Oct. 11, 1955 H. MOSES 2,720,206

LOCKED HAIR CURLING DEVICE

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Fig. 1

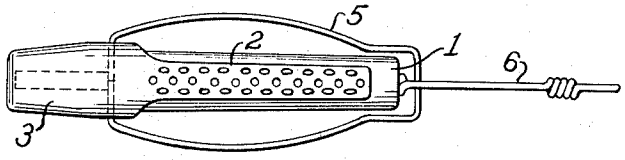


Fig. 2

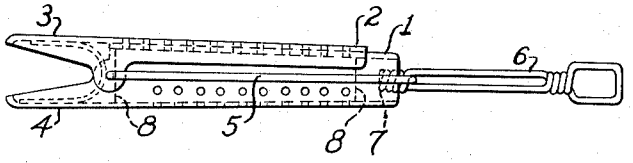


Fig. 3

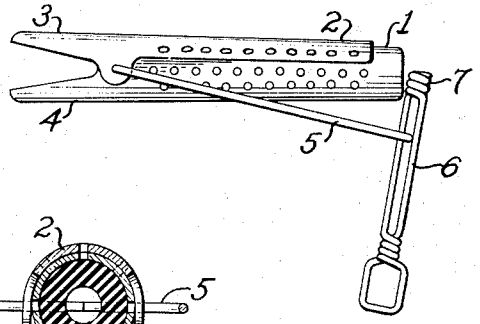


Fig. 6

Fig. 4

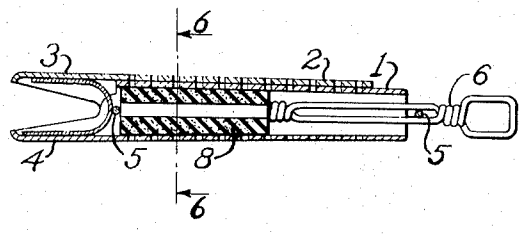
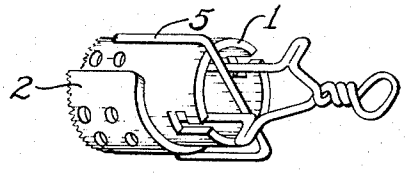


Fig. 5



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LOCKED HAIR CURLING DEVICE

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4 Claims. (Cl. 132—41)

The invention here disclosed is a curler for curling hair, particularly for the application of permanent wave solutions to hair, by which there is provided a spring pressed clamp for holding the end of a tress, a holding loop for holding the hair in place after rolling it around the curler, a locking wire for positioning the holding loop in proper position, an absorbent member inside the curler for carrying the curling liquid, and a compressor on the end of the locking wire for ejecting the curling liquid from the absorbent material.

In the permanent waving process various liquids have been developed by which a head of hair can be given a permanent curl, with or without the application of heat, and many applicators have been devised, none of which have to the present been found to be entirely satisfactory. It is required that the curler shall contain a mandrel and cooperating clamp, the clamp being spring pressed to hold the end of a tress from the head of hair. When the tress of hair has been wound upon the mandrel, it is essential that the wound hair be held in place, for which purpose a holding loop may be used. Great difficulty is, however, encountered in building a structure in which the holding loop will perform the necessary functions. The holding loop must be small and light and therefore necessarily delicate. Furthermore, it must be held firmly across the end of the mandrel so that the two sides of the loop, having a U shape and pivoted near the opposite end, will move over the wound hair and prevent unwinding. It is essential also that the curling liquid be applied to the wound hair. This has previously been done by a pad, or by pouring it from a bottle or some other container onto each wound tress; but this procedure makes it extremely difficult to supply enough curling liquid without wastage.

According to the present invention there is provided a mandrel formed of light sheet metal into tubular shape which may if desired be a truncated cone and may be perforated. The mandrel is preferably perforated with relatively small holes, and desirably has at one end a formed handle. There is desirably provided also a spring closed, perforated clamping member in the form of a trough partly surrounding the mandrel and pivoted thereto near the handle end of the mandrel. The clamp member is provided with a handle near to the mandrel handle so that the clamp can be spread apart from the mandrel to permit the insertion of the end of a tress, which is thereupon held to the handle by spring pressure on the clamp.

Within the mandrel there is provided an absorbent member which may be a layer of sponge, either natural sponge or viscose sponge or the like, or may be a pad of cotton fabric (a woolen pad may be used but is less desirable since repeated use involving the application of curling liquid tends to cause an undesirable deterioration).

There is also provided a holding loop to keep the hair from unrolling after being wrapped around the mandrel. This may conveniently be a U-shaped member or may

be a ring, as desired. The holding loop is preferably pivoted to the mandrel near the handle end and it may, if desired, serve as the axle upon which the clamp pivots. The holding loop preferably is bowed outwardly at the sides to follow the contours of a wrapped tress.

In order to maintain the holding loop in position to cover the wound tress, a locking member is provided in the form of a wire member straddling the holding loop and adapted to enter the end of the mandrel opposite to the handle. This is made in such a way that it can be pulled outward from the mandrel body, turned slightly, and the locking wire thereby freed for movement away from the mandrel to permit the wrapping of a tress and return over the tress with the locking wire then thrust lengthwise of the mandrel into pressure cooperation with the sponge or other pad which is provided to absorb the curling liquid and discharge it upon application of pressure from the locking wire.

By this construction there is provided a very convenient permanent wave implement in the form of a mandrel around which a tress may be wound which has therein an absorber for holding an appropriate quantity of curling liquid, a clamp cooperating therewith to hold the end of a tress preliminary to the winding operation, a holding loop to cover and maintain the wound tress in position, and a locking wire having a plunger which is adapted simultaneously to sustain the holding loop in position to prevent unwinding of the tress and at the same time to squeeze the curling liquid out of the carrying pad for the curling operation. Other objects and details of the invention will be apparent from the following description when read in connection with the accompanying drawing, in which

Fig. 1 is a front view of the curler;

Fig. 2 is a side view of the curler showing the handles;

Fig. 3 is a view of the curler with the locking wire withdrawn;

Fig. 4 is a view in section showing the sponge member and the compressor in operative relationship;

Fig. 5 is a perspective view of the upper end of a curler showing an alternative locking means utilizing bayonet locks; and

Fig. 6 is a transverse sectional view of the embodiment of Fig. 4.

Referring to the drawings, there is provided a perforated tubular mandrel member **1** with which the clamp member **2** cooperates as shown, pinch clip handles **3** and **4** being provided for operation of the clamp. There is also provided a holding loop member **5** and a locking wire **6** upon which a plunger member **7** is positioned to cooperate with the pad member **8** which carries the curling liquid.

In the operation of this device the pad **8** is first charged with the curling liquid. A convenient sized tress is then separated from a head of hair and the free end inserted under the clamp with the holding loop drawn backward away from the clamp and tress. The tress is then wrapped in the usual way, whereupon the holding loop is pulled into position over the tress to prevent unwinding. When the free end of the holding loop is positioned adjacent to or over the open end of the mandrel, the locking wire is brought into play by inserting the plunger member into the bore of the mandrel and pushing it inward until it squeezes the curling liquid out of the pad and is held in position by a binding action between the plunger and the pad, the opposite end of the locking wire then serving to fasten the holding loop solidly in place.

By this procedure the first wound tress is held solidly on the mandrel and the second and subsequent tresses are easily wound upon other mandrels with no danger of any wound tresses escaping from their respective

mandrels; yet when the curling is completed, the simple removal of the locking wire from the bore of the mandrel frees the tress for rapid and easy unwinding.

The above described embodiment is fully satisfactory for most uses. Occasionally, however, it is desirable to provide a more solid locking action. This may be obtained by the embodiment shown in Fig. 5. In this embodiment the upper end of the locking wire **6** is bent to form ears as shown which enter bayonet slots in the upper end of the tube **1**, whereupon by a slight twist of the locking wire it is held very firmly in place. Otherwise, the method of operation is substantially the same.

While there are above disclosed but a limited number of embodiments of the device of the present invention it is possible to provide still other embodiments without departing from the inventive concept herein disclosed, and it is therefore desired that only such limitations be imposed on the appended claims as are stated therein or required by the prior art.

The invention claimed is:

1. A cold wave curler comprising a perforated mandrel having a handle and an absorbent liquid holding pad therein, a co-operating perforated spring clamp pivoted to said mandrel near the handle end thereof to clamp a tress upon said mandrel, a holding loop also pivoted at said handle end to secure a wound tress upon the mandrel, and a lock member to maintain the loop in locked position straddled upon said loop, said lock member having a plunger positioned at its free end to enter and to hold said lock member within the bore of the mandrel and simultaneously to apply pressure to the pad within said mandrel to eject the curling liquid from the perforated mandrel into the wound tress.

2. The structure of claim 1, in which the mandrel has bayonet slots, said lock member having ears entering the bayonet slots in said mandrel.

3. In a cold wave curler having a perforated mandrel member having a handle, a spring pressed perforated clamp and a holding loop pivoted, respectively, near the handle of said mandrel member, in combination with an absorbent pad member within the bore of said mandrel and a locking-compressing member comprising a wire structure straddled upon and co-operating with said holding loop and having a pressing portion at its free end positioned to enter the bore of the mandrel and simultaneously to lock said loop member upon and parallel with the axis of said mandrel and to compress said pad.

4. The structure of claim 3, in which the mandrel has bayonet slots, said locking-compressing member having ears entering the bayonet slots in said mandrel.

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