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3,126,896

HAIR CURLER WITH WINDING MEANS

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Fig. 1.

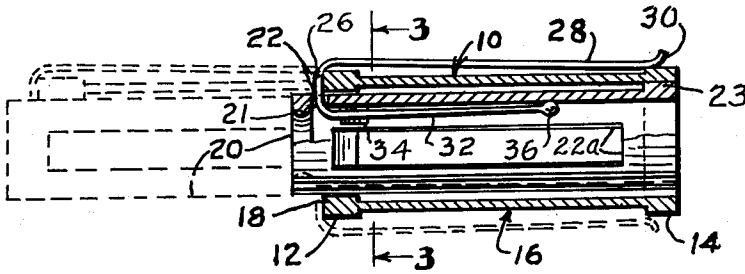


Fig. 3.

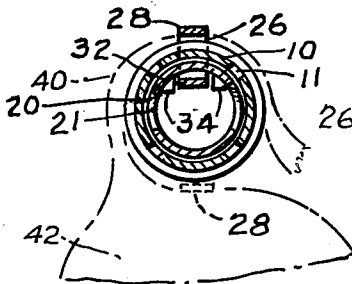


Fig. 2.

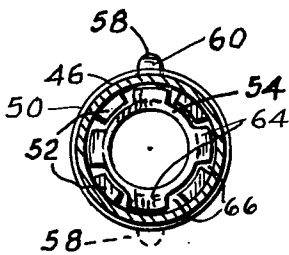
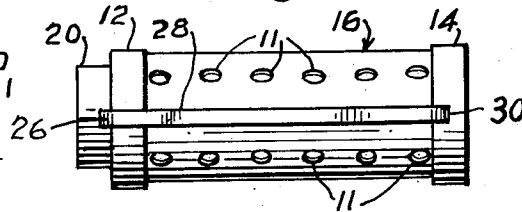


Fig. 5.

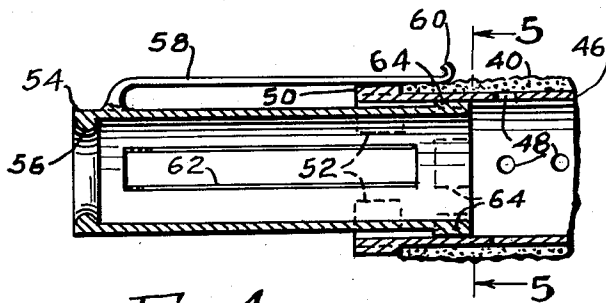


Fig. 4.

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HAIR CURLER WITH WINDING MEANS

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The present invention relates to hair curlers and more particularly it relates to a sleeve type curler.

The primary object of our invention is to provide a novel curling device that requires no preliminary preparation or application of any kind to the hair thereby providing for a hair-curling operation that saves considerable time and labor.

It is another object of this invention to provide a simple, inexpensive and easily operated sleeve type hair curler and method of operating same that may be readily and easily applied without injury to the hair or scalp.

A further object of this invention is to provide a simple, practical sleeve type curler having a novel means for clamping the curl firmly while it is being wound up on the outer sleeve, and also to provide a novel stop means to prevent the sleeves from being disconnected from each other while in use.

With these and other objects in view, this invention resides in the combinations, arrangements and functional relationships of elements as set forth in the following specification and particularly pointed out in the appended claims.

Referring to the drawing,

FIG. 1 is a longitudinal section of the device in hair-clamping position thereof and showing the extended position in broken lines.

FIG. 2 is a top plan view of the device of FIG. 1.

FIG. 3 is a cross-section taken on line 3-3 of FIG. 1.

FIG. 4 is a longitudinal section of a modified form of the device.

FIG. 5 is a cross-section taken on line 5-5 of FIG. 4.

Referring to the drawing, the numeral 10 designates an outside sleeve or mandrel made of thin, rigid plastic or any other suitable material and preferably opaque. On the ends of the mandrel 10 are formed outer flanges 12 and 14 which define between them a winding space 16. Opposite to flange 12, is an internal stop flange 18. The mandrel 10 has vent holes 11.

Slidably positioned within the mandrel 10 is an inner winder sleeve 20 longer than the mandrel and having an internal annular flange 21 at one end thereof to serve as a finger grip for facilitating telescopic projection of the sleeve from the mandrel, and an adjacent slot 22 in the wall of the sleeve. The inner edge of the winder sleeve 20 has an external, annular stop flange 23.

Extending freely through the slot 22 is the short leg 26 of a U-shaped hair clamp formed of thin, narrow flexible plastic or metal. Leg 26 merges into an outer spring clamping arm 28 which extends over the space 16 and is rounded at its extremity 30. The leg 26 also merges into an inner spring arm 32 that extends into the winder sleeve 20, passing between the guide lugs 34 depending therefrom, and terminating in a rounded end 36 which yieldably contacts the inner surface of the winder sleeve 20.

The winder 20 is reduced in weight by suitable slots 22a, and may be projected from the mandrel 10, as shown by broken lines in Fig. 1, the flange 18 of said mandrel serving to prevent its complete withdrawal.

In practice, the winder sleeve 20 is withdrawn to the extended position of the dotted lines of FIG. 1, thereby exposing the winding space 16. The end of a tress of hair 40 of the scalp 42 is positioned on the mandrel in said space 16 and the winder sleeve 20 is returned to its

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retracted position with the clamp arm 28 over said tress of hair and its end 30 engaged with the flange 14, keeping said arm spaced from the winding space 16. Now, as said sleeve 20 is turned by its extending end, the clamp arm 28 clamps the tress or curl 40 firmly while said tress is being wound up in the space 16 around the outer mandrel 10. The operation comes to a stop when the arm 28 comes to rest against the scalp 42, as shown in FIG. 3.

This operation requires no preparatory steps thus saving much time and material, and is continued until the scalp is covered with curls so the desired styling effect is achieved.

FIGS. 4 and 5 show a modification wherein a mandrel 46, having vent holes 48, is provided at one end with an outer flange 50 and spaced inwardly extending lugs 52. An inner telescoping winder sleeve 54 is provided at one end with an inner, annular, finger grip 56 and an integral, inwardly extending, narrow, elongated spring hair clamp 58 which terminates in a curved end 60. Slots 62 reduce the weight of the winder sleeve which has at its opposite end outer spaced lugs 64 designed to pass through spaces 66 between the lugs 52 in the position shown, to lock behind said lugs when the winder is turned forty-five degrees to its clamping position.

From the foregoing it is apparent that our improved hair curler device eliminates preparatory accessories and provides a simple practical curler that gives a professional result.

It is understood that this invention includes such modifications that may come within the purview of the appended claims.

What we claim is:

1. A hair curler comprising:

- (a) an outer tubular mandrel provided with outer end flanges defining therebetween an outer cylindrical area on which a tress of hair is adapted to be wound, and an inner end flange opposite one of said outer flanges,
- (b) an inner winder sleeve provided with an outer end flange rotationally and slidably fitting the inner face of the tubular mandrel and larger than the inner flange of said mandrel, said outer flange of the sleeve and said inner flange of the mandrel constituting interengaging abutments to limit relative endwise movement of the mandrel and sleeve,
- (c) an extension on the sleeve beyond the end of the mandrel on which the inner abutment flange is provided and provided with an inner flange constituting a finger grip by means of which the mentioned relative rotation of mandrel and sleeve is effected,
- (d) a resilient tress clamp carried by said extension of the sleeve in overstanding relation with the outside of the mandrel and in contact with the outer end flange at the opposite end of the mandrel to thereby space said clamp away from the cylindrical area on which a tress is wound,
- (e) the winder sleeve, in the extension thereof, being provided with a circumferential slot, and
- (f) the clamp comprising a U-shaped member having a base leg extending through said slot, an inner leg extending from said base leg longitudinally along the inside of the sleeve with an end in resilient contact with the inner surface of the sleeve, and a longer outer leg extending from said base leg in the mentioned overstanding relation with the outside of the mandrel.

2. A hair curler according to claim 1 in which circumferentially spaced guide lugs are provided on the inner face of the winder sleeve adjacent the slot therein, the inner leg of the tress clamp extending therebetween.

3. A hair curler according to claim 1 in which the resil-

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ient tress clamp is integrally connected to said extension of the winder sleeve.

4. A hair curler according to claim 1 in which both the flange on the winder sleeve and the inner flange of the mandrel are interrupted to form circumferentially spaced abutment lugs, the spaces therebetween being larger than the circumferential extent of the lugs, thereby permitting endwise separation of the mandrel and winder sleeve by registering the lugs with the spaces of the respective mandrel and sleeve.

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