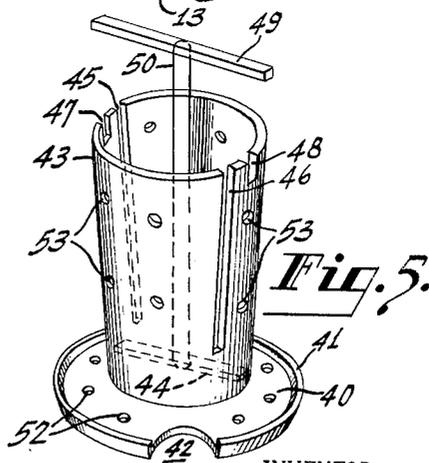
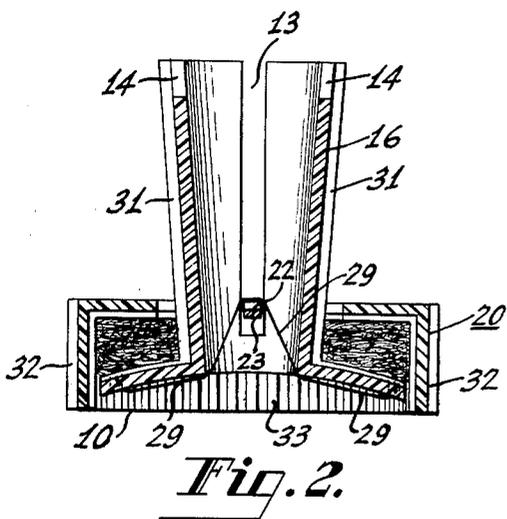
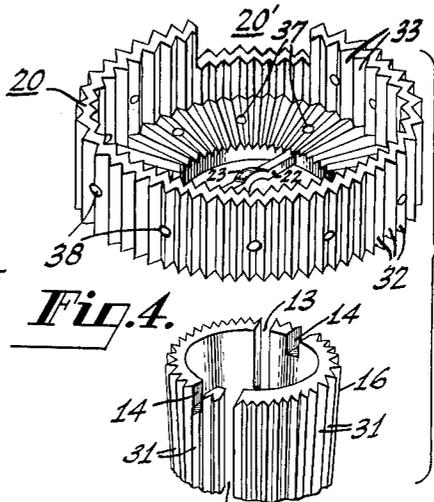
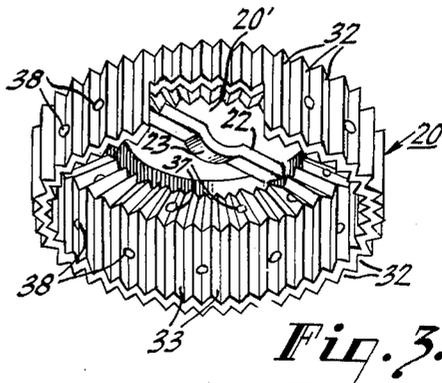
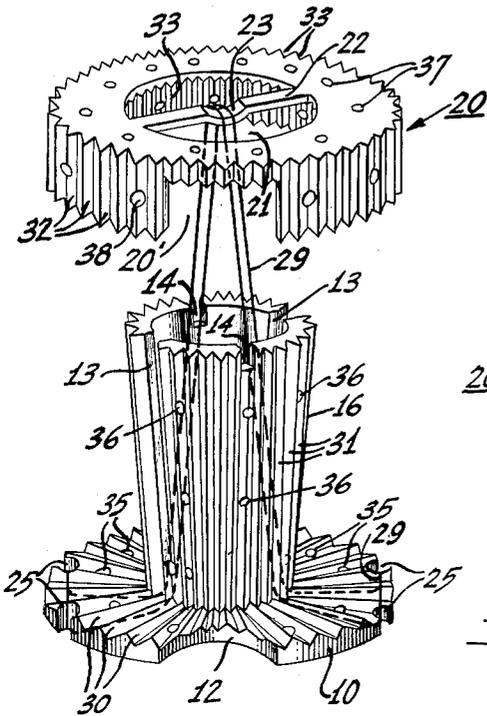


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SPOOL TYPE HAIR WINDING MANDREL WITH
TELESCOPING COVER CLAMP
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Fig. 1.



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SPOOL TYPE HAIR WINDING MANDREL WITH TELESCOPING COVER CLAMP

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Continuation of application Ser. No. 830,326, July 29, 1959. This application May 23, 1962, Ser. No. 198,413
3 Claims. (Cl. 132-40)

This application is a continuation of my copending application, Serial No. 830,326, filed on June 29, 1959, and now abandoned.

My invention relates to a hair curling device and more particularly to a simple form of such device having advantages over those now available and which may be used for providing home permanents and the like such as finger waves or watch-spring curls as desired.

In the treatment of the hair to produce permanent waves by either a heat process or by cold waves, a hair softening chemical is employed which renders the hair limp or soft without hydrolyzing the keratin or bringing about any chemical change which would prevent the reconversion of the hair to its original physical state, and then applying a neutralizing chemical serving to react with the softening chemical originally applied whereby the hair is reconverted to its original state. After applying a neutralizer which prohibits the curling fluid from acting further, the hair may be rinsed with lukewarm water with the curl set on the curling device and the hair may then be dried in any suitable manner.

An object of my invention is to provide a form of curling device which may be used by non-professionals without the use of bobby pins or other metal fastening means for the making of ordinary curls or permanent wave curls.

A further object of my invention is to provide a form of hair curling device which may be made at low cost and which is adapted to be used at home with safety and without difficulty.

A further object of my invention is to provide a curling device which may be made of any plastic or like material not affected by oils or chemicals normally used in the curling of hair.

A still further object of my invention is to provide a form of curling device which can be maintained open while curls are being formed on one portion of the device and which thereafter may be closed to a clamping position over the formed curls, and which has means for ventilation and permitting air circulation through the curls as well as permitting vaporization of moisture from the curls while the curls are held in place on the device.

Referring to the drawings:

FIG. 1 shows an exploded perspective view of one form of a hair curling device made according to my invention;

FIG. 2 is a longitudinal sectional view of the device shown in FIG. 1 in curl-forming position;

FIG. 3 is a bottom view in perspective of the top member showing the corrugations for permitting air circulation;

FIG. 4 is a perspective view showing the cover inverted for curling operations; and

FIG. 5 is a view of a modified form of my invention shown in FIG. 1.

Referring to the drawings, a hair curling device made according to my invention is provided with a circular base 10. An arcuate recess 12 may be provided to permit the lock of hair to be curled close to the scalp and the stem for facilitating tight curls. Extending upwardly from the base 10 is the stem or spindle 16 which tapers outwardly from its junction with the base 10 so that the diameter of the free end of the spindle is larger than that in its junction at the base. The spindle is provided with a pair of elongated oppositely disposed slots 13 and a pair of

smaller recesses 14 which cooperate with the cover member as will be described.

The cover member 20 is of cup-shape and has a central aperture 21 across which extends the cross bar 22 having the offset 23 for purposes to be described. The cover member 20 and base 10 are resiliently connected together by means of a resilient member, preferably a rubber band 29, which permits the cover to be moved relatively to the base and spindle during used. The resilient member 29 is looped through recesses 25 in base 10.

As shown in FIG. 2, the base may be concave upwardly. The cover 20 is of larger inside diameter than the outside diameter of the base to permit the base to be received up within the cover. This permits the hair to be firmly retained. The recesses 20' and 12 register to permit the hair to be more tightly held to provide a firmer curl.

Normally, when the device is to be put to use, the bar 22 of the cover member rests in the recesses 14 either as shown in FIG. 1 or reversed as shown in FIG. 4. In the latter position, more working space is provided. After the hair has been wound around the spindle, the cover member is lifted and rotated so that the bar 22 slides down the slots 13 pushing the wound hair toward the base and clamping the hair between the cover member 20 and the base 10. The base 10 rests against the scalp. Since the stem is tapered, it provides a wider curl and prevents piling up of the hair.

To insure rapid and thorough drying of the hair, I provide the base with the corrugations 30 and the spindle with the corrugations 31. This permits air circulation by providing space between the spindle and the wound hair. I also provide the spindle with the apertures 36 and base with the apertures 35 to insure that air may flow freely inside of the curled hair. These apertures are at the bottom of the ridges to prevent hair being caught on the ridges. The ridges provide a space between the inner surface of the spindle and the hair so that the air may freely circulate therethrough. The cover member is also provided with the corrugations 32 and 33 and the apertures 37 and 38 for the same purpose.

In the modification shown in FIG. 5, the device is provided with a base 40 concave upwardly toward the stem and having an upturned lip 41. The recessed portion 42 has the same function as the recess 12 shown in FIG. 1. The spindle or stem 43 is secured to the base at its lower end and has oppositely disposed elongated slots 45 and 46 for receiving the retaining bar 49, urged toward the base by the resilient or elastic element 50, its lower end being secured to the crossbar 44 mounted in the base of the tube. Supporting slots 47 and 48 are provided at the upper end of the spindle 43 for supporting bar 49 which contacts the hair in raised position during curling. Here again apertures or openings 52 in the base and 53 in the spindle are provided for insuring circulation of air into the curled hair. The upturned lip 41 insures comfort when the curler is placed against the scalp.

What is claimed is:

1. A hair curling device having a base member, an elongated tubular member extending therefrom upon which hair is adapted to be wound, said elongated tubular member having a pair of oppositely disposed slots extending from an end thereof remote from said base member towards said base member, a cooperating cup-shaped cover member slidably disposed on said elongated tubular member, said cover member having an aperture through which said tubular member extends, said cover member having an integral element extending across said aperture and into said slots when said cover member is in hair engaging relationship, and elastic means connecting said base member and said integral element biasing said cover member towards said base member to retain wound hair in

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place, said slots having a depth sufficient for said cover member to receive said base member, said tubular member diverging outwardly from its junction with said base member towards said remote end, and said tubular member being corrugated longitudinally thereof.

5 2. A hair curling device according to claim 1 wherein said base and cover members are provided with opposed radially ridged surfaces for engagement with hair wound on said tubular member.

10 3. A hair curling device according to claim 1 wherein said base and tubular members contain perforations for the circulation of air.

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References Cited by the Examiner

UNITED STATES PATENTS

D. 160,373	10/50	Davis et al.	
2,212,569	8/40	Lemley -----	132-40
2,429,176	10/47	Watson -----	132-40
2,611,377	9/52	Barnes -----	132-40
2,750,948	6/56	Lutz -----	132-33
2,867,223	1/59	Anzalone -----	132-41 X
3,026,883	3/62	Harmon -----	132-40

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