Feb. 18, 1941. R. E. MELARO 2,232,009

HAIR WAVING ROD

Filed Dec. 30, 1939

Fig. 1.

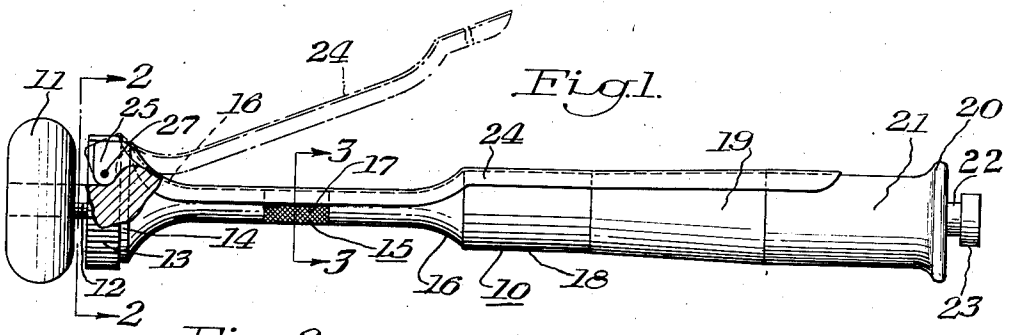


Fig. 2.

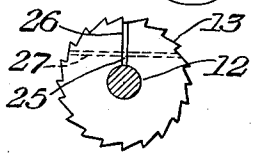


Fig. 3.

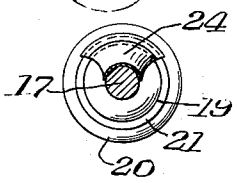


Fig. 4.

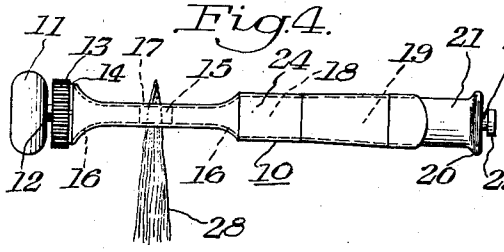


Fig. 6.

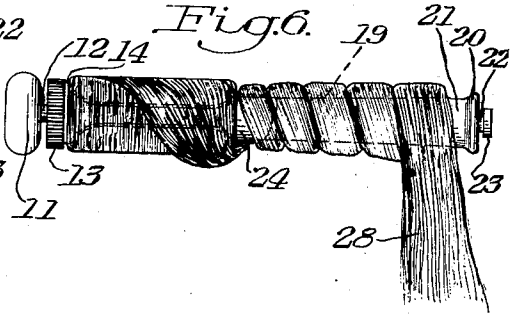


Fig. 5.

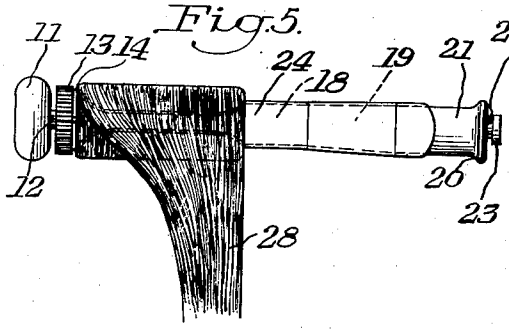
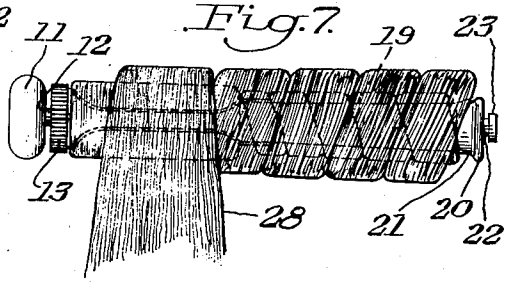


Fig. 7.



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Patented Feb. 18, 1941 2,232,009

UNITED STATES PATENT OFFICE

2,232,009

HAIR WAVING ROD

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Application December 30, 1939, Serial No. 311,884

12 Claims. (Cl. 132—33)

This invention relates generally to apparatus for waving human hair and more particularly to a rod for producing the combination of a Croquignole and a spiral wave on a long strand of hair.

The principal object of this invention is the provision of a hair waving rod constructed to produce a combination wave in a single strand of hair.

Another object is the provision of a hair waving rod for producing a combination wave which is adaptable for use with standard Croquignole equipment.

Another object is the provision of a hair waving rod for producing a combination wave in a long strand of hair.

Other objects and advantages appear in the following description and claims.

In the accompanying drawing a practical embodiment illustrating the principles of this invention is shown wherein:

Fig. 1 is an enlarged side elevation of a hair curling rod, part of which is shown in section.

Fig. 2 is an end elevation of the rod taken on the line 2—2 of Fig. 1.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a plan view of the rod with the end of a strand of hair placed under the rod clamp.

Fig. 5 is a plan view of the rod illustrating the completion of the Croquignole winding of the hair strand.

Fig. 6 is a plan view of the rod illustrating the Croquignole and the first part of the spiral winding.

Fig. 7 is a plan view of the rod illustrating the completion of the spiral winding.

Referring principally to Fig. 1 of the drawing, 10 represents the rod which is made of aluminum or other suitable material. The length of this rod is the same as that of a standard Croquignole rod and it is constructed to fit the same hair strand clamps and heating apparatus.

The left end of the rod is preferably provided with a thumb handle 11 which is secured in a transverse slot in the axially extending stud 12. If desired the thumb handle may be omitted, in which case the stud is usually formed with a square cross section for receiving a key to rotate the rod.

The stock from which the rod is made is approximately one-half inch in diameter, which represents the diameter of the ratchet gear 13 formed on the rod adjacent the stud. This gear is ordinarily provided with twenty teeth, as shown in Fig. 2. Inwardly adjacent the gear a narrow journal portion 14 is formed. This journal is substantially flush with the bottom of the teeth of the gear and is just wide enough to receive the bearing mounted on a hair clamp.

From this journal portion the rod is shaped in the form of a small spool 15 with arcuate conical surfaces 16 at each end thereof and a narrow neck portion 17 approximately one-eighth inch in diameter. The intermediate portion of the neck is knurled as indicated. If the length of the rod between the spaced journal portions is approximately three and three-sixteenths inches this spool should be approximately one and five-sixteenths long, or substantially one-fourth the length of the rod.

A cylindrical portion 18 joins the other end of the spool. This section is approximately nine thirty-seconds in diameter and one-seventh the length of the rod. The next adjacent section 19 is frusto conical in shape and is slightly longer than the section 18 and terminates in a diameter of approximately three-eighths of an inch. A cylindrical section 21 is formed between the rounded flange 20 and the frusto conical section 19. Outwardly adjacent the flange 20 the stock is cut to a small diameter to produce the journal portion 22. The shoulder 23 on the outer end of the journal prevents the rod from shifting longitudinally of the hair strand clamp.

A grasping finger 24, which is shaped to fit the contour of that part of the rod which it overlies, is provided with a centrally disposed depending ear 25 arranged to fit within the slot 26 cut in an axial plane into the gear 13 and the journal 14. This ear is pierced to receive the pin 27 which passes transversely through the gear as shown in Fig. 2. The journal 14 is cut away adjacent the slot 26 to receive the grasping finger 24; the surface of the finger at this point acting as a part of the journal when it is closed against the rod.

The small spool section 15 of the rod 10 is arranged to receive the outer end of the hair strand 28 under the finger 24, as indicated in Fig. 4. The hair is then wound straight onto the small spool 15 in Croquignole fashion. When a sufficient length of the hair strand is wound in this manner for producing a tight ringlet at the end of the hair, the strand is gathered toward the intermediate cylindrical section 18 as illustrated in Fig. 5.

The operator then continues to wind the strand in helical form around the intermediate cylindrical section 18 and up the frusto conical sec-

tion 19 and along the cylindrical section 21, which produces a spiral as shown in Fig. 6. The strand is then wound back on itself as indicated in Fig. 7. The extent of the spiral winding depends on the length of the strand of hair. If the strand is relatively short it need only be wound partially up to the flange 20 and back to the center of the rod. If the strand is long then it may be wound to the flange 20 and back over the spool 15 and then returned to the center of the rod. The reason for terminating the winding in the center of the rod is to permit the hair to be spread out in both directions so that the strand may be uniformly distributed as it passes through the jaws of the hair clamp.

In this manner a combination Croquignole and spiral wave may be produced on a single strand of hair at one time. It will be noted that the winding of the hair is accomplished by rotating the rod in the hands in the same manner as that now employed to produce a full Croquignole wave. The shape of the rod comprising this invention permits this character of wave to be formed and facilitates the winding of the strand. This rod construction produces a tight Croquignole ringlet and a tight spiral wave because the hair may be drawn tightly on the rod at a pressure substantially as great as the clamping pressure applied by the hair clamp adjacent the scalp.

I claim:

1. A hair waving mandrel of the character described comprising a rod made in one piece, a journal section adjacent each end of the rod and arranged to engage the bearings of a standard Croquignole type hair clamp, a spool surface and a frusto conical surface formed intermediate of said journal sections.

2. A hair waving mandrel of the character described comprising a rod made in one piece, a journal section adjacent each end of the rod and arranged to engage the bearing of a standard Croquignole type hair clamp, a spool surface adjacent one of said journal sections, a frusto conical surface adjacent the other journal section, and a cylindrical surface intermediate the spool and the frusto conical surface.

3. A hair waving mandrel of the character described comprising a rod made in one piece, a journal adjacent one end of the rod, a spool surface adjacent said journal, a frusto conical surface with its smallest diameter adjacent said spool, and a second journal adjacent the other end of said frusto conical surface.

4. A hair waving mandrel of the character described comprising a rod made in one piece, a journal adjacent one end of the rod, a spool surface adjacent said journal, a cylindrical surface adjacent the spool surface, a frusto conical surface with its smallest diameter adjacent the cylindrical surface, and a second journal adjacent the frusto conical surface.

5. A hair waving mandrel of the character described comprising a rod made in one piece, a ratchet gear adjacent one end of the rod, a journal adjacent the gear, a spool adjacent the journal, a frusto conical surface with its small end adjacent the spool, a second journal on the other end, and a clamping finger formed to fit the contour of the spool and parts adjacent thereto, said finger being hingedly attached to the rod adjacent one end of the spool.

6. A hair waving mandrel for use with a hair clamp comprising a rod made in one piece and having journals at each end thereof arranged to fit the bearings of a standard Croquignole type hair clamp, a spool section and an inverted frusto conical section intermediate of said journals, means adjacent one of said journals for locking the rod against rotary movement in one direction relative to the hair clamp, and a finger pivotally attached adjacent one end of the spool for securing the end of a hair strand to the rod.

7. A hair waving mandrel of the character described comprising a rod made in one piece, a journal adjacent each end of the rod and arranged to engage the bearings of a standard Croquignole type hair clamp, a spool surface adjacent one of said journals, a cylindrical surface adjacent the spool surface, a frusto conical surface adjacent the cylindrical surface, and a second cylindrical surface between the conical surface and the other journal.

8. A hair waving mandrel of the character described comprising a rod made in one piece, a journal adjacent each end of the rod and arranged to engage the bearings of a standard Croquignole type hair clamp, a spool surface adjacent one of said journals, a cylindrical surface adjacent the spool surface, a frusto conical surface adjacent the cylindrical surface, a second cylindrical surface larger in diameter than the first cylindrical surface adjacent the frusto conical surface, and a flange between the second cylindrical surface and the other journal.

9. A hair waving mandrel of the character described comprising a rod made in one piece, a journal section adjacent each end of the rod and arranged to engage the bearings of a standard Croquignole type hair clamp, a spool surface and a frusto conical surface formed intermediate of said journal sections, and a flange adjacent the outer end of said frusto conical section.

10. A hair waving mandrel of the character described comprising a rod made in one piece, a journal adjacent each end of the rod and arranged to engage complementary bearings mounted on a standard Croquignole type hair clamp, a spool surface and a cylindrical surface formed intermediate of said journal sections.

11. A rod made in one piece for waving hair comprising in combination a consecutive series of perimetral surfaces between its ends, namely, a spool, a cylindrical surface, a frusto conical surface, and a second cylindrical surface to provide for a successive Croquignole and spiral wave in a strand of hair.

12. A rod made in one piece for waving hair comprising in combination a consecutive series of perimetral surfaces between its ends, namely, a spool, a cylindrical surface, a frusto conical surface, and a second cylindrical surface, to provide for a successive Croquignole and spiral wave in a strand of hair, and perimetral means at the extremities of the rod to prevent lateral displacement of the wound strand.

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