

Sept. 15, 1942.

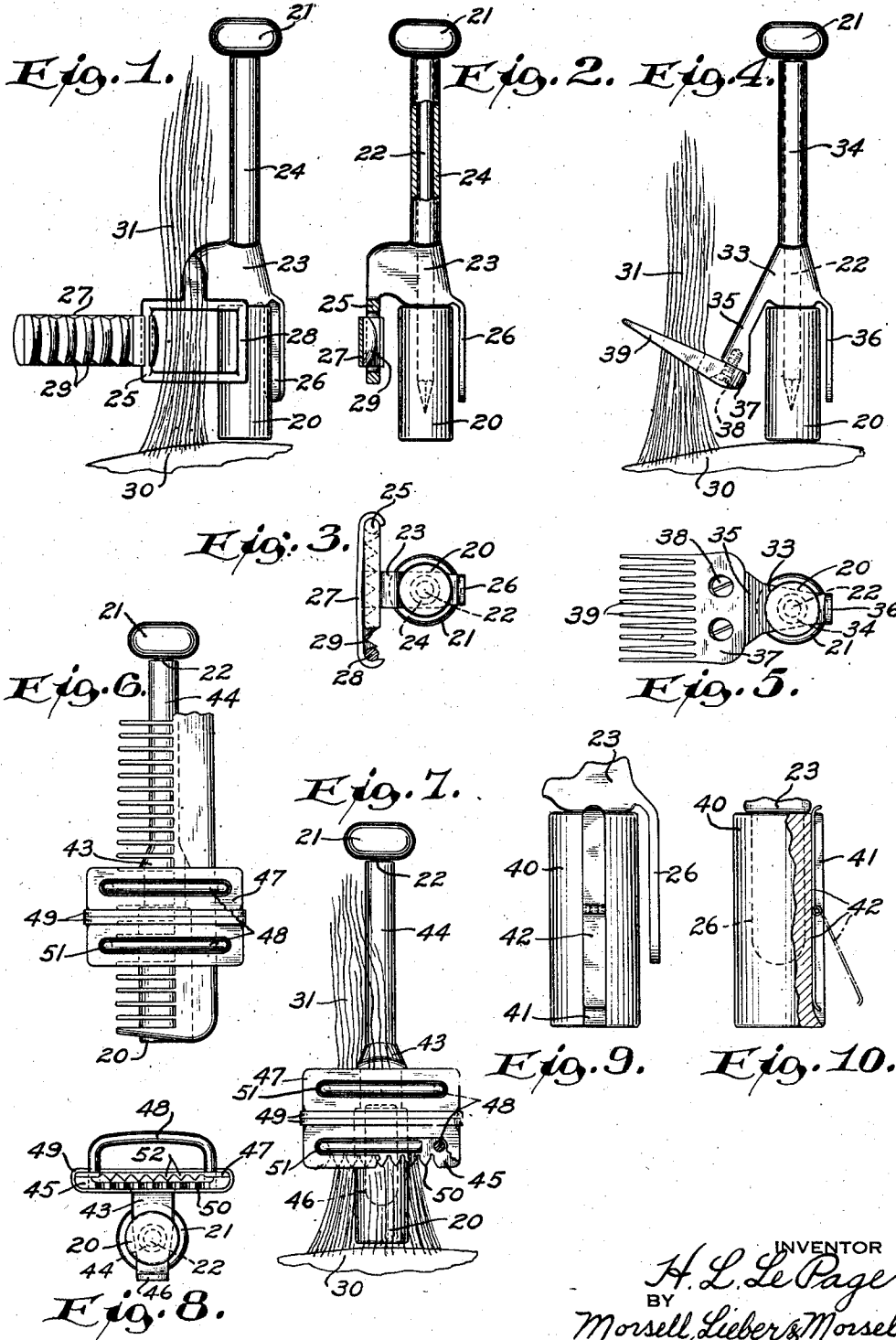
H. L. LE PAGE

2,296,168

ART OF HAIR DRESSING

Filed Oct. 19, 1940

2 Sheets-Sheet 1



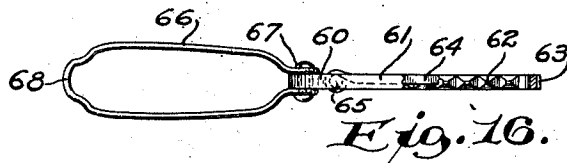
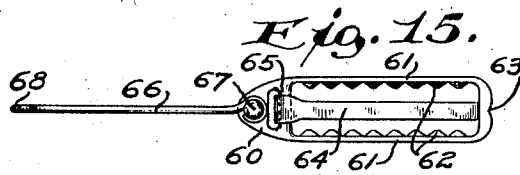
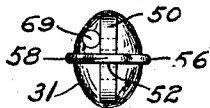
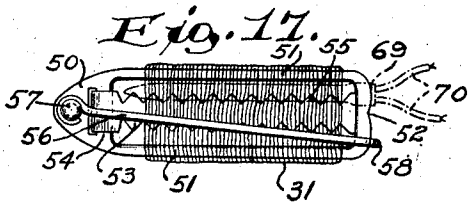
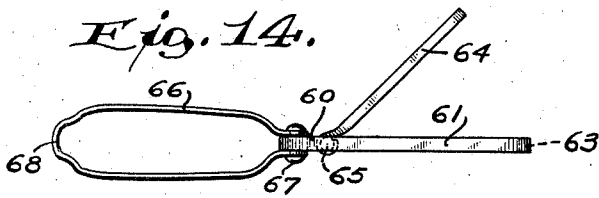
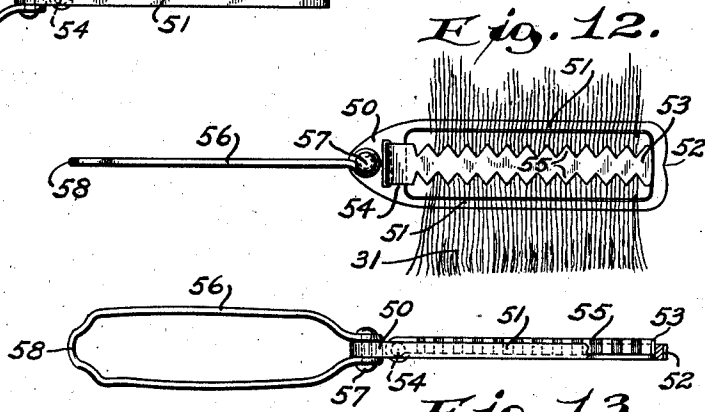
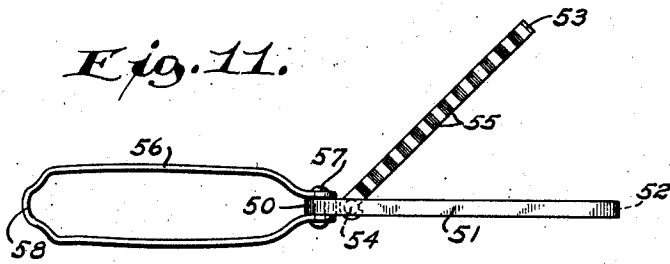
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,296,168

ART OF HAIR DRESSING

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10 Claims. (Cl. 132—33)

The present invention relates in general to improvements in the art of hair dressing, and relates more specifically to improvements in the construction and operation of apparatus for curling hair.

Many different kinds of appliances and devices have heretofore been proposed and used with varying degrees of success, for the purpose of producing various types of waves and curls in hair. Some of these prior devices are relatively ineffective because they do not properly engage and confine the strands of hair, while others cannot produce attractive curls of uniform texture having all of the hair of a strand properly positioned with respect to the others. Many of the prior hair curlers are also too complicated for proper manipulation by a novice, and some of these appliances are also painful to the user and injurious to the hair. It has been observed when producing either so-called pin curls which lie flat against the head, or roll curls extending along and approximately parallel to the scalp, that it is desirable to frictionally maintain the individual hair of a strand under slight tension while the strand is being wound around the curling axis and that if the strand is combed during the curling operation more uniform and regular final curls result. The individual hair of the strands should be retained out of contact with adjacent hair near the roots, and when forming pin curls, the winding of the strands should proceed away from the root ends of the hair. None of the prior hair curlers are adapted to produce these desirable actions and therefore do not function most effectively, and the prior structures moreover cannot be readily equipped with simple and effective means for holding the curls after the curlers have been removed, and for drying the curls when clamped in the curlers.

It is therefore an object of my present invention to provide new and useful apparatus for producing pin curls, roll curls, or other types, expeditiously and so that attractive final curls result.

Another specific object of the present invention is to provide an improved hair curling appliance wherein the hair may be properly wound into curl formation with minimum discomfort to the user of the device.

A further specific object of my invention is to provide an improved curl producing device wherein the hair is effectively combed and arranged so as to produce neat and attractive final curls, during the curl forming operation.

Still another specific object of the invention is

to provide an improved curl producing assemblage which may be manipulated by a novice to effectively curl the hair without danger of injuring the same.

5 An additional specific object of this invention is to provide an improved device for quickly and effectively producing pin curls, and means for retaining the curls in place after the forming device has been removed, or the curls have been removed from the former.

10 Still another additional object of my invention is to provide an improved appliance for rapidly and effectively producing roll curls which will lie flat against the head while the curl formed thereon is drying, together with simple and effective means for expediting the drying operation.

15 A further additional object of the present invention is to provide improved hair curling units which are flexible in use, sturdy in structure, and which can be manufactured and sold at moderate cost.

These and other specific objects and advantages of the invention will be apparent from the following detailed description.

25 A clear conception of the mode of constructing and of utilizing hair curlers embodying the new features, may be had by referring to the drawings accompanying and forming a part of this specification wherein like reference characters designate the same or similar parts in the various views.

Fig. 1 is a side view of one type of new pin curl producing device, showing the hair combing and frictional tensioning clamp open and about to be applied to a strand of hair;

Fig. 2 is a part sectional elevation of the pin curler of Fig. 1, showing the combing and tensioning clamp closed;

Fig. 3 is an end or bottom view of the assemblage with the parts positioned as in Fig. 2;

Fig. 4 is a side elevation of a modified type of pin curl producing device, showing a strand of hair coating therewith preparatory to curling;

Fig. 5 is an end or bottom view of the assemblage of Fig. 4;

Fig. 6 is a side elevation or still another modified type of pin curl producing device wherein the hair strands are initially insertable with the aid of an ordinary comb applied as shown;

Fig. 7 is a similar view of the appliance of Fig. 6, showing the comb removed and the strand of hair positioned preparatory to actual curling;

Fig. 8 is an end or bottom view of the assemblage of Fig. 7;

Fig. 9 is an enlarged side view of the curler

spindle of any of the preceding views, but showing the spindle modified for reception of a curl retaining clip;

Fig. 10 is a similarly enlarged part sectional view through the modified spindle of Fig. 9, showing the retaining clip in several positions;

Fig. 11 is a side view of one of my improved roll curl producing devices, showing the curl clamping yoke and the frictional retaining and combing bar, swung into inactive position;

Fig. 12 is a top view of the curler of Fig. 11, but showing the clamping yoke inactive while the retaining bar is cooperating with a strand of hair;

Fig. 13 is a side elevation of the assemblage positioned as in Fig. 12;

Fig. 14 is a side view of a modified type of my improved roll curl producer, showing both the clamping yoke and the retaining bar in inactive position;

Fig. 15 is a top view of the modified curler of Fig. 14, but showing the clamping yoke inactive while the frictional clamping bar is active;

Fig. 16 is a side elevation of the modified assemblage positioned as in Fig. 15;

Fig. 17 is a plan view of a roll curler such as shown in Figs. 11 to 13 inclusive, with all parts in active position, and showing the mode of applying one of my improved drying heaters to a curl; and

Fig. 18 is an end view of the assemblage of Fig. 7 showing the approximate location of the drying heater.

While several specific embodiments of the invention have been shown and described by way of illustration, it is not my desire or intent to unnecessarily restrict the scope or utility of the invention by virtue of this limited illustrative disclosure, and the precise steps of my improved mode of producing curls will be more fully described in connection with the description of operation of the several types of curlers.

Referring specifically to Figs. 1 to 3 inclusive, the improved pin producing curling device shown therein, comprises in general an approximately cylindrical core or spindle 20 having a handle or positioning knob 21 rigidly attached thereto by means of a bearing rod 22; a winder or bracket 23 having an integral sleeve 24 rotatably journaled on the rod 22 between the spindle 20 and the knob 21, and being provided with a generally rectangular frame 25 and a flange or lip 26 disposed on opposite sides of and parallel to the spindle 20; and a frictional retaining and hair tensioning clamp bar 27 pivotally suspended from one side member of the frame 25 and interlockable with the other side member 28, the bar being provided with a series of serrations or hair combing teeth 29.

The spindle 20 may be formed of wood or other suitable material which will have pleasing contact with the scalp, and the other elements of the assemblage may be formed of aluminum or other light but durable metal. The core or spindle may be positioned in contact with a scalp 30 in the manner shown in Fig. 1, and a strand 31 of hair may be initially positioned upon the frame 25 as illustrated. The bracket 23 and the parts carried thereby may be freely rotated about the bearing rod 22, and when the clamping bar 27 is clamped in closed position as shown in Figs. 2 and 3, an intervening group or strand 31 of hair will be frictionally clamped against the frame. When thus clamped, the strand 31 may however be pulled longitudinally and the in-

dividual hair will be combed and arranged parallel to each other by the teeth 29.

In Figs. 4 and 5, is shown a modified type of improved pin curler comprising in general an approximately cylindrical core or spindle 20 having a manipulating knob 21 rigidly attached thereto by means of a bearing rod 22; a bracket 33 having an integral sleeve 34 rotatably journaled upon the rod 22 between the spindle 20 and the knob 21, and being provided with a depending arm 35 and with a lip 36 disposed on the opposite sides of and parallel to the spindle 20; and a comb segment 37 secured to the lower extremity of the arm 35 by means of screws 38 or otherwise, and having teeth 39 extending upwardly and away from the spindle axis.

The spindle 20 and other elements with the exception of the comb segment 37, may be formed as previously described, and the comb segments 37 may be formed of hard rubber or other material used in the construction of ordinary combs. This comb segment 37 is adapted to initially engage a strand 31 of hair as shown in Fig. 4, while the spindle 20 engages the scalp 30, and when the hairs are forced into the tapered grooves between the teeth 39 of the comb, they will be frictionally restrained and will also be arranged parallel to each other as the strand is pulled through the segment 37.

In Figs. 6, 7 and 8 of the drawings, I have shown another modified type of improved pin curl producer comprising in general, a spindle 20 having a manipulating knob 21 rigidly attached thereto by means of a bearing rod 22; a bracket 43 having an integral sleeve 44 rotatably journaled on the rod 22 between the spindle 20 and the knob 21, and being provided with a strand clamping plate 45 and with a lip 46 disposed on the opposite sides of and parallel to the spindle 20; a movable clamping pad 47 slidable along guides 48 carried by the plate 45; and one or more rubber bands 49 or other means for resiliently urging the pad 47 toward the plate 45.

The spindle 20, and the other elements of this modified structure may again be formed as hereinabove described, and the plate 45 which is formed integral with the rotary bracket 43 and to which the pad guides 48 are rigidly attached, is preferably provided along one edge with combing serrations or teeth 50. The pad 47 which is movable along the parallel guides 48 has slots 51 for receiving these guides, and the surface of this pad 47 which faces the plate 45, is provided with serrations or teeth 52 as shown in Fig. 8. It is preferable in this modified assemblage, to form both the plate 45 and the pad 47 slightly oppositely concave so as to provide a slight comb receiving space between them. An ordinary comb 53 is adapted to be inserted between the plate 45 and pad 47 as illustrated in Fig. 6, in order to gather up a strand 31 of hair and to insert the same between the plate and pad as shown in Fig. 7, and the inserted strand will be frictionally confined between the clamping elements by the rubber bands 49 and will be combed into regular order by the teeth 50, 52 when the hair are withdrawn longitudinally.

Referring to Figs. 9 and 10, the modified curl core or spindle 40 shown therein may be applied to any of the devices shown in Figs. 1 to 8 inclusive, and this core 40 may likewise be formed of wood or the like, and is provided with a peripheral slot 41 adapted to frictionally retain a curl clamping clip 42 therein. When a curl has been formed around the spindle core 40, the clip 42

may be folded to clamping position as illustrated in dot-and-dash lines in Fig. 10, and may thereafter be snapped shut to confine the completed curl and to facilitate removal thereof from the spindle.

As previously indicated, my improved mode of curling comprises winding a frictionally confined strand of hair about an axis while maintaining each hair free from attachment to the adjacent hair and under slight longitudinal tension, and combing the strand directly preceding winding thereof into curl formation. This procedure may be carried on by hand or with any of the devices shown in Figs. 1 to 10 inclusive, and all of these appliances are adapted to form so-called pin curls which may be finally clamped and retained in shape by the clips 42 until the curls have dried and set. When utilizing any of these pin curl forming devices, each strand 31 of hair is initially properly positioned in the frictional retaining portion of the rotary bracket, with the root ends of the hair free from engagement with each other; and after the cylindrical curl forming spindle 20 has been positioned perpendicular to the scalp 30 and is being thus held, the hair engaging bracket may be revolved about the bearing bar 22 thereby causing the strand 31 to be wound in helical formation about the spindle core. As the winding of the strand about the spindle axis proceeds, the individual hair will be constantly maintained under tension, and will also be combed parallel to adjacent hair; and the wound strand will be engaged by the depending bracket lip and will retain required tension and be prevented from unwinding until otherwise secured by a hairpin or the like. The finally formed curls may be slipped axially from the spindle end and held in place against the scalp 30 either with a hair pin or with a clip 42, and while the improved method is thus readily applicable when forming pin curls, it is also applicable when producing ordinary roll curls or other hair arrangements.

Referring specifically to Figs. 11 to 13 inclusive, the improved roll curler and clamp shown therein, comprises in general, an open generally rectangular metal frame 50 having opposite side bars 51 and a notch 52 in one end thereof; a flat bar 53 pivotally suspended from a pin 54 formed integral with the opposite end of the frame 50 and having opposite side serrations or teeth 55 adapted to be brought into juxtaposition with the frame side bars 51; and a resilient wire clamping yoke 56 pivotally suspended from one end of the frame 50 by means of a pivot pin 57, and having its opposite end 58 formed to snap into the frame notch 52.

In Figs. 14, 15 and 16, I have illustrated a modified type of roll curler comprising in general an approximately rectangular metal frame 60 having parallel opposite side bars 61 provided with serrations or teeth 62 along their inner sides, the frame 60 having a notch 63 in one end; a flat bar 64 pivotally suspended from a pin 65 formed integral with the opposite end of the frame 60, and adapted to be positioned between the side bars 61; and a resilient wire clamping yoke 66 pivotally suspended from the frame 60 by means of a pivot pin 67, and having its opposite end 68 formed to snap into the frame notch 63.

Referring to Figs. 17 and 18, here I have shown a roll curler and clamp of the type shown in Figs. 11 to 13 inclusive, in action and with a strand 31 of hair wrapped thereabout and held in place by the yoke 56. An elongated electrically heated

element 69 adapted to be connected to an energizing line 70, has been inserted within the curled strand in order to facilitate drying thereof. There may be any desired number of these heating elements 69 provided, and they may be detachably connectable to plugs at the ends of the lines 70; and the elements 69 may obviously be permanently installed within the central bars 53, 64, if so desired.

When utilizing any of the improved roll curlers to curl hair, the parts may be initially positioned as shown in Figs. 11 and 14, whereupon strands 31 of hair may be positioned across the frames and the central bars may be snapped within the frames to moderately clamp the strands near the roots of the hair. Each frame may thereafter be pulled along the initially clamped hair strand 31, thereby causing the teeth to comb the hair into parallel position. When the frame has been brought near the ends of the hair in the strand 31, the strand may be wound snugly about the frame side bars and over the center bar while permitting the hair to slide to their extreme ends, whereupon the yoke may be snapped over the frame and over the curl so as to prevent unwinding. A heating element 69 may be subsequently applied to facilitate drying and setting of the curl, and in this manner regular and perfect successive curls may be produced.

From the foregoing detailed description it will be apparent that my present invention provides apparatus for quickly and effectively producing various types of curls having the individual hair thereof arranged in neat and regular order, and properly tensioned so as to cause the curls to maintain their shapes for a long time. The improved curlers obviously expedite formation of each individual curl, and facilitate production of the successive curls. The pin curlers are readily manipulable without unpleasantness and injury to the hair, and the use of the clamping clips avoids necessity of using hair pins and also speed the removal of the curls. The improved roll curlers are also manipulable by a novice without injury and discomfort and eliminate the formation of "fish-hooks" at the ends of the hair, and these roll curlers also lie flat against the head and are not uncomfortable when the user lies down. The use of the improved heaters also hastens the drying operation and prolongs the life of the curls. All of the improved appliances have proven highly successful in actual use, and can obviously be produced at moderate cost.

It should be understood that it is not desired to limit this invention to the precise details of construction of the apparatus, herein shown and described, for various modifications within the scope of the claims may occur to persons skilled in the art.

I claim:

1. In combination, a scalp engaging spindle directly abutable against the scalp to retain the spindle fixed, a bracket having a lip revolvable about and in close proximity to said spindle to frictionally tension a strand of hair and to wind the strand around the spindle in a plane perpendicular to the spindle axis when said bracket is revolved, and means associated with said tensioning means for combing the hair of said strand during the winding operation.

2. In combination, a spindle adapted to directly engage and to be fixedly held relative to a scalp, and a frame revolvably supported by said spindle and being fixed against displacement along the spindle axis, said frame having a lip

for winding a strand of hair rooted adjacent the spindle end about the spindle in a plane approximately perpendicular to the spindle axis and near the scalp abutting end thereof.

3. In combination, a spindle adapted to directly engage and to be fixedly held relative to a scalp, a frame revolvably supported by said spindle and being fixed against displacement along the spindle axis, said frame having a lip for winding a strand of hair rooted adjacent the spindle end about the spindle in a plane approximately perpendicular to the spindle axis and near the scalp abutting end thereof, and means associated with said frame for combing the strand during the winding operation.

4. In combination, a spindle adapted to directly engage and to be fixedly held relative to a scalp, and a bracket member revolvably supported by said spindle and being held against displacement along the spindle axis, said member having a lip co-operable with a strand of hair rooted adjacent to the spindle end to maintain the strand in a plane approximately perpendicular to the spindle axis while the strand is being wound into curl formation by rotation of said member relative to said spindle.

5. In combination, a spindle adapted to directly engage and to be fixedly held relative to a scalp, a bracket member revolvably supported by said spindle and being held against displacement along the spindle axis, said member having a lip co-operable with a strand of hair rooted adjacent to the spindle end to maintain the strand in a plane approximately perpendicular to the spindle axis while the strand is being wound into curl formation by rotation of said member relative to said spindle, and means revolvable with said member for tensioning the strand during the winding operation.

6. In combination, a spindle adapted to directly engage and to be fixedly held relative to a scalp, a bracket member revolvably supported by said spindle and being held against displacement along the spindle axis, said member having a lip co-operable with a strand of hair rooted adjacent to the spindle end to maintain the strand in a plane approximately perpendicular to the spindle axis while the strand is being wound into curl formation by rotation of said member relative to said spindle, and means associated with said member for combing the strand during the winding operation.

7. In combination, a spindle having one end directly abutable against a scalp and having its opposite end provided with a handle for retaining the spindle in fixed position, and a bracket member revolvably supported adjacent to said handle and being held against displacement along the spindle axis, said member having an elongated lip extending along and in close proximity to the

spindle periphery toward the scalp abutting end for maintaining a strand of hair in snug coaction with the spindle and in a plane approximately perpendicular to the spindle axis while the strand is being wound into curl formation by rotation of said member relative to said spindle.

8. In combination, a spindle having one end directly abutable against a scalp and having its opposite end provided with a handle for retaining the spindle in fixed position, a bracket member revolvably supported adjacent to said handle and being held against displacement along the spindle axis, said member having an elongated lip extending along and in close proximity to the spindle periphery toward the scalp abutting end for maintaining a strand of hair in snug coaction with the spindle and in a plane approximately perpendicular to the spindle axis while the strand is being wound into curl formation by rotation of said member relative to said spindle, and means carried by said member for tensioning and for combing the strand during the winding operation.

9. In combination, a spindle having an approximately cylindrical portion one end of which is directly abutable against a scalp and the opposite end of which is provided with a handle for retaining the spindle in position, and a bracket member revolvably supported between said cylindrical portion and said handle and being held against displacement along the spindle axis, said member having an elongated lip extending along and in close proximity to the periphery of said cylindrical spindle portion toward the scalp abutting end for maintaining a strand of hair in snug coaction with said spindle portion and in a plane approximately perpendicular to the spindle axis while the strand is being wound into curl formation by rotation of said member relative to said spindle.

10. In combination, a spindle having an approximately cylindrical portion one end of which is directly abutable against a scalp and the opposite end of which is provided with a handle for retaining the spindle in position, a bracket member revolvably supported between said cylindrical portion and said handle and being held against displacement along the spindle axis, said member having an elongated lip extending along and in close proximity to the periphery of said cylindrical spindle portion toward the scalp abutting end for maintaining a strand of hair in snug coaction with said spindle portion and in a plane approximately perpendicular to the spindle axis while the strand is being wound into curl formation by rotation of said member relative to said spindle, and means revolvable with said member for tensioning and for combing the strand during the winding operation.

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