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E. L. WATSON

2,429,176

HAIR CURLER

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Fig. 1.

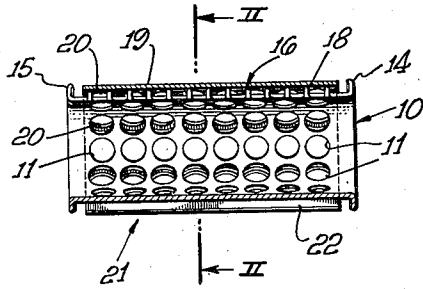


Fig. 2.

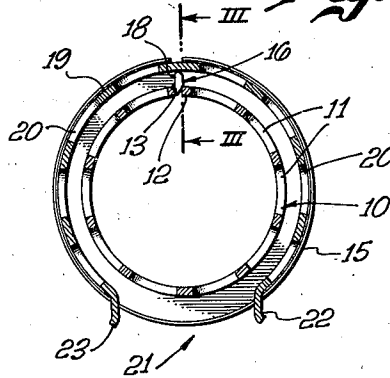


Fig. 3.

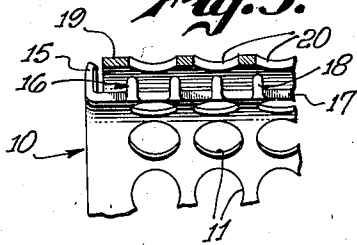


Fig. 4.

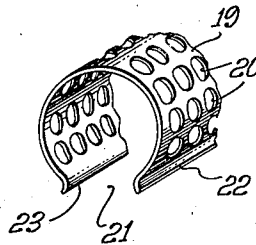


Fig. 5.

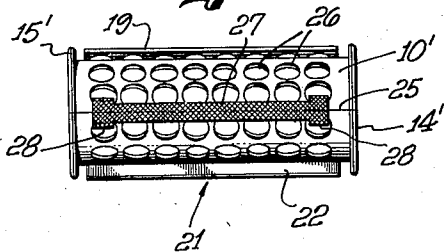
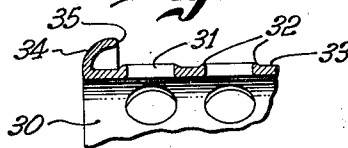


Fig. 6.



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UNITED STATES PATENT OFFICE

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HAIR CURLER

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3 Claims. (Cl. 132-40)

1

My invention relates to hair curlers and particularly small curling units, six or a dozen of which may be applied to the hair at one time. The particular device is intended to make relatively large curls inwardly or outwardly turned at the ends of the strands in order to produce a somewhat wavy effect to the ends of the strands of hair.

Although a great variety of hair curling devices have already been tried which have utilized a variety of means of rolling and clamping the hair in the device, for the most part, they have been unsatisfactory because of their relatively expensive construction and because of having a number of articulating parts which are apt to come out of adjustment or pull apart during long periods of use. This has been particularly true of a great many hair curlers previously designed because of their inadaptability to make curls of a variety of different sizes. When too much hair is wound upon the average hair curler it is quite apt to strain the parts causing them to wear out rather quickly.

With these requirements in view, therefore, an object of my invention is to provide a new and improved hair curler which consists of a relatively minimum number of parts and is adapted to produce a neat, inwardly or outwardly directed curl.

Another object of my invention is to provide a new and improved hair curling device of relatively simple construction which is adapted to spread the strands of hair when rolled upon it so as to produce a smooth, even curl.

Still another object of my invention is to produce a new and improved hair curling device consisting of a maximum of two parts which are readily attachable to each other in order to hold strands of hair spread evenly upon one of them and which can be readily separated when the curl is set without disturbing the regularity of the curl thus formed.

Another object still is to provide a new and improved hair curler wherein an element about which strands are to be rolled is roughened just sufficiently to firmly grasp the strands of hair without damaging them during its application.

A further object is to provide a hair curler having two parts cooperable in such a manner that they may be used advantageously regardless of the quantity of hair which may be rolled upon one of them and without straining or damaging the device.

With these and other objects in view, my invention consists in the construction, arrangement

2

and combination of the various parts of my device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Fig. 1 is a longitudinal, sectional view of one embodiment of the device.

Fig. 2 is a cross-sectional view of my device one the line II-II of Fig. 1.

Fig. 3 is a fragmentary sectional view of the device shown in Fig. 2.

Fig. 4 is a fragmentary, perspective view of the outside element.

Fig. 5 is a longitudinal view, partly in section, of a modified form of the device.

Fig. 6 is a fragmentary, sectional view of still a second modified form of the device.

In making and setting curls in women's hair, it is commonly appreciated that the most attractive curls are large, loose curls which most nearly approximate natural curls, as contrasted with small, tight curls which have a tendency to produce an artificial effect. In order to make large, loose curls, relatively large curlers must be used.

When hair curlers of this type are contemplated, considerable difficulty is experienced in securely clamping and holding the strands of hair on the curler for a time long enough to permit the curl to set. In devices now used for the purpose of producing large, loose curls, the devices, for the most part, have been so large that they have necessitated a rather complicated mechanism for grasping the strands of hair so that they may be tightly held for as long as it is necessary to have the curl set. Where complicated clamping mechanisms have been used in making large curls, they are usually damaged rather quickly because of the tendency of the average user to roll more hair upon the curl than it is designed to hold.

In order to produce a curler which will make large, loose curls, a problem is presented of making the device of sufficiently light-weight and inexpensive material so that it may be available in the numbers required by the average user and also of making it simple to operate so that it may be quickly and readily applied and as quickly and readily removed without disturbing the set of the curl too much.

In an embodiment of my invention shown in the drawings, there is provided a relatively thin-walled cylindrical body 10 having a series of ventilating perforations 11 throughout and which has an inside diameter of such size that the body can be readily slipped over the index finger of

the average operator. When the body is made of sheet material, the longitudinal edges 12 and 13 may be abutted. At the ends of the body there are provided outwardly extending flanges 14 and 15 which may be provided with a reverse curve as best shown in Fig. 2 in order to retain the strands of hair which are spread upon the surface of the body as hair is wound around it preparatory to curling.

To further facilitate attaching the hair to the body in a proper manner, a comb-like member 16 is provided. For ease and simplicity in manufacturing, the comb member may comprise an outwardly extending portion 17 of the edge 13 which is divided up into a series of widely spaced, smooth teeth 18. It has been found advantageous to make the teeth well rounded in all directions, narrow in width and spaced from each other a distance two or more times greater than the width of each individual tooth.

For holding the strands of hair in place, once they have been wound around the body, there is provided a spring clip 19 having a large number of perforations 20 spread about its circumference and having a diameter substantially larger than the diameter of the outside of the cylindrical body portion 10. The clip is preferably some inherently resilient material and has a longitudinal opening 21 extending from end to end along the side. Outwardly bent edges 22 and 23 at the sides of the opening facilitate slipping the clip into position over wound strands of hair.

In order that the clip may remain securely clamped in proper position under substantially all circumstances, it may be preferable to have the inside diameter of the clip slightly less than the diameter of the outer circumference of the flanges 14 and 15. The longitudinal opening should be less than the diameter of the body but should be large enough so that the edges 22 and 23 may be easily spread apart when the clip is applied to the body.

In a modified form of my device, shown in Fig. 5, a body 10' is shown having the customary cylindrical shape and provided with rounded flanges 14' and 15' at the ends similar to those previously described. In this embodiment, however, the body, when made of relatively thin material, may have longitudinal edges abutting along the line 25. The body carries customary perforations 26 throughout the area of the wall.

In order to provide a roughened portion so that ends of strands of hair may be anchored in place, when the operator starts to wind the hair around the body, there is provided an elongated strip 27 which may be roughened by knurling on its outer surface and which is provided with laterally extending fingers 28 which are adapted to be bent inwardly through perforations near the abutting edges at the ends. The strip thus serves a double purpose of providing a roughened surface and also as a means for clamping together the abutting edges of the body so that they may not easily be spread apart.

In order to clamp the strands of hair when once rolled on the body, there is provided the spring clip 19 described in connection with Figs. 2 and 3.

In still another embodiment of my invention shown in Fig. 6, roughening of the surface of a body 30 comprises extending perforations 31 outwardly so that side walls protrude in the form of a bead 32 beyond the outer surface 33 of the cylindrical body. Flanges 34 are likewise provided at the ends of the body, in this case illus-

trated as having an outermost edge 35 turned back, making a reverse curve of the flange. Where fabricating circumstances permit, the making of a reversely curved flange of this sort has an increased advantage in holding strands of hair in place which are spread upon the body. The cylindrical body 30 shown and described in connection with Fig. 6 is adapted for use with the customary clip 19 previously described.

In using my device, it has been found advantageous to slide the body over the operator's index or other finger which she may be accustomed to use for combing out strands of hair for curling. The body forms, in effect, a false finger, and provided as it is with a roughened portion on its surface such as the teeth 18 of a comb, it can be readily used to spread the strands of hair smoothly and easily over the body and hold them in place in a lateral direction, once they have been applied to it. By reason of the fact that the teeth of the comb are kept well rounded, well spaced apart and not permitted to extend a great distance beyond the space of the body, they supply sufficient roughening without the danger of breaking the hair which is wound around the body.

After a quantity of strands of hair have been thus combed out, spread upon the body and rolled around it, the clip is applied to the rolled mass of hair by slipping it over the roll so that the side edges spring outwardly to permit its application, whereupon the inherent resiliency of the clip will cause it to press tightly around all sides of the rolled hair and thus hold it securely in place. Inasmuch as hair when it is to be curled is usually dampened a slight amount, perforations in the body and the clip will permit moisture to evaporate while the curl is setting.

For releasing the curl, it is necessary only to firmly grasp the resilient spring clip and slide it off laterally. As soon as this is done, the roll of hair will spring out slightly and permit the body to be released from it. Both the clamping and releasing are very simple operations and consist of the application of a clamping part or clip which cannot damage the strands of hair either as it is applied or when it is removed.

The modified types of bodies shown in Figs. 5 and 6 may be used in a similar manner, namely by slipping it over the index or other finger in order to roll the hair upon the body caught by the roughened portions whatever they may be, after which the roll of hair can be securely held in place.

If the quantity of hair rolled around the body is relatively small, so that it provides little for the clip grasp when it is applied to the roll of hair, the flanges 14 and 15 extending outwardly beyond the outer circumference of the clip will prevent the clip from slipping endwise and releasing the curl while it is setting. If a large quantity of hair is rolled upon the body, it will provide sufficient resistance because of the larger diameter of the roll and the yielding quality of the mass of hair, so that the clip will be retained in place even though it may be sprung outwardly to a temporary diameter greater than the diameter of the flanges 14 and 15.

There has thus been provided a hair curler directed to the making of loose, large curls in a head of hair wherein the number of parts comprising the curler have been kept to substantially a minimum and which have not been permanently connected to each other by the addition of connecting devices which may be sprung loose

5

or damaged during use. Bodies and clips thus formed are readily interchangeable one with another and can be applied and removed with perfect ease.

I claim:

1. In a hair curler: a body member comprising a perforated sheet bent to tubular form, said sheet having abutting edges and having outwardly turned annular flanges at its ends for confining strands of hair wound upon said body member; a tubular resilient perforated sheet having a diameter greater than said body member and a length of approximately the distance between said flanges, said sheet being longitudinally split for adapting the same to be spread and clipped upon said body member, said clip sheet being cooperative with said flanges in confining said strands of hair upon said body member; and means on the outer surface of the body member for holding strands of hair thereon comprising a comb forming a part of one of the abutting edges of the body member.

2. A hair curler comprising a thin-walled cylindrical tube having ventilating perforations therein, flange means carried by the ends of said tube for retaining strands of hair on said tube, said tube having a plurality of closely spaced projections extending substantially throughout the length thereof for positioning the strands of hair in a lateral direction on said tube and in parallel relation to each other, and a clip comprising a perforated, resilient substantially cylindrical

6

element having a diameter less than the diameter of the outer circumference of said flange means and greater than the diameter of the tube, said clip having a length to fit between the flange means and having a longitudinal opening of less width than the diameter of the cylindrical body.

3. A hair curler comprising a thin-walled cylindrical body having ventilating perforations therein, flange means carried at each end of said body for retaining the strands of hair, a comb running longitudinally relative to the body, and a clip comprising a perforated, resilient substantially cylindrical element having a diameter less than the diameter of the outer circumference of said flange means and greater than the diameter of the body, said clip having a length to fit between the flange means and having a longitudinal opening of less width than the diameter of the cylindrical body.

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