Sept. 13, 1932. T. I. MOSELEY 1,877,191

HAIR WAVING APPARATUS AND METHOD

Filed Oct. 6, 1931

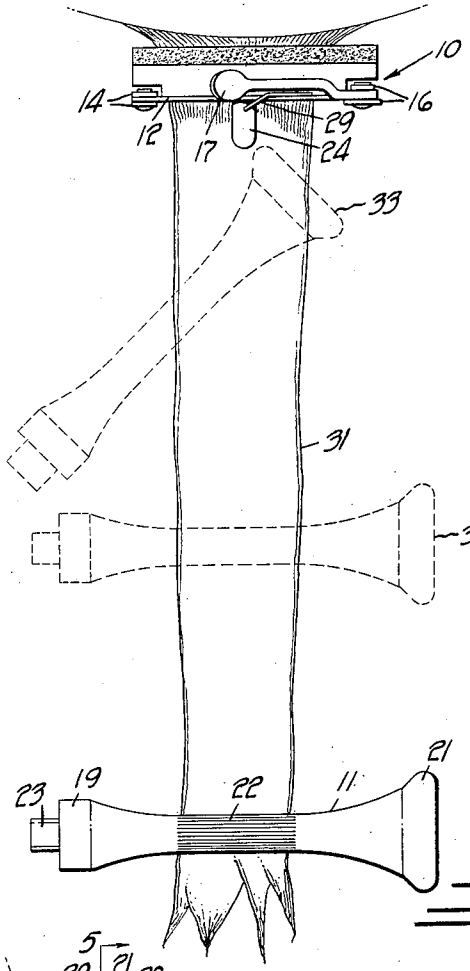


FIG. 1.

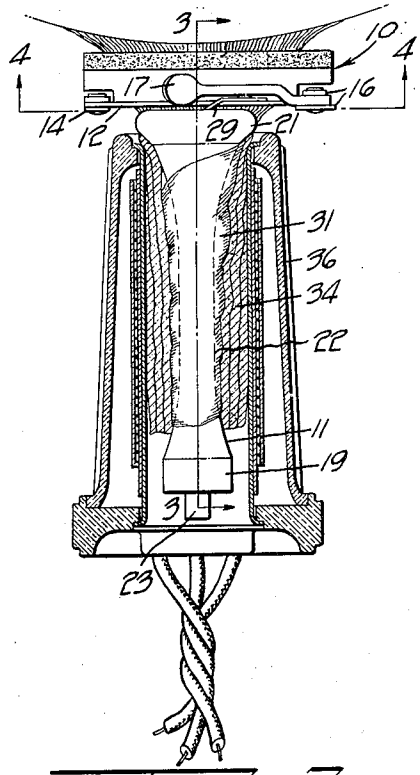


FIG. 2.

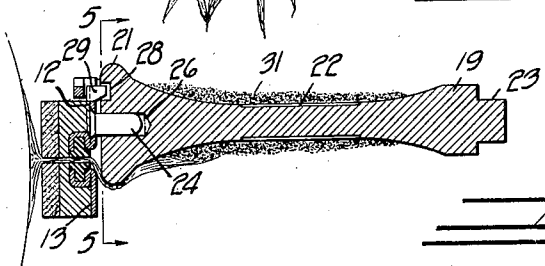
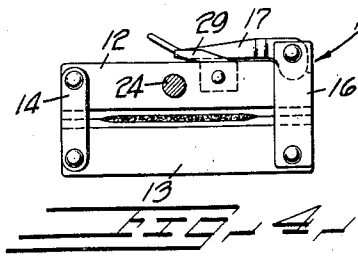


FIG. 3.



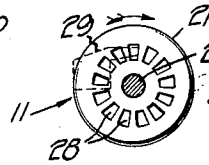


FIG. 4. FIG. 5.

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UNITED STATES PATENT OFFICE

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HAIR WAVING APPARATUS AND METHOD

Application filed October 6, 1931. Serial No. 567,214.

This invention relates generally to apparatus for the waving of human hair, and particularly to apparatus of this character which utilizes the application of heat to impart permanency to the wave.

At the present, two general types of hair waving methods are in general use. One is termed the spiral type, in that a strand of hair is wound in the form of a helicoid upon a curling rod or spindle, after which heat is applied. The second is commonly known as the croquignole type, and differs from the spiral type in that the hair is wound upon a curler or mandrel beginning with the tip of the strand and winding towards the scalp. In the croquignole apparatus some form of protecting clamp is utilized to grip the hair adjacent the scalp, and upon winding the strand upon the curler the curler is mounted upon the protector with its axis substantially parallel to the scalp. The character of wave imparted to the hair by these two methods differs somewhat, although the croquignole apparatus is generally deemed to impart a more natural wave.

I have found that a highly artistic waving effect can be produced if the desirable features of the spiral and croquignole methods can be combined. It is, therefore, an object of this invention to devise a method and apparatus which will effect this general result.

It is a further object of the invention to devise a hair waving apparatus including a curler 10 shaped as to enable it to receive a hair strand wound both croquignole and spiral fashion about the same.

Further objects of the invention will appear from the following description in which the preferred embodiment of the invention has been set forth in detail in conjunction with the accompanying drawing. It is to be understood that the appended claims are to be accorded a range of equivalents consistent with the state of the prior art.

Referring to the drawing:

Figure 1 is a plan view illustrating the parts of my apparatus and illustrating the method of the present invention.

Figure 2 is a plan view of my apparatus illustrating the curler mounted upon the protector with a hair strand wound upon the curler.

Figure 3 is a cross sectional detail taken along the line 3—3 of Figure 2.

Figure 4 is a cross section in detail taken along the line 4—4 of Figure 2.

Figure 5 is a cross section in detail taken along the line 5—5 of Figure 3.

My method can be best understood from a description of the apparatus illustrated in the drawing and its preferred mode of manipulation by an operator. Referring to Figure 1, this apparatus includes generally a protecting device 10 utilized in conjunction with a mandrel-like curler 11. Protector 10 preferably includes a pair of elongated clamping members 12 and 13 having corresponding ends pivotally connected by links 14. The other corresponding ends of members 12 and 13 are adapted to be clamped together by suitable means such as provided by links 16 in conjunction with a cam lever 17. Protectors having these parts are well known and no further detailed explanation is required. It may be explained, however, that when this protector is engaged upon a strand of hair, as indicated in Figure 1, the strand is tightly clamped between opposed faces of clamping members 12 and 13.

Curler 11 differs somewhat from curlers heretofore employed in either croquignole or spiral waving. It has a circular cross section contour, and the end portions 19 and 21 are considerably larger in diameter than the medial portion 22. In other words, from the medial portion 22 the cross section contour increases in diameter towards both ends of the curler. As shown in Figures 1 and 3, the end portion 21 is relatively larger in diameter than the end portion 19, for a purpose which will be presently explained. A non-circular stud 23 is shown formed upon the small end portion 19 in order to facilitate application of a key or wrench for turning the curler. The medial portion 22 is also shown roughened or knurled in order to facilitate gripping a strand of hair. In place of utilizing such a knurled surface, it is obvious that spring tongues or other equivalent

means can be utilized for engaging the strand.

For mounting the curler 11 upon protector 10 I provide a short stud 24 which is mounted upon the clamping member 12 and which projects laterally therefrom as shown in Figures 1 and 3. This stud is adapted to fit within aperture 26, formed axially in the curler 11 and in the large end portion 21 thereof. Since clamping members 12 and 13 of protector 10 are generally engaged with a hair strand in such a manner as to be substantially parallel to the scalp and since stud 24 projects laterally from the outer face of clamping member 12, the normal position of mandrel 10 when engaged with stud 24 will be substantially perpendicular to the scalp.

In order to retain the hair strand in tensioned condition upon the curler it is desirable to provide some means tending to prevent unwinding of the curler when engaged with stud 24. As representative of suitable means of this character, I have shown the end face of curler 11 provided with recesses 28 forming the equivalent of ratchet teeth. Mounted upon clamping member 12 adjacent stud 24 (Figure 3) there is a pawl 29 in the form of a spring metal strip which is adapted to engage within recesses 28. As will presently be explained, when curler 11 is held down against protector 10, by virtue of pawl 29 its rotation in one direction will be prevented, although it can be rotated in the other direction as by means of a key engaged with lug 23, to enable tensioning of the wound strand.

In operating my apparatus, a strand is first segregated from the head of hair to be waved, and protector 10 is engaged with the strand adjacent the scalp as shown in Figure 1. The strand indicated at 31 is then combed out relatively flat and the operator then starts to wind the strand upon the curler 11 beginning with the tip of the strand and winding towards the head. The convolutions at this time are wound one on top of the other until the curler reaches an intermediate position such as indicated at 32 in this figure. The remaining portion of the strand between the curler and protector is then wound spiral fashion over the enlarged end portion 11, thus causing the curler to assume a continuously increasing angularity with respect to the protector. When the curler has progressed to a position substantially as indicated at 33 in Figure 1, aperture 26 in the end of the curler is engaged with stud 24 and the curler thus caused to be supported and retained in the position shown in Figure 2. The next operation is to engage a key or a suitable tool with stud 23, and the curler is then turned an amount sufficient to properly tension the wound strand. Unwinding movement is of course prevented by pawl 29. A suitable pad 34 such as is commonly employed in permanent hair waving, and which is generally made of absorbent material, is then wrapped about the wound hair, and a suitable form of tubular electrical heater 36 is then placed over this assembly. After the heating operation, which imparts permanency to the wave, the heater and pad 34 are removed and the curler 11 released by merely forcing the curler away from the protector a sufficient amount to disengage pawl 29. The strand is then removed from the curler and the protector disengaged.

I claim:

1. In a method of waving hair, the steps of winding a strand of hair, both croquignole and spiral fashion, maintaining the convolutions tensioned, and then applying heat to the strand while so wound and tensioned.

2. In a method of waving hair characterized by the use of a mandrel-like curler, the steps of grouping together a number of individual hairs to form a strand, winding a major portion of the flat strand upon the mandrel croquignole fashion, starting from the tip of the strand, winding the remaining portion of the strand upon the mandrel spiral fashion, maintaining the strand tensioned while on the mandrel, and then applying heat to the strand while so wound and tensioned.

3. In hair waving apparatus, a mandrel-like curler upon which a strand of hair can be wound, a protector adapted to grip the strand adjacent the scalp, said protector including two elongated clamping members, a stud mounted upon one of said clamping members intermediate the ends of the same, said stud projecting laterally from said clamping member and adapted to engage in an aperture formed in one end of the curler, and means co-acting between said end of the curler and said one clamping member for permitting tensioning of hair wound upon the same.

4. In hair waving apparatus, a mandrel-like curler having a circular cross section contour which increases in diameter from the medial portion of the mandrel towards both ends thereof, one end of the mandrel being of substantially larger diameter than the other, whereby a strand of hair can first be wound croquignole fashion on the medial portion of the curler and then spiral fashion over the enlarged end portion of the curler, clamping means adapted to grip a strand of hair, and means for detachably and rotatably mounting said enlarged end of the curler upon the clamping means.

5. In hair waving apparatus, a mandrel-like curler having a circular cross section contour which increases in diameter from the medial portion of the mandrel towards both ends thereof, one end of the mandrel being of substantially larger diameter than the other, whereby a strand of hair can first be wound croquignole fashion on the medial

portion of the mandrel beginning with the tip of the strand, and then wound spiral fashion over the enlarged end portion of the curler, clamping means, including a pair of elongated clamping members adapted to grip a strand of hair adjacent the scalp, means for detachably and rotatably mounting said enlarged end of the curler upon one of said clamping members, and means co-acting between said enlarged end of the curler and said one clamping member whereby the strand wound upon the curler can be maintained tensioned.

6. In hair waving apparatus, a mandrel-like curler having a circular cross section contour which increases in diameter from the medial portion of the mandrel towards both ends thereof, one end of the mandrel being of substantially larger diameter than the other, whereby a strand of hair can first be wound croquignole fashion on the medial portion of the curler and then wound spiral fashion over the enlarged end portion of the curler, clamping means including a pair of elongated members adapted to grip a strand of hair adjacent the scalp, a stud mounted upon one of said members and adapted to engage in an aperture formed in the enlarged end portion of the curler, ratchet teeth formed in the enlarged end face of the curler, and a pawl mounted on said one member and serving to engage said ratchet teeth.

In testimony whereof, I have hereunto set my hand.

TOMLINSON I. MOSELEY.