April 24, 1934. W. G. SHELTON 1,956,258

HAIR WINDER

Filed Dec. 23, 1932

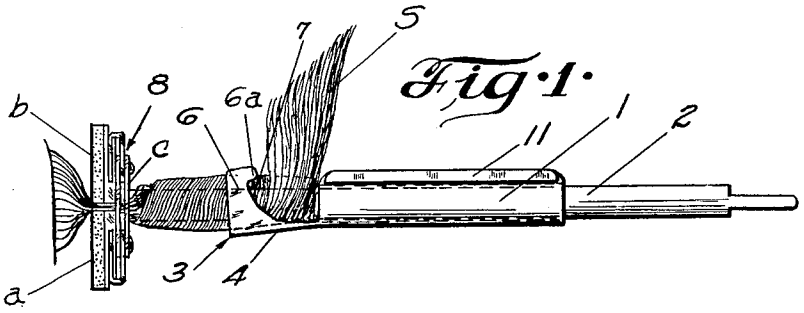


Fig. 1.

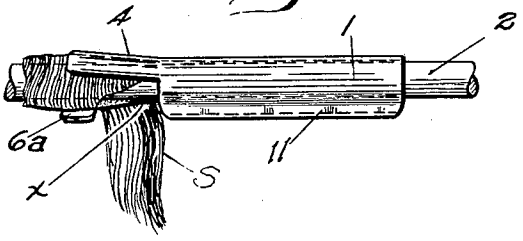


Fig. 2.

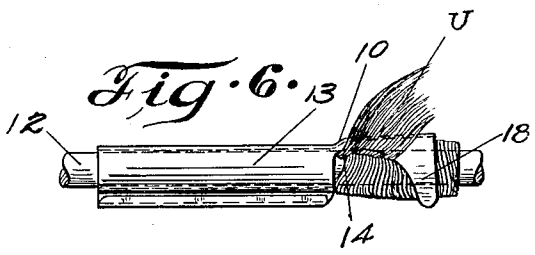


Fig. 6.

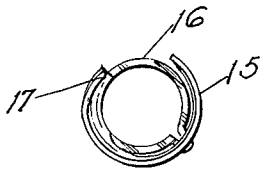
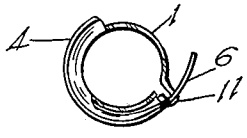


Fig. 7.



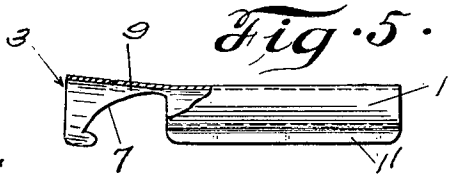


Fig. 5.

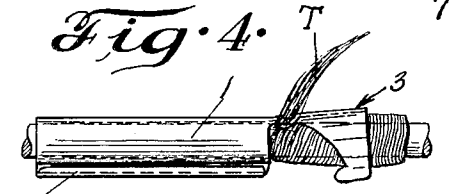


Fig. 4.

Fig. 3.

INVENTOR
William G Shelton
BY Rodney Bedell
ATTORNEY

Patented Apr. 24, 1934 1,956,258

UNITED STATES PATENT OFFICE

1,956,258

HAIR WINDER

William G. Shelton, St. Louis, Mo., assignor to W. G. Shelton Company, St. Louis, Mo., a corporation of Missouri

Application December 23, 1932, Serial No. 648,528

13 Claims. (Cl. 132—33)

This invention relates to the hair waving art and consists in a novel device for winding a segregated strand of hair properly upon a curling rod.

Self-feeding hair winders previously developed have usually embodied axially facing internal cam arrangements for guiding the collected strand and effecting longitudinal movement of the winder. With most of these devices the hair is applied to the rod in successive coils which do not overlap, this type of winding giving the hair the so-called helical or corkscrew type of wave. Certain other devices at present known are constructed to wind the hair spirally in overlapping flat layers, giving to the hair the more desirable natural appearance characteristic of the so-called Croquignole wave. Such devices, however, have usually relied upon the skill of the operator, or other independent means, for moving the winder along the rod and properly tensioning the hair. Moreover, in devices of the latter type with which applicant is familiar, the hair guiding finger is usually offset substantially from the rod receiving part of the winder to prevent jamming of the hair. This offsetting of the finger prevents effective use of the winder with thin strands of hair.

A co-pending application, Serial No. 630,853, filed August 29, 1932, in the name of the present inventor, illustrates a self-feeding winder which applies the hair to the rod in properly tensioned regular spiral overlapping flat layers. This winder involves a novel arrangement of cam or inclined plane hair engaging surfaces which complicates manufacture and increases the weight and cost of the device.

The main object of the present invention is to provide a simple, light, inexpensive hair winding device adapted to apply the hair to a curling rod in properly tensioned, spirally overlapping flat layers.

Another object is to provide a winder which may be effectively used with thin strands of hair.

Another object is to provide a device of the above type which may be conveniently and cheaply formed of a piece of sheet metal preferably by stamping and bending operations.

These objects and others are attained substantially by the devices illustrated in the accompanying drawing, in which—

Figure 1 is a view of the novel winder applied to a curling rod and showing a strand of hair partly wound.

Figure 2 is a partial view showing the other side of the device and illustrating diagrammatically the sectional shaping of the curl during winding.

Figure 3 is a view of the winder in operation with a thin strand of hair.

Figure 4 is an enlarged end view of the winder alone.

Figure 5 is a side view partly in section of the winder.

Figure 6 illustrates a modified winder assembled with a curling rod and partly wound hair strand.

Figure 7 is an end view of another slightly modified form.

In the preferred form of the invention shown in Figures 1 to 5, the winder is formed of a piece of sheet metal bent cylindrically in a sleeve 1 for revolubly receiving the curling rod 2. One edge of the sheet projects sidewardly of the sleeve-forming part and is bent over to form a finger grip 11 to facilitate manipulation of the winder. At one end of the sleeve the metal is cut away to form a hair collecting and guiding finger 3 including a longitudinal portion 4 and a forwardly projecting curved element 6 which may be flared outwardly at the end to facilitate proper engagement with the hair strand S in starting the wind. The front edge 7 is cut in the shape of a helix terminating at the edge of sleeve 1. A hook 6*a* is provided at the end of the finger to prevent disengagement of the hair which might occur where the rod is disposed upwardly from the scalp.

In order to accommodate the hair between the finger and curling rod, the finger is bent longitudinally away from the axis of the sleeve, this operation being satisfactorily performed by means of a conical forming die so that a substantial portion of the finger is concentric with sleeve 1. The winder is preferably constructed of sufficiently rigid material and the longitudinal portion 4 of such width that the finger will be substantially non-yielding during operation.

In using the novel device, a segregated strand of hair S (Figures 1 and 2) is secured as near as possible to the roots between the jaws of a clamp device 8 to which may be attached the curling rod 2. The clamp shown, which does not constitute the present invention, is formed of a pair of jaws *a* and *b* secured together at one end by a hinge *c* and having felt protector pads on their lower surfaces. The winder is slid endwise upon the rod, with the finger 3 disposed towards the scalp, and then turned in a manner to hook the strand beneath the curved portion 6 of the finger. As the winder is rotated, the hair,

being carried around the device by the finger, engages the helical forward edge 7 thereof which causes the strand to be fed longitudinally of the rod creating pressure on the inclined inner surface 9 of the finger which moves the device longitudinally of the rod. The consequent tightening of the hair beneath the finger produces a desirable smoothing and stretching action. Each coil is laid upon the rod in a spiral overlapping a large part of the preceding coil (see Figures 3 and 6).

Due to the inclination of the guiding finger, the device is adapted to be used with strands of any desired thickness, thicker strands being spread out along the helical finger, as in Figure 1, and the thinner strands (as T in Figure 3) working along the helical finger towards sleeve 1 until the tension between the finger and strand is sufficient to effect proper tensioning and cause the winder to be automatically moved longitudinally. The shaping of the hair beneath the finger is diagrammatically illustrated in Figure 2 which shows a section of the hair after passing beneath the finger. It will be noticed that the hair beneath the finger tapers towards the outer extremity of the curl and reaches a minimum thickness in the most tightly packed portion X adjacent the end of the sleeve.

If desired, the hair guiding finger may be offset slightly from the sleeve portion, as at 10 in Figure 6. The finger 18 is inclined longitudinally to the axis of the sleeve 13 and rod 12 and the device in other respects is similar to that previously described. This form may be more advantageously used with thicker strands of hair, the shoulder 10 providing for easier operation of the device without substantially affecting the advantages attained in the preferred form. At 14 in this figure is clearly shown the overlapping of the wound hair by the freshly collected strand in passing beneath the finger. The shoulder 10 between the finger and sleeve serves as an abutment for engaging the strand U impelled longitudinally by the helical finger in effecting movement of the winder along the rod. The hook at the end of the finger is omitted in this form, but may be provided if desired.

In Figure 7, the end of the finger 15 is not flared outwardly, as in Figure 4, but the entire finger is concentric with sleeve 16 except a portion of the outer edge thereof at the rear corner 17 which is bent slightly inwardly to facilitate initial engagement of the hair by the finger. The bent corner is not essential, the outward disposition of the finger being sufficient to cause the strand to be properly hooked in starting the wind. This shaping of the finger is particularly advantageous where the winder is maintained in position on the curl and inserted therewith into a close-fitting cylindrical heater or steaming tube of absorbent material, as is frequently the case.

The winder may, as suggested, be maintained in position during steaming, in which case the lightness of the device is particularly beneficial. Where the device is removed after the wind, for instance to permit its use in forming other curls, the open construction of the hair engaging part permits the operator's finger to be placed near the end of the strand to prevent loosening. The exact degree of longitudinal inclination of the finger, as well as the proportions of the winder, are not essential, these being determined from the usual thickness of the segregated strand. The finger may be slightly yielding, if desired.

The novel device is simple, light, and inexpensive to manufacture and may be conveniently made of sufficiently rugged material to withstand long use. The use of the winder requires the exercise of no particular skill by the operator, it being necessary to merely rotate the device about the rod, the novel shaping and inclination of the finger functioning to cause sufficient friction between the finger and the strand to effect proper tensioning and also causing the winder to be fed longitudinally along the rod at a uniform rate.

I contemplate the exclusive use of all such modifications as are suggested above, as well as others that come within the scope of the appended claims.

What is claimed is:

1. A hair winder comprising a member for receiving a curling rod, and a hair guiding finger projecting from said member and inclined longitudinally to the axis of the winder.

2. A hair winder comprising a member for receiving a curling rod, and a hair guiding finger having a portion projecting longitudinally from said member at an angle to the axis thereof and a part offset from said portion for collecting the hair strand.

3. A hair winder comprising a sleeve for revolubly receiving a curling rod, and a hair guiding finger projecting longitudinally from said sleeve at an angle to the axis thereof, one edge of said finger being helical for collecting and guiding the hair strand.

4. A hair winder comprising a sleeve for revolubly receiving a curling rod, and a hair guiding finger projecting longitudinally from said sleeve and disposed at an angle away from the axis thereof to accommodate hair passing between said finger and the curling rod.

5. A hair winder comprising a sleeve for revolubly receiving a curling rod, and a hair guiding finger projecting longitudinally from an end of said sleeve at an angle to the axis thereof and having a helically curved edge, said curved edge serving to collect the hair strand when the winder is rotated and feed the same towards said sleeve causing the winder to move along the rod.

6. A hair winder comprising a sleeve for receiving a curling rod, and a helical hair collecting and guiding finger projecting longitudinally from an end of said sleeve at an angle to the axis thereof.

7. A self-feeding device for winding a strand of hair on a curling rod in overlapping flat spirals comprising a sleeve for revolubly and slidably receiving a curling rod, and a finger longitudinally inclined to the axis of said sleeve and having a helically curved edge for collecting and guiding the hair strand.

8. A hair winder comprising a part for revolubly receiving a curling rod and a part forming a hair guiding finger, the inner surface of said part being inclined longitudinally away from the axis of said first-mentioned part.

9. A self-feeding hair winder comprising a sleeve for revolubly receiving a curling rod, and a helical hair collecting and guiding finger, said finger being longitudinally inclined to the axis of said sleeve so as to tightly wind the strand in overlapping spirals as the winder is rotated without jamming the winder.

10. A hair winder comprising a sleeve for rev-

olubly receiving a curling rod, and a self-feeding hair collecting finger projecting therefrom, said finger being inclined longitudinally away from the axis of said sleeve to accommodate and tightly wind hair strands of different thicknesses.

11. A self-feeding hair winder comprising a member for revolubly receiving a curling rod, and a helical hair guiding finger with its inner surface inclined longitudinally to the axis of said member and forming an abutment for engagement by the hair strand in effecting automatic longitudinal movement of the winder.

12. A hair winder comprising a sleeve for receiving a curling rod and a portion forming a hair collecting and guiding finger, said portion being concentric with said sleeve and disposed longitudinally at an angle to the axis thereof.

13. A hair winder comprising a sleeve portion for receiving a curling rod, and a finger for collecting and guiding a hair strand around said rod, the forward portion of said finger being substantially concentric with said sleeve portion and at least a part of the outer edge of said finger being radially a less distance from the axis of the winder than said forward portion to resist slipping of the hair longitudinally from beneath said finger.

WILLIAM G. SHELTON.