May 6, 1952 W. H. H. DAVIS ET AL 2,595,645

HAIR CURLING DEVICE

Filed Jan. 8, 1949

FIG_1_

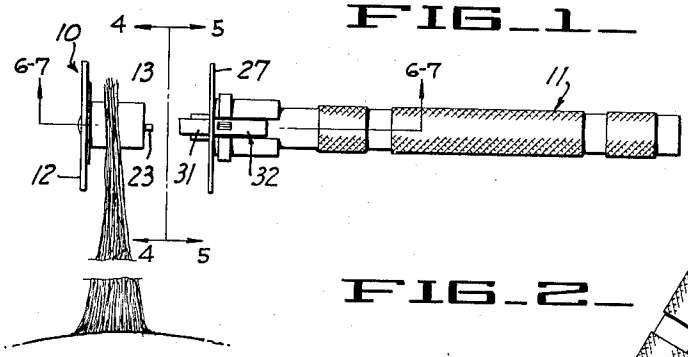


FIG_2_

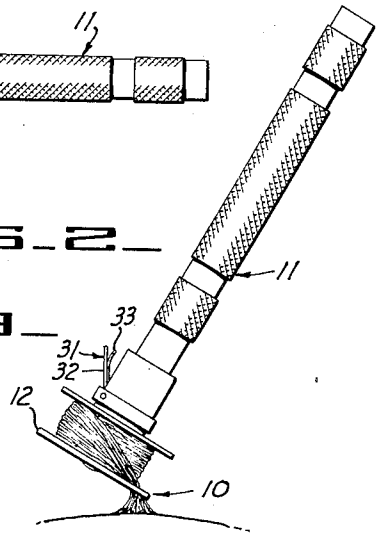


FIG_3_

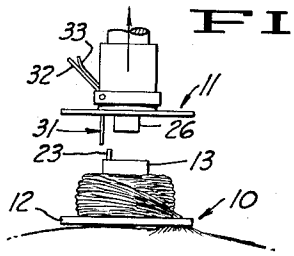


FIG_4_

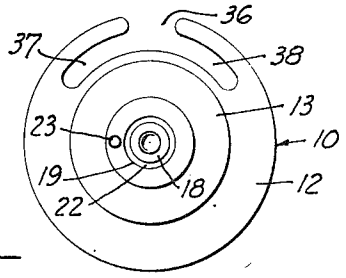


FIG_6_

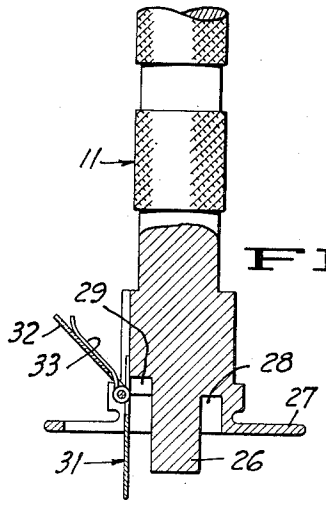
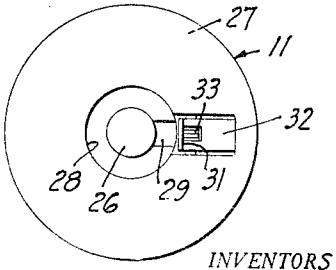


FIG_5_



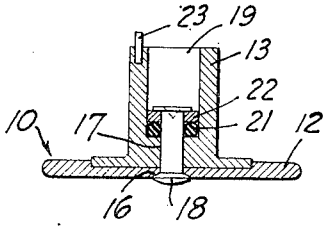


FIG_7_

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HAIR CURLING DEVICE

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2 Claims. (Cl. 132—33)

1

This invention relates to devices to be used in connection with the curling of hair and particularly to devices on which separate locks of hair may be tightly wound in Croquignole fashion and then secured in place for a considerable period of time in order to permit the hair to take a set in the form of a Croquignole curl or wave.

It is an object of this invention to provide a device of the character described which is relatively small and of simple and inexpensive construction, and which is easily used for the purpose intended by either a skilled beauty operator or in the home.

A further object of the invention is to provide a device of the character described which will be maintained in place by the hair which is wound thereon and which is so constructed that the device may be placed immediately adjacent the scalp, so that the entire lock, from its free end to the scalp, will receive a wave.

It is a further object of this invention to provide a handy handle for a device of this kind.

Further objects and advantages of this invention will appear from the following description taken in connection with the accompanying drawings in which

Figure 1 is a plan view of the device incorporating our invention in which the two portions are separated;

Figure 2 is a device as shown in Figure 1 in which the two portions have been joined and hair has been wound upon the same;

Figure 3 is the device shown in Figures 1 and 2 in which the hair has been wound upon one of the devices and the other has been removed therefrom;

Figure 4 is a view taken along the line 4—4 of Figure 1;

Figure 5 is a view taken along the line 5—5 of Figure 1;

Figure 6 is a view, partly cross-sectional, taken along the line 6—6 of Figure 1; and

Figure 7 is a cross-sectional elevation taken along the line 7—7 of Figure 1.

As shown in Figure 1 our device consists generally of a member 10 upon which hair may be wound and a member 11 which consists of a handle or winding device.

As shown in the drawings, the member 10 consists of a stationary shuttle 12 and a rotatable mandrel 13. The member 12 is provided with an annular orifice which is adapted to cooperate with the member 13 generally, as shown in Figure 7. Both members 12 and 13 are provided with registering orifices 16 and 17 which are adapted

2

to accommodate a rivet 18 which extends upwardly through the members 12 and 13 into a cavity 19 within the member 13. A washer 21 formed of readily deformable material such as natural or synthetic rubber is next placed about the rivet 18, a washer 22 is placed thereupon and the rivet is spread in the conventional manner. In this way members 12 and 13 are rotatably secured together. Yet, because of the deformation of the member 21, the devices are not freely rotatable. The member 13 is provided with an upstanding pin 23 the purpose of which will be more fully hereinafter described.

The handle or winding portion 11 consists generally of a handle as shown, one end of which is provided with an extending member 26 which is adapted to cooperate with and rotate within the cavity 19 of the member 13. The handle 11 is also provided with an annularly extending flange 27 which is substantially the same diameter as the flanged member 12 whereby, when the two devices are joined, as shown in Figure 2, the flanged member 12 and the flange 27 form a spool within which hair may be wound.

The member 11, within the flange 27 is provided with an inwardly extending groove 28 which is adapted to receive the member 13, and an orifice 29 which is adapted to receive the pin 23 whereby, when the pin 23 is in the orifice 29, rotation of handle member 11 will be imparted, through the pin 23 to the member 13.

The member 11 is also provided with a clip 31 which is actuated by handle 32 and which is retained in the position generally as shown in Figure 6 by a spring 33. The purpose of the clip 31 will be more fully hereinafter described.

The shuttle 12 is also provided with an opening 36 and a pair of generally concentric slots 37 and 38 the purpose of which will be more fully hereinafter described in connection with the description of the operation of the device.

Operation of our device may be described as follows:

The members 10 and 11 are joined together in such a manner that the member 26 rests within the cavity 19 and the annular wall member 13 is accommodated within the groove 28 of the member 11. Pin 23 is accommodated within the orifice 29 and the clip 31 engages the outside wall of the rotating mandrel 13.

A tress of hair is then separated from the remainder of the hair upon the human head and that portion of the hair remote from its roots is placed in contact with the mandrel 13 and under the clip 31 in such a manner that the clip 31

retains the tip end of the hair. The handle 11 is then rotated. It will be recalled that rotation of the handle 11 likewise causes rotation of the revolving mandrel 13. In this way the hair is wrapped, from its extremity to its roots, upon the mandrel 13 and between the flange 27 and the stationary shuttle 12. When substantially all of the hair in the tress has been wound upon the mandrel 13 and the device is in close proximity to the scalp, the tress is passed through the orifice 36 into either one of the slots 37 or 38 in such a manner that the shuttle 12 may be placed substantially in engagement with the scalp. After the hair has been passed through the orifice 36 and is retained in one of the slots 37 or 38, the mandrel 13 and the handle may be further rotated since, it will be recalled, the mandrel 13 is rotatable with respect to the shuttle 12. In this manner the desired tension may be applied to the hair wound upon the mandrel 13. When the desired tension has been obtained, the handle 11 may be removed from the mandrel 13 by simply drawing the same directly away therefrom in such a manner that the member 26 and the cavity 19 are no longer in engagement, the member 13 and the annular groove 28 are no longer in engagement, and the spring clip no longer engages the hair or the mandrel. The shuttle 12 and mandrel 13 with the hair which has been wrapped thereupon may then be allowed to remain upon the head until the fluid or liquid which has been placed thereon to impart a curl to the hair has dried. At that time the device may be removed from the scalp by simply removing the tress of hair from the slot 37 or 38 through the opening 36 and allowing it to fall free of the mandrel.

While many devices have been proposed by others in the past to achieve the results which we achieve, we have found that none of them are satisfactory for various reasons. We have found it desirable to have a device upon which the hair may be tensioned even after the hair has been wound upon the device and the device has been placed in proximity to the scalp. No other device of this character has been made, to our knowledge. The combination of the rotating mandrel and the stationary shuttle make this possible. In the second place we have provided a device which may be secured to the hair without the use of pins, clips, or other devices. However, the slots 37 or 38 which we have provided, in and of themselves, would not achieve the result desired for the reason that if the hair were merely passed into the slot on the shuttle 11 without provision for further tightening of the hair or winding of the hair upon the mandrel 13, the device would not be retained upon the scalp.

Therefore it is readily seen that the combination of the rotating mandrel and the stationary shuttle is of utmost importance. Not only does it make possible further tensioning of the hair after the device has been applied to the hair and scalp but it also renders possible the use of a simple slot or pair of slots in the shuttle to retain the device upon the scalp. This feature eliminates the use of various types of caps, pins, clips, etc. which have been used in the past.

By providing the annular flange 27 we have created a spool or reel arrangement upon which hair may be wound easily, since the flange 27 and the shuttle 12 form barriers to side movement.

We claim:

1. In a hair curling device, a mandrel adapted to receive hair for winding thereon, an axle extending from the lower end of said mandrel, a relatively flat base member mounted on said axle for relative rotation with respect to said mandrel and in a plane at right angles to the axis of the mandrel and extending outwardly of the same, friction means between said mandrel and said base member tending to impose a frictional restraint against such relative rotation, a detachable handle engaging said mandrel, a projecting pin at the upper end of said mandrel for engagement with the handle, groove means in the lower end of said handle to engage said pin in driving engagement, spring clip means attached to the lower end of said handle to overlie a major longitudinal portion of the surface of said mandrel and thereby retain strands of hair upon said mandrel, a flat annular plate mounted upon and surrounding the lower portion of said handle to provide the upper wall of a reel formed in conjunction with the mandrel and said base member, said handle and said spring clip means being readily removed from said mandrel after strands of hair are wound about said mandrel.

2. In a hair curling device, a mandrel adapted to receive hair to be wound thereon, an axle extending from the lower end of said mandrel, a flat base member mounted on said axle for relative rotation with respect to said mandrel and in a plane at right angles to the axis of the mandrel and extending outwardly from the same, a projecting pin formed on the upper end of said mandrel, a detachable handle engaging said mandrel and said projecting pin, a recess in the lower end of said handle to engage said pin in driving engagement, a spring clip attached to the lower end of said handle to overlie a portion of the surface of said mandrel to thereby hold the end of a strand of hair to be wound upon said mandrel, an annular member mounted upon and surrounding the lower portion of said handle to thereby form the upper wall of a reel in conjunction with the mandrel in said base member, said mandrel and attached devices being readily removed from said mandrel after strands of hair are wound about said mandrel.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,138,608	McCormick	Nov. 29, 1938
2,244,897	Rubira	June 10, 1941
2,270,618	Bowyer	Jan. 20, 1942
2,325,316	Haberman	July 27, 1943
2,432,585	Pohl	Dec. 16, 1947
2,482,052	Zachary	Sept. 13, 1949
2,508,374	Cipolla	May 23, 1950