Jan. 6, 1959 R. L. ANZALONE 2,867,223

HAIR CURLING DEVICE

Filed March 6, 1957

FIG. 4

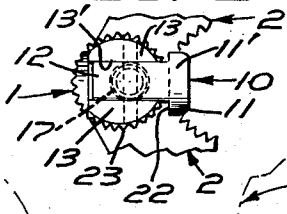


FIG. 3

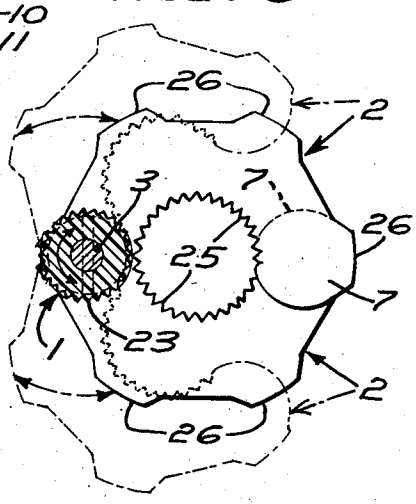


FIG. 1

FIG. 9

FIG. 2

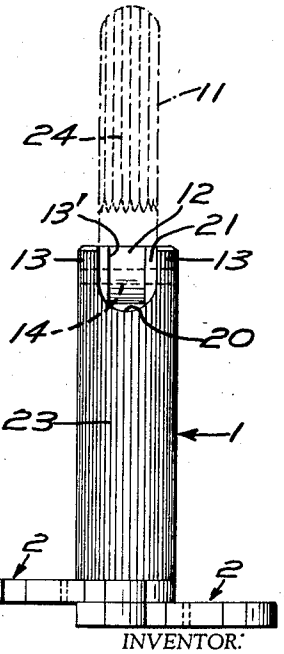


FIG. 5

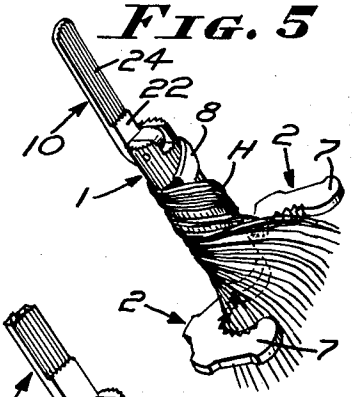
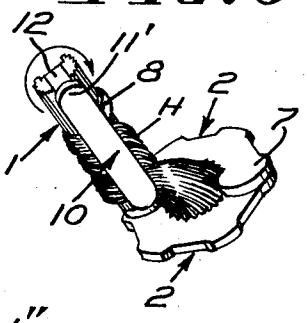


FIG. 6



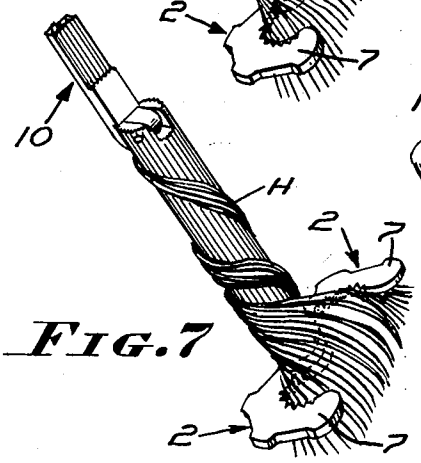
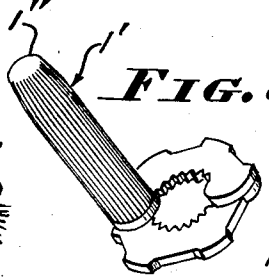


FIG. 7

FIG. 8



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HAIR CURLING DEVICE

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Application March 6, 1957, Serial No. 644,398

10 Claims. (Cl. 132—40)

This invention relates generally to the hair styling art, and more particularly to a new and useful device for curling and styling the hair.

It has been customary to initially impart a wave to the hair, using long slender rods lying at a right angle to the hair and generally tangent to the scalp. The hair is wound about the rods and waving solution is applied to the hair. Then the rods are removed, and it is necessary to form the waved hair strands to the desired style. In other words, two separate and distinct operations are required because the devices customarily used to impart a wave to the hair are not suitable to form and style the same.

This is cumbersome, time consuming and uncomfortable to the patron and I have observed, over a number of years during which I have been actively engaged in this art, that a simple hair curling and styling device, requiring but one operation, would be highly desirable. I am aware that prior attempts have been made to provide such a device, but for one reason or another they have not been accepted to any appreciable extent. I believe that is because either they did not operate satisfactorily or they were not practical.

Accordingly, it is a primary object of my invention to provide a highly practical hair curling device on which the hair can be wound as a ringlet in a manner to form the desired styling, whereby both the curling and the styling can be accomplished in one operation.

It is another object of my invention to provide the foregoing in a device which is relatively simple and inexpensive in construction, which is light in weight and extremely comfortable to the patron when in use, and which is rugged, durable and dependable in operation.

A hair curling device constructed in accord with my invention is characterized in one aspect thereof by the provision of a spindle member adapted to receive a group of hair strands wound therearound, and a pair of opposed arm members carried by the spindle member in opposition to each other adjacent one end of the spindle, the spindle being mounted for rotation relative to the arms in either direction about a lengthwise axis and the arms being rotatable relative to the spindle member and to each other about the same axis, whereby the arms can be opened to receive a group of hair strands and closed to confine the hair strands therebetween, the spindle being rotated relative to the arms to wind the hair strands thereon.

The foregoing and other objects, advantages and characterizing features of a hair curling device constructed in accord with my invention will become clearly apparent from the ensuing detailed description of a presently preferred embodiment and certain modifications thereof, taken together with the accompanying drawing illustrating the same wherein like reference numerals denote like parts throughout the various views and wherein:

Fig. 1 is a longitudinal, generally sectional view through a presently preferred form of hair curling device constructed in accord with my invention, the clip being shown partly in section with its closed position illustrated by full lines and its open position illustrated by broken lines;

Fig. 2 is a rear elevational view thereof;

Fig. 3 is a transverse sectional view thereof taken about on line III—III of Fig. 1;

Fig. 4 is a fragmentary end view thereof with the clip in closed position, taken about on line IV—IV of Fig. 1;

Fig. 5 is a generally perspective view showing an initial position of the device in use;

Fig. 6 is a similar perspective view showing a final position of the device in use;

Fig. 7 is a view similar to Fig. 5 but illustrating a longer spindle and different manner of winding the hair thereon.

Fig. 8 is a view similar to Fig. 6 but illustrating a modified form of device wherein there is no clip; and

Fig. 9 is a view of a ringlet formed by the device of my invention.

Referring now to the embodiment of Figs. 1–6, a hair curling device constructed in accord with my invention comprises an elongated spindle member 1 of generally cylindrical form, and a pair of opposed arm members 2 carried thereby adjacent one end thereof. The arms 2 are adapted to receive and confine a group of hair strands H therebetween.

To this end, arms 2 are mounted for rotation relative to each other and to spindle 1 for opening movement to receive the hair strands H and for closing movement to confine the same, with spindle 1 being mounted for rotation in opposite directions about a lengthwise axis to wind the hair strands H thereon. All such rotation is about a common axis and is expeditiously accomplished in a simple manner by means of a pivot pin securing the arms 2 at substantially a right angle to spindle 1 at one end thereof. In the illustrated embodiment the pivot pin comprises a threaded bolt 3 which is threaded into a longitudinal bore 4 in one end of spindle member 1.

Arm members 2 preferably are of generally semicircular form being arranged in opposite relation with overlapping inner ends 5 which receive bolt 3 therethrough. The end 5 remote from spindle 1 is recessed in its outer face, as indicated at 6, to accommodate the head 3′ of bolt 3 in countersunk relation and thereby provide a smooth, flat bottom surface on the paired arm members.

Thus, spindle 1 is mounted for rotation relative to arm members 2 in opposite directions about the axis of bolt 3, which comprises the longitudinal axis of spindle member 1, and the arms 2 are pivoted to spindle 1 for rotation relative thereto and to each other about the same axis. This provides a very simple, foolproof, basic construction, and it will be noted that the arm members 2 are of flat sided form whereby the device is provided with a flat bottom surface at the end carrying the arm members 2. Also, by regulating the depth to which bolt 3 is threaded in the end of spindle 1 sufficient friction can be provided between the opposed bearing surfaces provided by bolt head 3′, the adjacent end of spindle 1 and the opposite faces of the arm ends 5 to releasably hold arm members 2 in whatever position they are adjusted to, even when spindle 1 is rotated relative thereto, while enabling them to be adjusted readily out of that position.

While my device can be made from any of a number of different materials suitable for the purpose, I prefer to use a synthetic plastic material which will withstand the solutions used in waving the hair, is not a good conductor of heat, and can be provided in a number of pleasing colors and color combinations.

In use, arms 2 are opened as to the broken line position thereof shown in Fig. 3, and a group of hair strands H is slipped into the entrance slot provided between the outer ends 7 threeof. Or, arms 2 can be opened to whatever position is comfortable for the operator. An end paper 8 or the like is wrapped around the outer ends of

the hair strands, to keep them together in a manner customary in the art. Then spindle 1 is rotated in the desired direction with one hand while arms 2 are grasped in the other hand and the strands H are wound around the spindle 1 in a manner determined by the hair style desired, all as illustrated in Fig. 5. Then, just prior to the full wind, arm members 2 are brought together in clamping position with the outer ends 7 overlapping as illustrated in full lines in Fig. 3, whereby the group of hair strands H is confined between the arm members 2, and the arm members 2 are held in this position with one hand while spindle member 1 is rotated with the other hand to complete the winding of the hair strands H thereon to the tightness desired. This brings the closed arms 2 to a position against or closely adjacent the scalp, thereby firmly holding the device in position on the head in a comfortable manner providing a pleasing appearance even during the operation.

For a two-way hair-do, spindle 1 is rotated in one direction on one side of the head, and the opposite direction on the other side. For a one-sided hair-do, it is wound in the same direction throughout.

It is a unique advantage of my device over the customary rods that it winds with the hair growth, without pulling the hair roots, thereby giving a much smoother and more manageable wave with far less discomfort. The hair strands H are wound on spindle 1 in a manner to provide the desired styling, as will be explained more fully hereafter and the waving solution is applied thereto in the usual manner. Then, while it is not absolutely necessary, I prefer to provide a clip 10 for clamping the wound strands H in place while the waving solution is setting, this being the position illustrated in Fig. 6.

In accord with this invention, clip 10 preferably is made of the same material as spindle 1 and arms 2 and comprises an elongated, generally flat clamping arm 11 having at one end a lateral flange 12 extending at about a right angle thereto. The end of spindle 1 remote from that to which arms 2 are attached is transversely slotted, as indicated at 13', to provide upstanding trunnion bearing, side wall portions 13 between which flange 12 is confined and to which it is pivoted as by a pivot pin 14 extending therethrough and into the bearing portions 13.

Thus, arm 11 can be swung from the inoperative, open position thereof shown in broken lines in Fig. 1 to the operative, closed position thereof shown in full lines therein, or to an intermediate position at about a right angle to spindle 1, and I preferably provide means for resiliently urging the arm into either of these positions. To this end, three sides of flange 12 are flattened, as indicated at 15 and a bearing member 16 is spring urged thereagainst by a coil spring 17 confined within a bore 18 which extends longitudinally into spindle member 1 to a point short of the inner end of bore 4.

Thus, bearing member 16 is urged against flange 12 by spring 17, and bears against one flat portion 15 when arm 11 is in its inoperative or open position, against the opposite one of said flat side portions when arm 11 is in its closed position, and against the flat side portion therebetween when the arm is in its intermediate position. This provides a strong clamping action when the arm is in closed position, releasably holds the arm in its extended, inoperative position for slipping off the hair strands H, and holds the arm against free swinging movement about the axis of pivot 14.

It is a feature of my invention that the inner end 11' of arm 11 is curved and mates with the adjacent end of slot 13' when the arm is in open position to provide a smooth, substantially cnotinuous surface for sliding the smooth, substantially continuous surface for sliding the correspondingly curved, as indicated at 20, and is provided with flat shoulders 21 on opposite sides thereof to receive the underside 22 of arm 11 on opposite sides of flange 12, whereby when the arm is swung to its open position shown in Fig. 5 it is aligned with the periphery of spindle 1, to facilitate sliding the device out of the strands H after they have been curled.

It is also a feature of my invention that, to better hold the hair strands in the correct position, the spindle member 1 is formed with serrations 23 therearound, extending lengthwise thereof, and the undersurface of arm 11 also is formed with serrations 24 extending lengthwise thereof. Thus, when the strands of hair H are wound upon spindle member 1 the serrations 23 help to hold them against slipping around the spindle, and the serrations 24 on clip arm 11 bear against the wound strands H on the opposite side thereof and help to hold them in place. The inner periphery of arm members 2 also are serrated, as shown at 25, to help grip the hair and insure that the hair and the clamping arms 2 stay in position.

In addition, to facilitate manipulation of arm members 2 and manual grasping thereof when rotating spindle 1, I notch the outer peripheries thereof by providing lugs 26 projecting laterally therefrom at spaced points therearound. Preferably there is a lug 26 at the overlapping ends 5 and 7, with one or more lugs therebetween. This assists the operator, whose hands often are wet and apt to be slippery, in obtaining a good purchase on the arm members 2 for quickly and easily manipulating and holding the same.

Accordingly, it is seen that my invention fully accomplishes the aforesaid objects and provides a hair curling device which is extremely simple in construction, which greatly reduces the amount of time and labor required to style hair, and which is comfortable to the patron and does not damage the hair. The usual tight permanent look is avoided and the hair looks natural and the desired style is provided at once. The hair is wound on the device in ringlet form, and is styled as it is curled, whereby upon releasing clip 10 and moving it to its open position, shown in broken lines in Fig. 1 the styled hair is simply slipped out of the device and, when dry, need only be brushed. No further styling is necessary. The device can be used on men, women and children, with comfort, to provide any hair style desired, and is particularly adapted to provide today's casual, more natural looking hair styles.

As shown in Fig. 7, by varying the manner of winding the group of hair strands H upon the spindle member 1, a wide wave styling can be provided as distinguished from the natural wave and ringlet end styling shown in Figs. 5 and 6. Also, the length of spindle member 1 can be varied for different purposes, as indicated by the longer spindle of Fig. 7. As previously noted, the device curls the hair with a ringlet wind, and of course can provide simple ringlets as illustrated in Fig. 9.

It will be appreciated that while it is helpful and to be desired, clip 10 is not always necessary and in many instances a device without the clip, and therefore without the spring backed bearing 16 and related parts, would have wide utility. Such a device is shown in Fig. 8, wherein the spindle 1' is provided with a rounded end 1'' to facilitate removal of the curled hair.

While I have shown only the presently preferred embodiment, and certain modifications, I do not necessarily intend my invention to be limited to the details thereof. I realize that other variations and modifications will occur to those skilled in the art without departing from the spirit of my invention, and I intend to include the same within the scope of the appended claims.

Having fully disclosed and completely described my invention together with its mode of operation, what I claim as new is:

1. A hair curling device comprising, a spindle adapted to be rotated in opposite directions about an axis extending lengthwise thereof to wind a group of hair strands thereon, a pair of opposed arms, and a pivot pin extending through said arms adjacent one end thereof and into one end of said spindle in alinement with said axis for

mounting said arms on said spindle and holding said arms and said spindle in assembled relation, said pin mounting each of said arms for pivoting in opposite directions about said axis relative to the other of said arms and to said spindle and mounting said spindle for rotation in opposite directions about said axis, whereby said arms can be rotated about said axis away from each other to open said arms and can be grasped in one hand to hold the device while said spindle is rotated about said axis relative to said arms by another hand to wind a group of hair strands on said spindle, and whereby said arms can be rotated toward each other about said axis to close said arms and clasp a group of hair strands therebetween and said spindle can continue to be rotated about said axis relative to said arms to complete the winding of a group of hair strands on said spindle.

2. A hair curling device comprising, an elongated spindle member adapted to have a group of hair strands wound thereon, a pair of opposed arms, means mounting said pair of arms on said spindle member adjacent one end thereof at generally a right angle thereto for independent pivoting movement of said arms relative to each other and to said spindle member completely about substantially the lengthwise axis of said spindle member, said spindle member being rotatable about said axis in opposite directions relative to said pair of arms, whereby said pair of arms can be opened to receive a group of hair strands and then brought together to confine the same therebetween, and whereby said arms can be held in position with one hand and said spindle member can be rotated about said axis in either direction relative thereto with the other hand to wind a group of hair strands thereon.

3. A hair curling device as set forth in claim 2, wherein the periphery of said spindle member is serrated to reduce slippage of a group of hair strands therearound.

4. A hair curling device as set forth in claim 3 wherein said arms each have a generally semi-circular inner periphery to provide a pair of opposed jaws for clamping a group of hair stands therebetween, and wherein said inner peripheries are serrated to better grip such hair strands.

5. A hair curling device as set forth in claim 3, wherein said arms are generally semi-circular, together with laterally projecting lug means on the outer periphery of said arms to facilitate manually grasping and manipulating the same.

6. A hair curling device comprising, an elongated spindle member adapted to receive a group of hair strands wound thereon, a pair of opposed arm members lying in generally parallel planes, and a common pivot member securing said arm members to said spindle member in overlapped relation against one end thereof, said common pivot member enabling rotation of said arm members in opposite directions relative to said spindle member and to each other completely about substantially the longitudinal axis of said spindle member and enabling rotation of said spindle member relative to said arm members in opposite directions completely about said axis for winding a group of hair strands on said spindle member.

7. A hair curling device as set forth in claim 6, wherein the other end of said spindle member is generally rounded to facilitate removal of a group of curled hair strands therefrom.

8. A hair curling device as set forth in claim 6, together with a clip arm pivoted adjacent one end to the other end of said spindle member for movement about an axis transverse thereto between a closed position along said spindle member for holding a group of hair strands thereagainst and an open position generally alined with said spindle member to comprise an extension thereof, and means for holding said clip arm in either of said positions.

9. A hair curling device as set forth in claim 8, wherein both said spindle member and the underside of said clip arm are serrated.

10. A hair curling device as set forth in claim 8, wherein the outerside of said clip arm when in said open position merges smoothly with the periphery of said spindle member to facilitate slipping a group of curled hair strands endwise therefrom.

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CERTIFICATE OF CORRECTION

Patent No. 2,867,223 January 6, 1959

Rose L. Anzalone

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 2, line 37, for "opposite" read -- opposed --; line 69, for "threeof" read -- thereof --; column 3, line 70, strike out "smooth, substantially cnotinuous surface for sliding the"; line 71, after "sliding the" insert -- device out of the hair H. Thus, that end of slot 13' is --.

Signed and sealed this 5th day of May 1959.

(SEAL)
Attest:

KARL H. AXLINE
Attesting Officer

ROBERT C. WATSON
Commissioner of Patents