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2,732,845

HAIR CURLER

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FIG. 1

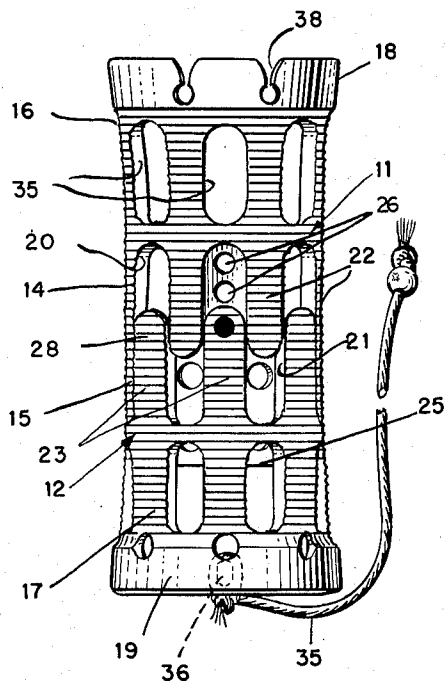


FIG. 2

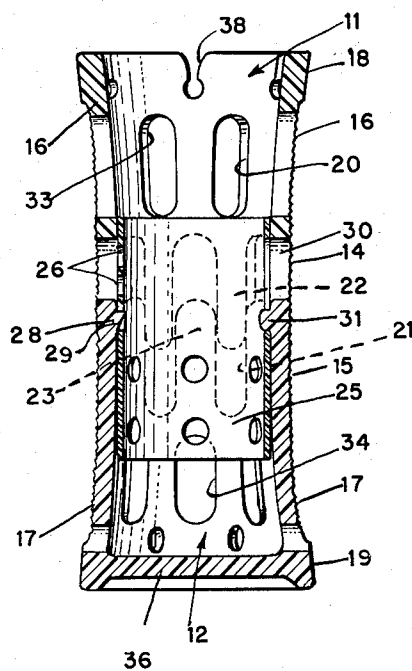
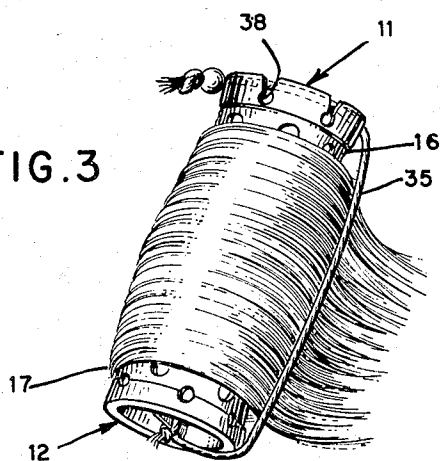


FIG. 3



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## HAIR CURLER

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8 Claims. (Cl. 132—42)

The present invention relates to a hair curling device, of the type utilized in the arrangement and setting of the hair in curls by the cold setting process, utilizing chemical means rather than thermal means.

The size or diameter and the thickness of hair curls are determined, respectively, by the diameter and by the length of the curler or curling device used. A curler of greater diameter produces curls of greater diameter. Also, a curler of greater length which permits the winding thereon of a thicker strand of hair allows the formation of thicker curls.

Heretofore, in order to form curls of different thicknesses, curlers of different length had to be utilized. This necessitated, particularly for professional hair dressers, the keeping of a stock of curlers of each of a number of different lengths. This requirement necessitated a substantial investment and was also confusing, tending to clutter up the working shelves and tables of hair dressing establishments.

Heretofore also, it was difficult to form neat curls in which all the hair was neatly in place and uniformly spiraled because, generally, the extreme end portions of the strand of hair wound around each curler tended to loosen and slide off the curler.

It is an object of the present invention to provide a hair curler of the character described which is adjustable as to length, thereby enabling its utilization to form curls of different thicknesses and doing away with the need for keeping numerous sets of curlers of different lengths on hand and bringing about economies in money and space, particularly for professional hair dressers, and also enabling persons who set their own hair to vary the thickness of their curls from time to time, as they may see fit, without the necessity of investing in a new set of curlers each time.

It is another object of the present invention to provide adjustable hair curlers of the character described which are relatively simple and easy to adjust from one length to another.

It is still another object of the present invention to provide adjustable hair curlers of the character described which will remain firmly and securely in adjusted position until manually readjusted.

It is yet another object of the present invention to provide an adjustable hair curler of the character described on which the hair may be safely and securely held during the curling or setting operation.

It is a further object of the present invention to provide adjustable hair curlers of the character described which will enable the formation of neat and compact curls without any loose and straying hair.

It is a still further object of the present invention to provide adjustable hair curlers of the character described which are easy and convenient to use and manipulate; which are strong, rigid and sturdy and which may be relatively easily and economically mass-produced.

The foregoing and other advantages and superiorities of the hair curlers of the present invention will become

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more readily apparent to those skilled in the art from the embodiment thereof shown in the accompanying drawing and from the description following. It is to be understood, however, that such embodiment is shown by way of illustration only, to make the principles and practice of the invention more readily comprehensible and without any intent of limiting the invention to the specific details therein shown.

In the drawing:

Fig. 1 is an elevational view of one embodiment of a hair curler of the present invention, shown in partly extended position;

Fig. 2 is a vertical, longitudinal, sectional view through the curler of Fig. 1; and

Fig. 3 is a perspective view showing the curler as actually used.

Referring more specifically to the accompanying drawing, the curler of the present invention comprises a pair of preferably substantially equal and preferably substantially symmetrical tubular sections, 11 and 12, which may be formed of any suitable material, such as a synthetic plastic material having limited inherent resilience. The two sections 11 and 12 may preferably be of approximately the same uniform wall thickness.

Each of sections 11 and 12 comprises a preferably cylindrical inner portion, 14 and 15, respectively, and an outer portion, 16 and 17, respectively, which preferably widens slightly gradually in an outward direction. Each of portions 16 and 17 is preferably formed with the annular, externally thickened edge portions, 18 and 19, respectively.

The inner cylindrical portions 14 and 15 may each be formed with parallel slots, 20 and 21, respectively, extending inwardly from the free edge thereof and separated by the parallel prongs, 22 and 23, respectively.

The slots 20 and 21 and the prongs 22 and 23 are so formed and disposed as to have prongs 22 of section 11 fit into slots 21 of section 12, and the prongs 23 of section 12 fit into slots 20 of section 11, so that the prongs and slots of the two sections may be slidably interfitted. This may be readily accomplished by making all of the slots in one section of the same length and width as the corresponding prongs of the other section and preferably by making all of the slots and prongs of the same length and width.

Sections 11 and 12 may be steadied and supported in interfitted position by means of a tubular member, 25, fitted into and secured within the inner portion of one of the sections, as in portion 14 of section 15, to underlie snugly, the prongs 22 and the separating slots 20, and extending outwardly therefrom to underlie and support the partly or wholly interfitted prongs 23 and inner portion 15, which are freely slidable over the cylinder of tube 25. The tube 25 may, if desired, be integrally formed with the section 11 or it may be fitted and secured therewithin, as by a suitable cement.

It will be readily apparent that the two sections 11 and 12 may thus be interfitted with their prongs and slots in longitudinally slidable relation to form a longer or shorter curler as may be desired; a curler which will remain of the same thickness and provide uniform support for the strand of hair curled thereabout for any of its variable lengths. Means are provided, however, for preventing the inadvertent shortening of the curler during use, as under the influence of the hair securing elastic band which will hereinafter be described and which tends to pull the two sections toward one another.

The means for preventing the inadvertent foreshortening of the curler may comprise a plurality, such as 3 or 4, of spaced, small openings 26, formed in a row in the cylinder 25 within one of the slots 20, and by the provision on the end of the prongs 23 on its inner face of a stud or

pin 28 adapted to fit within any selected one of the openings 26. The stud 28 may have its forward or inner face perpendicular to the inner face of the prong supporting it to inhibit movement of the stud out of the aperture once it is fitted therein, except by deliberate manual removal, which is made possible by the general inherent resilience of the synthetic plastic material of which the prongs are composed. The pin or stud 28 may be provided with a convergingly tapered rear face 29, which will permit its removal from any of the openings 26 by a mere separating pull upon the two sections 11 and 12, without the need of the manual release of the pin from such opening for that purpose.

To prevent the complete removal of the two sections from one another, at least one elongated slot 30 is formed in the cylinder 25, opening into one of the spaces 20, and a corresponding prong 23 is provided at the end of its inner face with a pin 31, which pin or stud is adapted to fit within the slot 30. The slot 30 is preferably of a length equal to the length of the row of openings 25 and the inner edge of the slot 30 engaging against the rear face of the pin 31, prevents the withdrawal of curler section 12 from curler section 11 except by deliberate manual action.

Each of the sections 11 and 12 may have their outer portions formed with longitudinal slots 33 and 34 for purposes of ornamentation as well as reduction of weight and also, if desired, to permit the application of hair setting liquid through the interior of the curler. The outer surfaces of sections 11 and 12 may also be provided with closely set annular corrugations that serve to prevent the sliding thereover of the strand of hair 35 that may be wound thereabout.

The hair curler of the present invention may be completed by the attachment of an elastic band or string 36 to the bar 37, which may be provided across the outer end opening of section 12, the elastic 36 having a knot at its free end which is adapted to be caught in one of the ventura slots 38 formed in the outer thickened edge portion 18 of the section 11.

This completes the description of the adjustable hair curler of the present invention. It will be readily apparent that such hair curler may easily and conveniently be formed and assembled and adjusted to different lengths for the purpose of forming curls of different thicknesses therewith; that the curler, once adjusted, may not be inadvertently shortened during use; that the curler although adjustable as to length remains at all times a complete unit, the parts of which may not inadvertently come apart and be separated.

It will also be apparent that because of the slight taper formed on each of the curler sections as well as because of their thickened edges, all of the hair in a strand wound thereabout will be tensely curled and will not slip off to form a uniformly tight curl without any loosely spiraled hair.

It will be further apparent that numerous variations and modifications of the adjustable hair curler of the present invention may be made by anyone skilled in the art in accordance with the principles of the invention hereinabove set forth and without the use of any inventive ingenuity. I desire, therefore, to be protected for any and all such variations and modifications that may be made within the spirit of the present invention and the scope of the claims hereto appended.

What I claim is:

1. A hair curler of the character described, comprising a pair of tubular sections each having a plurality of spaced, longitudinally disposed, circularly arranged prongs extending from one end thereof, with the prongs of said two sections slidably interfitting, a cylindrical member fitted into

the end of one of said sections underlying the prongs thereof and the spaces between them and extending slidably beyond said prongs into the other of said sections, said cylinder having a longitudinal row of spaced apertures formed therein opposite a space between a pair of prongs of said first named section, a stud on the end of the inside face of the prong of the second of said sections fitting into said space of said first section.

2. A hair curler of the character described, comprising a pair of slightly tapering tubular sections each having a plurality of spaced, longitudinally disposed prongs extending from the edge of the narrower end thereof with the prongs of the two sections interfitting, a cylindrical member fitted into the end of one of said sections underlying the prongs thereof and the spaces between them and extending beyond said prongs for sliding movement within the second of said sections, said cylinder having a longitudinal row of apertures formed therein opposite the space between two of the prongs of said first mentioned section, and a stud on the end of the inside face of the prong of the second named of said sections interfitting into said space of said first named section.

3. A hair curler of the character described, comprising a pair of tubular sections each having a plurality of spaced, parallel, longitudinally disposed prongs extending from the edge of one end thereof, with the prongs of said two sections slidably interfitting, a cylindrical member fitted into the end of one of said sections underlying the prongs thereof and the spaces between them and extending beyond said prongs for slidable movement within the other of said sections, said cylinder having a longitudinal row of apertures formed therein opposite the space between a pair of prongs of said first named section and a longitudinal slot formed therein opposite the space between another pair of prongs of said first named section, the prong of the second of said sections fitting into the space over said row of apertures having a stud on the end of its inner face for selectively fitting into one of said apertures and the prong of said second section fitting into the space of said first section over said slot having a stud on the end of its inner face fitting into said slot.

4. The hair curler of claim 3, wherein said aperture entering stud is formed with its side facing said first section perpendicular to the inner face of its supporting prong and its opposed side convergent toward its said first side.

5. The hair curler of claim 3 wherein the said slot entering stud is formed with its sides substantially perpendicular to the underside of the prong on which it is supported and wherein said aperture entering stud is formed with its side facing the tubular section to which it is connected converging toward the side facing the free end of the prong on which it is supported.

6. The hair curler of claim 3 wherein the said cylinder is integrally formed with said first named section.

7. The hair curler of claim 3 wherein each of said sections is formed with an annular rib on its outer face at its end opposite the prong end thereof thereby to retain hair on the curler.

8. The hair curler of claim 3 wherein the outer face of each of said sections and the prongs thereof is formed with closely arranged circumferentially extending corrugations.

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