My invention relates broadly to hair waving apparatus and more particularly to a construction of winder for wrapping hair upon a mandrel during a hair waving operation.

One of the objects of my invention is to provide a construction of winder for wrapping hair upon a mandrel for the purpose of heat treatment during a hair waving operation, the winder being adapted for either clockwise or counter-clockwise movement.

Another object of my invention is to provide a winder for curling hair upon a mandrel in a hair waving apparatus in which the winder may be rotated in either a clockwise or counter-clockwise direction in wrapping the hair upon the mandrel.

A further object of my invention is to provide a construction of winder for a hair curling apparatus having a pair of jaws directed toward each other for gripping strands of hair and guiding the same in a wrapping operation upon a mandrel, the winder being operated in either a clockwise or counter-clockwise direction for effecting the curling operation.

My invention will be more fully understood from the specification hereinafter following by reference to the accompanying drawings, in which:

Figure 1 is a side elevation of the curling rod upon which the winder of my invention is adapted to operate; Fig. 2 is a fragmentary view illustrating the winder of my invention in front elevation and engaging strands of hair for effecting a winding operation by movement in a counter-clockwise direction about the mandrel; Fig. 3 is a side elevation showing the winder assembled on the mandrel and arranged in a position for maintaining the hair in wrapped position on the mandrel; Fig. 4 is a front elevation of the winder removed from the mandrel; Fig. 5 is a side elevation of the winder of my invention; and Fig. 6 is a cross-sectional view taken through the winder on line 6--6 of Fig. 4.

The winder of my invention is directed broadly to that class of hair curling winders covered by my Letters Patent No. 1,681,024, dated August 14, 1928. It has been found in applying the winder of my invention to many different constructions of heat treatment chambers that rotation of the winder should be made in the same direction in which the parts of the mandrel are assembled by screw threaded connection within the heater chamber as otherwise instead of tightly wrapping the hair upon the mandrel there is a tendency for the hair to loosen upon the mandrel by the tendency of the screw threaded parts to become loosened. It is usual to twist parts of the mandrel to a final binding position after the hair has been wrapped thereon by operation of the winder and if the hair has been curled by means of the winder in the direction opposite to the direction in which the parts of the mandrel must be moved in finally tightening the hair upon the mandrel, the hair will become loose on the mandrel and the heat treatment thereof will be ineffective to impart the desired wave or curl to the hair. I have also found that operators using the winder of my Letters Patent No. 1,681,024, are often inconvenienced due to the requirement for turning the winder in a particular direction as the operator may have a particular habit of winding in either a right hand direction or a left hand direction.

I have therefore devised the winder of my present invention for use in wrapping hair upon a mandrel either in a clockwise or a counter-clockwise direction. The winder of my invention is universally adaptable for use on mandrels of various types of construction and may be used in hair waving apparatus of various types of manufacture. My improved winder may be revolved either clockwise or counter-clockwise in wrapping the hair upon a mandrel.

Referring to the drawings in more detail, reference character 1 designates the mandrel which is provided with an end vice portion 2 having slotted jaws 3 therein for receiving the tie cord for securing strands of hair adjacent the end of the mandrel. Reference character 4 designates an actuating knob at one end of the mandrel 1 for revolving the vice 2 for tightening the hair after...
the hair has been wrapped upon the mandrel. A tie cord is represented at 5 secured between the jaws 8 and serving to tie the strands of hair 7 at the end of the mandrel as represented at 6. The hair is carried around the mandrel 1 by means of the winders 8. The winder 8 is tubular in form and is provided with exterior ribs 8a which serve to provide a grip for enabling the operator to twist the winder around the mandrel. The winder has a portion of its body structure cut away at one side as represented at 9, on a substantially curved line as shown in Fig. 5, leaving a pair of upstanding tongues 10 and 11 directed toward each other and separated by a substantially V-shaped gap indicated at 12. The tongues 10 and 11 form hooks having adjacent loop portions at 14 and 15 each adapted to receive the strands of hair which may be guided in wrapped arrangement over the mandrel 1. The strands of hair may be slipped between the tongues 10 and 11 through the gap 12 and engaged in either of the loops 14 and 15 for effecting a wrapping operation on the mandrel 1. That is, if it is desired to wrap the hair in a clockwise direction, the strands of hair are engaged in the loop 14 as illustrated in Fig. 2. If it is desired to wrap the hair in a clockwise direction, the hair is engaged in the loop 14 and the winder rotated in a clockwise direction. The direction of rotation is determined by the structure of the mandrel, that is if the mandrel is operated to tighten the hair in a clockwise direction then the winder is rotated for wrapping the hair in a clockwise direction on the mandrel. The winder serves to maintain the hair in the wrapped formation on the mandrel after the wrapping operation is complete as shown in Fig. 3, where the winder serves as a form of keeper which is wedged over the hair.

It will be seen that the winding device of my invention is readily operated by either a left hand or a right hand operator and the winding may be effected in either direction according to the habit or custom of the operator. The winder of my invention is capable of being readily molded from composition material having heat resisting properties. I have found the winder as illustrated highly practical in its construction and successful in its operation and while I have described my invention in one of its preferred embodiments I desire that it be understood that modifications may be made and that no limitations upon my invention are intended other than are imposed by the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent of the United States is as follows:

1. In a hair waving apparatus, a winding device comprising a tubular member adapted to slidably and rotatably engage a mandrel, said tubular device having a pair of oppositely directed jaws adapted to engage strands of hair for wrapping the hair upon the mandrel when said tubular member is rotated in either a clockwise or a counter-clockwise direction.

2. In a hair waving apparatus, a mandrel, a tie cord slidably and rotatably engaging the mandrel, said tubular member having a pair of oppositely directed jaws adapted to engage strands of hair for wrapping the same upon said mandrel in either a clockwise or counter-clockwise direction.

3. In a hair waver, a mandrel, a tubular member slidably and rotatably engaging said mandrel, means for securing strands of hair at one end of said mandrel, a pair of hook shaped members cut in said tubular member and adapted to engage the strands of hair for wrapping the hair upon the mandrel by either clockwise or counter-clockwise rotation of said tubular member.

4. In a hair waving apparatus, a mandrel, a tubular member adapted to slidably and rotatably engage said mandrel, said tubular member being cut away at one side thereof and having a pair of oppositely directed jaws extending into the cut away portion thereof for engaging strands of hair and guiding the same in the wrapped formation upon said mandrel by rotation in either a clockwise or counter-clockwise direction.

5. In a hair waver, a mandrel, a tubular member slidably and rotatably mounted on said mandrel, said tubular member being cut away along a substantially curved line and having a pair of upstanding hook members projecting into the cut away portion thereof, said hook members being adapted to engage strands of hair for wrapping the hair upon said mandrel by movement in either a clockwise or a counter-clockwise direction.

6. In a hair waving apparatus, a mandrel, a tubular member adapted to slidably and rotatably engage said mandrel, said tubular member having a substantially V-shaped gap cut in one side thereof and having a pair of hook shaped members disposed immediately adjacent said V-shaped gap, said hook shaped members being adapted to engage strands of hair for guiding the hair in wrapped formation upon said mandrel by either a clockwise or counter-clockwise movement.

7. A hair waver apparatus, comprising a mandrel, a tubular member slidably and rotatably engaging said mandrel, said tubular member carrying a pair of oppositely directed hooks thereon for engaging strands of hair for wrapping the hair on said mandrel by rotatable movement of said tubular member.
member in either a clockwise or a counter-clockwise direction.

8. In a hair waver, a mandrel, a tubular member rotatably and slidably engaging said mandrel, said tubular member being slotted at one side thereof and having a pair of oppositely directed hook members directed toward each other on each side of the slot thus formed for engaging strands of hair for wrapping the same on said mandrel by rotative movement in either a clockwise or counter-clockwise direction.

In testimony whereof I affix my signature.

ARTHUR G. BORDEN.