Jan. 17, 1933. J. MAYER 1,894,612

HAIR WAVING APPARATUS

Filed July 18, 1929

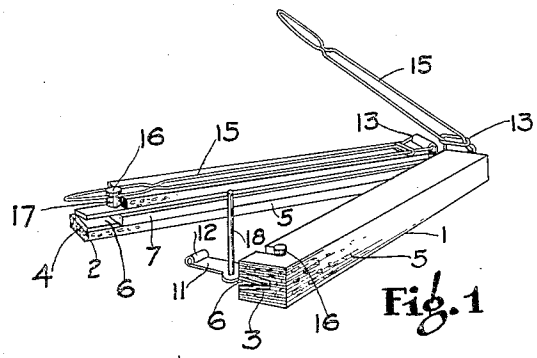

Fig. 1

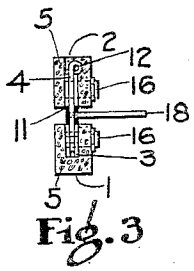

Fig. 3

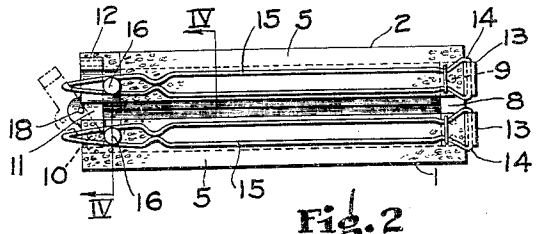

Fig. 2

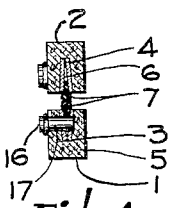

Fig. 4

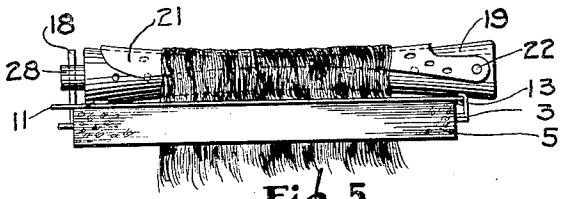

Fig. 5

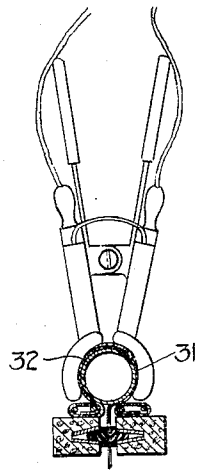

Fig. 7

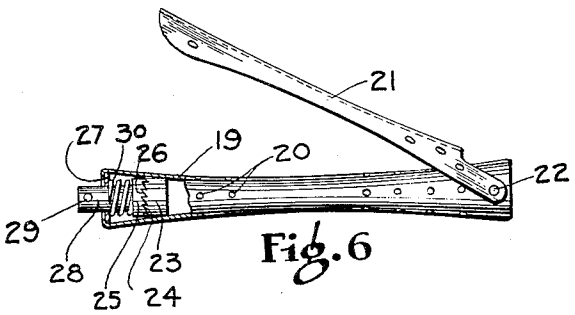

Fig. 6

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Patented Jan. 17, 1933

1,894,612

UNITED STATES PATENT OFFICE

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HAIR WAVING APPARATUS

Application filed July 18, 1929. Serial No. 379,235.

This invention relates to apparatus for use in the waving of hair upon the human head and more particularly to means for holding the hair in proper position while the same is treated to produce the desired wave.

An object of the invention is to provide an improved means for winding the hair and retaining it during the waving process.

Another object is to provide an improved means for retaining the hair and maintaining the same under tension during the heat applying operation of a waving process.

Other objects will hereinafter appear.

The invention will be better understood from the description of one practical embodiment thereof, illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of a protector or clamp used to hold a strand of hair while being treated and to prevent transmission of heat to the head of the wearer, showing the clamp in opened position;

Figure 2 is a plan view thereof, showing the clamp closed;

Figure 3 is an end elevation of the clamp showing the latching means;

Figure 4 is a transverse section taken on line IV—IV of Figure 2;

Figure 5 is a side elevation of the clamp engaging a strand of hair and showing the curler rod upon which the hair is wound;

Figure 6 is an elevation of the curler rod, parts being broken away to show the ratchet mechanism; and

Figure 7 is an end elevation of the clamp and rod, showing a pad or flannel applied to the wound strand of hair.

The apparatus illustrated is for use in those waving processes in which the hair on the head of the subject is divided into flat strands which are wound spirally, one turn immediately over another, upon a curling rod, and then placed under tension and subjected to heat and moisture to produce a lasting or "permanent" wave.

The clamp or protector comprises two arms 1 and 2, each having a metallic frame member or reinforcement 3 or 4 consisting of two superposed flat bars extending throughout its length, and a covering 5 of heat insulating material, shown as compressed ground cork. The reinforcement bars are each made of either two pieces riveted together or of one piece and folded upon itself, and their adjacent edges form channel-like recesses 6 in which are received rubber strips 7 which bear upon the strand of hair, resiliently retaining it firmly between the arms of the clamp.

The metallic bars are pivoted at one end of the clamp by a link 8 and a rivet 9, and to one of the bars 3 at the other end is pivoted, by means of a rivet 10, a latch 11 having a rolled or enlarged end 12, the latch being arranged to be swung between the halves of the end of the other bar 4 with the enlargement bearing on their outer edges to retain the parts of the clamp in closed position, as shown in Figure 2. The ends of the bars adjacent the pivot are bent upwardly to form bearing members 13 in which the ends 14 of wire loops 15 are pivotally inserted, the free ends of the loops being arranged to snap over the headed ends 16 of rivets 17 adjacent the free ends of the reinforcement bars. These retaining members are used to retain a fabric of absorbent covering for the hair strand being treated during the waving process. A pin 18 extends upwardly from latch 11 to receive the retaining mechanism of the curling rod.

This rod consists of a spool-like shell 19 gradually narrowing from its ends to its center and provided with perforations 20. A retaining tongue 21 is pivoted to the shell adjacent one end by a rivet 22 and is adapted to retain the ends of a strand of hair while being wound about the rod.

Within the shell, adjacent the other end, is a plug 23, having a serrated outer surface

24 arranged to constitute one element of a ratchet mechanism, the plug being rigidly secured to the shell. A second plug 25 having a complementary serrated end 26 is loosely inserted within this end of the rod and retained therein by a washer 27 at the extreme end of the rod, over which the end of the shell is rolled. A central lug 28 integral with the second mentioned plug extends through the washer and is perforated at 29, to be slipped over the pin 18 carried by the latch. A compression spring 30 surrounds this lug and is positioned between plug 25 and the washer to resiliently press the serrated faces and the two plugs into engagement.

The operation of the apparatus is as follows: The hair is divided into flat strands and one of these is clamped adjacent the wearer's scalp between the two arms of the clamp. The ends of this strand are then placed upon the curling rod and the tongue is closed upon them to retain them thereon. The rod is then rotated by the operator until substantially all the hair has been wound upon it, one turn above another, this winding, of course, bringing the rod closely adjacent the clamp. The hole in lug 28 is then slipped over the pin 18 upon the clamp, and the rod can be further rotated by the hand of the operator to tighten and stress the wound hair, the ratchet elements allowing it to be rotated in one direction but preventing its rotation in the other.

If it is desired to obtain a firmer grip upon the rod, the operator may apply a wrench having a bifurcated end over the rivet 22 which pivots the tongue to the rod, and so may place the hair under any desired tension. After the hair has been completely wound, a pad or flannel 31 containing a desired waving solution is wrapped about the wound strand. This covering is made in two parts, one of which is retained by each wire loop, the parts being lapped over each other to cover the strand of hair as shown in Figure 7. After this it is only necessary to apply a heater 32 over the coiled strand and supply heat to the same for the time necessary to cause the desired wave to be effected. One heater which is particularly well adapted for use with the above apparatus is such as is shown in my prior Patent Number 1,619,794. The heater and clamp together form a substantially continuous cylindrical chamber enclosing the rod, wound strand of hair, and pad or flannel.

While I have described the illustrated embodiment of my invention in some particularity, this is done by way of illustration only, it being obvious that many other embodiments will readily occur to those skilled in this art, and I do not, therefore, limit myself to the precise details shown and described but claim as my invention all embodiments coming within the scope of the subjoined claims.

I claim:

1. Hair waving apparatus comprising a clamp consisting of two elongated arms articulated together to grip a flat strand of hair adjacent its roots, a latch connecting the other end of said arms, a supporting member extending upwardly from said clamp, a generally cylindrical spool-shaped curler rod recessed at one end, ratchet mechanism within said recess, and provided with a pintle extending beyond the end of the rod and engageable with the supporting member to be held against rotation thereby.

2. Hair waving apparatus comprising a heating device arranged to surround a spirally coiled strand of hair on all sides except that adjacent the scalp, and an elongated clamp holding the strand adjacent the scalp, the heating device and clamp forming between them a chamber within which the strand may be heated, a generally spool-shaped curler rod upon which the hair may be wound and adapted to be positioned within said chamber, and having a recessed end, a pin in said recess and projecting therefrom and beyond the end of the rod, ratchet mechanism within the recess operating between the pin and rod, and means engaging said pin to retain it against rotation and carried by one of the elements forming the chamber.

3. In combination, a hair engaging elongated clamp, an upwardly projecting retaining member carried thereby, a generally spool-shaped curler rod comprising a tubular shell, a pin projecting from within the shell, a ratchet within the shell having one element thereof secured to the shell and another secured to the pin, the pin being engageable with the upwardly projecting member to be maintained against rotation thereby.

4. Hair waving apparatus comprising a generally spool-shaped curler rod tapering from its ends toward its center, a pin coaxial with the rod within one end thereof and projecting from said end, and resistance means within the rod acting between the rod and pin to resist relative rotation thereof.

5. Hair waving apparatus comprising a generally spool-shaped curler rod recessed at one end, a block journalled within said recess and having a projecting portion extending beyond the rod, and ratchet means between the block and rod resisting relative rotation thereof in one direction.

6. In combination with a hair engaging elongated clamp adapted to grip a flat strand of hair near its roots and having an upwardly extending support, of a foraminous tubular curler rod, a pintle coaxial with said rod and extending from one end thereof to be engaged by said support, ratchet means between the pintle and the rod, one of said engaging members being socketed to receive the other to prevent rotation of the pintle relative to the clamp.

7. A curler rod for use in waving process

comprising a tubular shell, a block fixed thereto within one end thereof and having a serrated outer surface, a second block having a complementary inner surface bearing thereon and a central pintle projecting beyond the end of the rod, a spring surrounding said pintle and pressing said surfaces into engagement, and a washer secured to the shell and retaining said spring within the shell.

In testimony whereof I hereunto affix my signature this 27th day of June, 1929.

JOSEF MAYER.