July 17, 1956 W. G. POLYKRANAS 2,754,831

HAIR WAVERS

Filed May 26, 1955

Fig. 1.

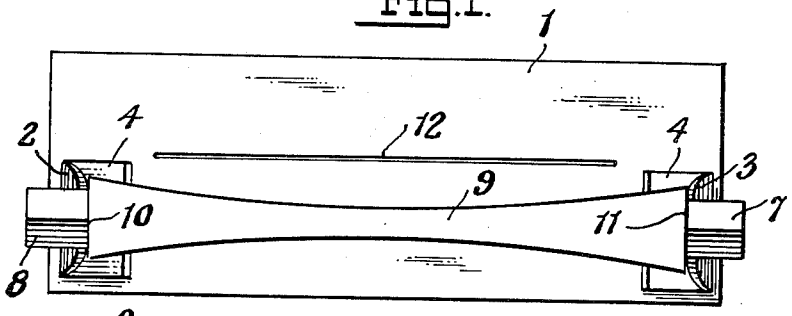


Fig. 2.



Fig. 4.

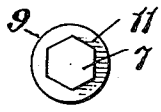


Fig. 3.

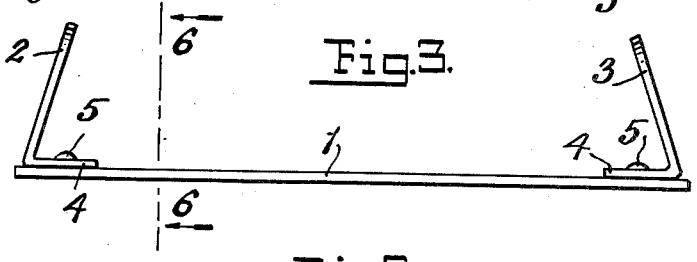


Fig. 5.

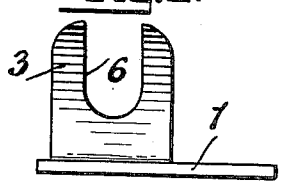


Fig. 7.

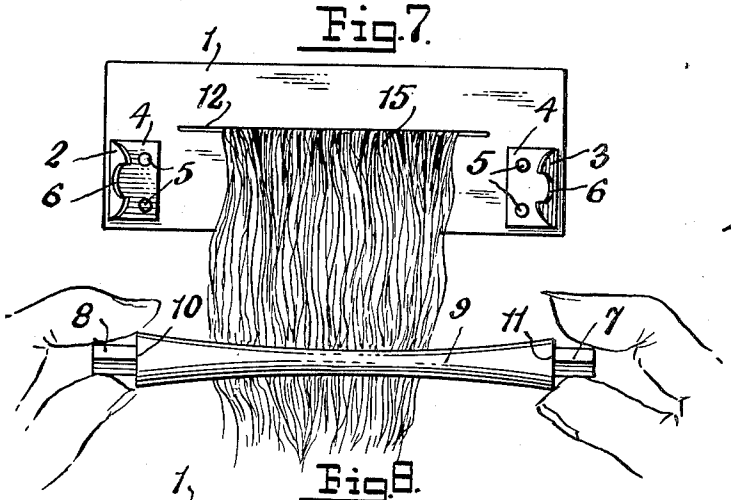


Fig. 6.

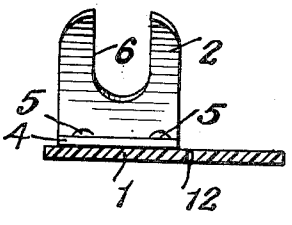
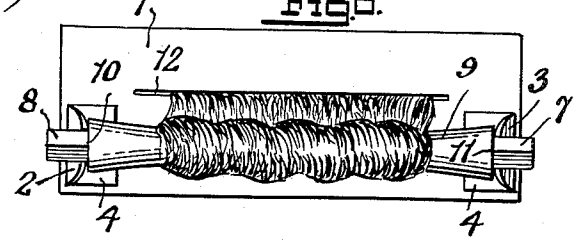


Fig. 8.



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HAIR WAVERS

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8 Claims. (Cl. 132—39)

This invention relates to hair wavers or curlers, and more particularly to a device of this kind in which is incorporated a protective guard or shield by means of which contact of the scalp with various preparations used in the treatment of the hair, or used in the hair-waving operation, will be prevented.

As is well known, many hair-waving and curling operations and other hair treatments entail the use of various liquid preparations on the hair. Some of these preparations must be used with care lest the same injure the scalp. As a result, a sparing use of them is often had so that the best hair-waving effects are not always secured. In other cases, an indiscriminate or careless use of these preparations has often resulted in burns or other damaging or injurious effects on the scalp.

It is therefore one of the objects of the present invention to provide a waver or curler of such a construction that it presents protective guard or shield between the body of the hair tress being impregnated with the preparation and the surface of the scalp, thereby protecting the scalp from contact with the preparation. It is an object of the invention to provide a device of this character which will be conformative to the surface of the scalp and therefore afford a substantial measure of protection.

It is another object of the invention to provide a waver or curler which can be applied to the hair without causing discomfort; which when placed on the hair will be prevented from permitting unwinding or unrolling of the rolled-up curl. It is still another object of the invention to provide means for retaining a curled or rolled-up tress of hair on a spindle without requiring the employment of rubber bands or similar confining elements normally used for that purpose, and which often break off hairs or cause other injury thereto.

With these and other objects to be hereinafter pointed out in view, I have devised the arrangement of parts to be described and more particularly pointed out in the claims appended hereto.

In the accompanying drawing, wherein an illustrative embodiment of the invention is disclosed,

Fig. 1 is a top plan view of a hair curler embodying my invention;

Fig. 2 is a side elevational view of the same;

Fig. 3 shows the combined base member and protective shield, with the spindle removed therefrom;

Fig. 4 is an end elevational view of the spindle;

Fig. 5 is an end view of the base member and shield;

Fig. 6 is a sectional view, taken substantially on the line 6—6 of Fig. 3, looking in the direction of the arrows;

Fig. 7 is a front elevational view of the device showing how the hair is extended through the slit in the shield portion for rotative reception on the spindle, and

Fig. 8 shows the hair wound on the spindle and the spindle maintained by the lugs on the shield.

Referring to the drawing, 1 indicates the base member of the device and which forms a protective shield for

the scalp. Said base member consists of a strip of flexible and resilient material, such as polyethylene plastic, rubber, Celluloid, or any other suitable material, and particularly a material which will be unaffected by various preparations used in hair dressing or hair-waving treatments.

Provided adjacent to the opposite ends of the strip 1 are upstanding lugs indicated respectively at 2 and 3. Each of these lugs may be made of non-corrosive metal and is in the form of an angle bracket having a base portion 4 permanentlly attached to the face of the strip 1 by means of the rivets 5 or by other equivalent fastening means. The angularity of the upstanding lug portions with respect to the base strip 1 is substantially as shown in Fig. 3, wherein it will be noted that when the strip 1 is in its normally flat or unstressed position, as shown in Fig. 3, the two lugs 2 and 3 will incline inwardly or toward one another to a substantial degree. Each of these lugs 2 and 3 is provided with the recess or notch 6 into which non-round end portions 7 and 8 of a hair-receiving spindle or mandrel 9 are adapted to be fitted. These non-round end portions 7 and 8 of the spindle 9 are shown as being hexagonal in cross-sectional shape so that when the same are fitted into the recesses or notches 6 in the lugs they will not rotate therein and hence the spindle will hold from unwinding the hair tress that has been wound upon it. These end parts 7 and 8 of the spindle need not necessarily be hexagonal, but may be square or of other non-round shape to prevent rotation of the spindle when it is placed in the notches in the lugs 2 and 3. The notches 6 are so shaped that when the spindle is placed in them it will be maintained spaced away from the strip 1.

The spindle 9 is preferably, but not necessarity, of the tapered shape clearly shown in the drawing, and it is provided with the ends 10, 11 which constitute shoulders or abutments that frictionally rest against the inner faces of the lugs 2 and 3 when the spindle is fitted in place in the notches 6. When the spindle is so fitted in place, it will exert pressure on the lugs 2 and 3 and tend to spread them apart, thus causing the strip 1 to be arched or bowed as clearly shown in Fig. 2. Thus, when the strip 1 in this arched or bowed condition, is placed against the head it will be found that the strip will conform in curvature thereto and closely fit against the scalp. The tendency of the lugs 2 and 3 to spring towards one another to the position of Fig. 3, will cause them to firmly contact with the shoulders 10 and 11 of the spindle to thus grippingly engage the spindle between them and hold it against displacement.

As will be noted in Fig. 1, the lugs 2 and 3 and the spindle 9 removably held thereby, are disposed to one side of the longitudinal center line of the strip 1, and formed in the strip 1 and situated adjacent to such center line, is a longitudinally-extending slit 12 through which a strand of hair to be rolled up on the spindle is extended.

The manner in which the curler or waver is used will be clearly apparent from Figs. 7 and 8. The strip 1 is placed against the head, and its curvature as shown in Fig. 2, will enable it to closely and comfortably conform to the shape of the head. A tress of hair 15 to be curled or waved is drawn through the slit 12 and the spindle, then detached from the lugs 2 and 3, is rotated in a manner to wind the tress upon it. The spindle, with the hair wound upon it, is then coupled to the base 1 by having its hexagonal end portions 8 and 9 fitted respectively into the notches 6 of the lugs 2 and 3, as shown in Fig. 8. The curvature of the strip 1 as it is held against the surface of the head locates

the lugs in position to enable the ends 7 and 8 of the spindle to be fitted into the notches 6.

The lugs 2 and 3, grippingly engaging against the shoulders 10 and 11 of the spindle, firmly hold the spindle against displacement out of the notches 6, while the non-round or hexagonal ends 7 and 8 on the spindle hold the same against rotative movement and thus prevent unwinding of the hair tress that has been wound upon it. As a result, all clamping pressures are avoided on the wound hair, and the curl formed on the spindle can be readily controlled as to tightness of wind thereon.

The strip 1 constituting a protective guard or shield, for the scalp covers a substantial portion of the scalp behind the spindle and behind the hair that has been wound thereon. This wound portion of the hair and that part which is disposed forwardly of the strip 1 may be impregnated or saturated with the hair-treating or waving preparation without fear of the preparation reaching the scalp and causing possible injury thereto. The curvature of the strip 1 is such that it closely conforms to the shape of the scalp, and a number of these strips, each carrying its spindle in the manner described, can be placed in close proximity on the scalp and can be overlapped to the desired degree without interference with one another, to provide all-over protection for the scalp. The materials of which the protective shield and lugs are composed may be such as permit of easy washing or other cleaning treatments, so that the device will be always sanitary and afford a maximum of protection to users.

Having described a single embodiment of the invention, it is obvious that the same is not to be restricted thereto, but is broad enough to cover all structures coming within the scope of the annexed claims.

What I claim is:

1. A hair curler comprising, a shield member in the form of a normally flat, flexible strip fitting against the surface of the scalp, the strip being apertured to permit of the passage of a hair tress through it, a spindle on which the tress is wound, lugs on the outer face of the strip for detachable engagement with the spindle to thereby hold the spindle spaced from the strip, the engagement between the lugs and the spindle being such as to cause the strip to assume and arched condition and prevent rotative movement in all directions of the spindle while it is held by the lugs.

2. In a hair curler as provided for in claim 1, wherein the lugs engage the end portions of the spindle, and said end portions are of non-round shape to thereby prevent their rotative movement within the lugs.

3. A hair curler comprising, a flat strip of flexible plastic material, a pair of spaced lugs secured to the strip, the lugs being located adjacent to the opposite ends of the strip, the lugs being normally inclined inwardly toward one another when the strip is in a flattened condition, a spindle on which hair is adapted to be wound, said spindle being provided with a shoulder adjacent to each of its ends and having a non-round portion extending from each of the shoulders, the lugs having notches for the reception of said non-round portions to thereby retain the spindle against rotation while said ends are disposed within the notches, the strip requiring curvature to enable the spindle to have its ends fitted in the notches, the strip when so curved acting to fit scalp curvature and to cause the lugs to be frictionally maintained in contact with the shoulders on the spindle.

4. In a hair curler as provided for in claim 3, in which the strip is formed with a slit through which hair is extended for winding upon the spindle, the non-round portions at the end of the spindle being of hexagonal shape, and the spindle tapering in shape from the shoulders toward its center.

5. A hair curler comprising a flexible, flat strip of protective plastic curvable to fit against the surface of the scalp, the strip having a slit through which a tress of hair is extended, supports on a face of the strip for receiving a spindle, means on the spindle receivable in said supports to cause the supports to be urged apart to thereby curve the strip, said means including elements engaging the supports in a manner to prevent rotative movement of the spindle therein in any direction, the spindle being maintained by the supports in spaced relation to the strip.

6. A hair curler as provided for in claim 5, wherein the strip is uncurved when the spindle is removed from the supports, and the supports are normally inclined in a direction toward one another, and are urged apart by the insertion of the spindle between them.

7. A hair curler comprising an elongated, normally flat, flexible strip for placement against the head, the strip having a slit through which a tress of hair is extended, the strip being provided with a lug at each end, a spindle on which the tress is wound, said spindle having ends received in said lugs to hold it positioned away from the strip, the spacing of the lugs being such that when the ends of the spindle are fitted therein the lugs will be urged apart to cause the strip to assume an arched formation to thereby fit the curvature of the head.

8. A hair curler as provided for in claim 7, wherein the ends of the spindle are provided with shoulders to engage against the lugs and urge them apart to arch the strip, the slit being located to one side of the lugs, and the portions of the spindle which engage with the lugs are non-round to maintain the spindle against rotative movement in all directions while positioned in said lugs.

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