surfaces,

said body having a plurality of circumferentially spaced openings comprising enclosed passages extending axially therethrough adjacent the outer surface and opening at the end surfaces of said curler,

said openings being nearer the outer surface than the center of said body so that the central portion of said body is substantially solid,

whereby said curler may be used with a holding pin comprising a pair of generally parallel arms connected at one end by an intermediate flexible portion with one of the arms being adapted to extend into one of the openings in the body and the other of the arms being adapted to extend adjacent the outer surface of said body to hold the hair curler in position on said body.

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RICHARD A. GAUDET, *Primary Examiner*.