Feb. 3, 1959 E. D. ANDERSON 2,871,865

HAIR CURLING DEVICE AND METHOD

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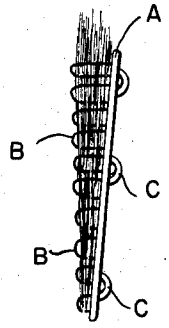


Fig. 1

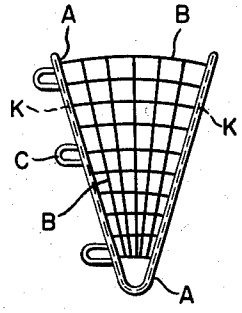


Fig. 2

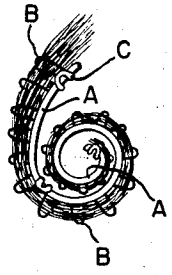


Fig. 3

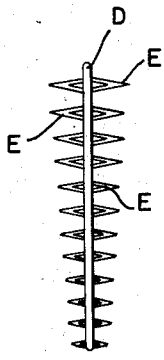


Fig. 4

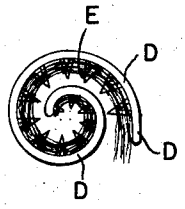


Fig. 5

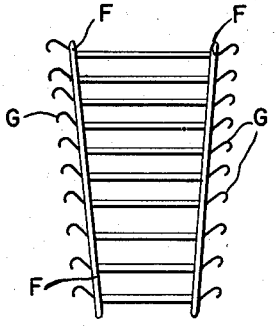


Fig. 6

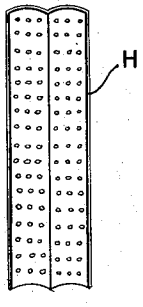


Fig. 7

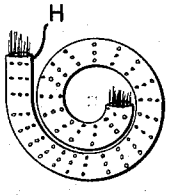
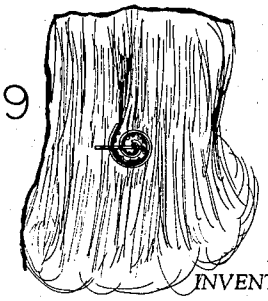


Fig. 8

Fig. 9



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HAIR CURLING DEVICE AND METHOD

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15 Claims. (Cl. 132—7)

This invention relates to a device for curling hair and more particularly to means for preparing and setting pin curls.

One object of the invention is to provide a novel and improved device for preparing and setting curls of hair which is dry, or wet with water or waving solution, or which is otherwise being set permanently or semi-permanently so that the use of bob pins or other means of fastening the hair is not required.

A particular object of this invention is to provide a facile means for preparing pin curls since the device is so constructed that curls are automatically formed when the combination of the device and enveloped hair as per the process of my invention is allowed to come to the natural or rest position of the device.

Further objects will become apparent from the ensuing description of the invention and from the accompanying drawings, wherein:

Figure 1 is a view of one embodiment of the invention in extended position enveloping hair to be curled;

Figure 2 is similar to Figure 1 except that the device is shown in an open, extended position prior to placing hair therein;

Figure 3 is similar to Figure 1 except that the combination of the device and enveloped hair as per the process of my invention is shown in the rest or curled and natural position of the device alone which the combination spontaneously assumes on the release of the forming force necessary to achieve the requisite operative association of the device and hair as per the process of my invention;

Figure 4 is a view of another embodiment of my invention wherein the device is shown in an extended, open position somewhat similar to Figure 2;

Figure 5 shows the embodiment of Figure 4 in combination with hair as in Figure 3;

Figure 6 is a view of another embodiment of the device of this invention in extended, open position somewhat similar to Figure 2;

Figure 7 shows still another embodiment of my inventive device in the open, extended position somewhat similar to Figure 2;

Figure 8 shows the device of Figure 7 in the natural or rest, that is, curled, position;

Figure 9 is a view similar to Figures 3 and 5 in position on the head of a subject showing the combination with the necessary operative association of hair and the new device after the forming pressure has been released and the desired curl corresponding to the natural or rest form of the device has been achieved spontaneously by the combination, whereby on standing the hair is so formed semi-permanently, retaining said form in itself after removal of the device from operative association therewith, that is, whereby the hair is semi-permanently curled in the desired spiral form corresponding to the natural or rest form of my spiral device.

The device may be illustrated by particular reference

to Figures 1, 2, and 3. This comprises in combination a spiral member A, which is flexible and elastic and whose relaxed or rest position is in the form of a double spiral as shown in Figure 3, reticulate material, thread-like members B which can extend from one side of the spiral member to the other as in Figure 1 or can be weblike as in Figure 2, desirably provided as integral parts of A and designed as means for securely engaging hair in the device in the necessary close association therewith; and, if desired, clamps C, desirably provided as integral parts of A, whose functions are to aid in securely engaging hair in the device and lockingly to engage each side of the double spiral A to the other thereby forming in combination with the hair a single spiral.

The entire device is constructed of a plastic, metal, rubber, or the like, and desirably the former, with sufficient rigidity and elasticity to be uncoiled and coiled repeatedly without changing the basic structure of the spiral in the natural or rest position thereof alone or in combination with the hair. The device can also have for the web or net materials, whose function is to encircle the hair, similar components fibrous in character, or fibers both natural or synthetic, or suitable combinations of these. For example member A of Figures 1, 2, and 3 can be composed of a metallic, springlike core surrounded by a soft plastic sheath, or it can be composed entirely of metal.

In operation the device can be opened, held open by a holder and used as follows with reference to Figures 1, 2 and 3, for example: (1) Using one hand uncoil the spiral to a more linear position; (2) Open the double member A by releasing clamps C to the position shown in Figure 2; (3) With the other hand select the strands of dry, damp, or wet hair to be curled and place them in the open, extended device; (4) Close the device and lock each side of member A to the other with clamps C; (5) Remove the hands and allow the curl to be formed spontaneously as the combination of member A and the hair to be curled returns to the natural or rest position of member A; (6) If desired, the completed curl, that is, the combination of the device and enveloped hair, can be pinned or otherwise held, for example by means of a net, in position on the head; and (7) Also if desired, a permanent or semi-permanent set to the curls can be applied chemically or in other ways after the hair is curled in the above manner.

After setting, which can for example vary from a few minutes to several hours and which can be accomplished chemically, by heating, by drying of damp or wet hair, or in other ways, the device is removed from the thus curled hair, clamps C, if any, are opened and the device is pulled from the curl, uncurling and opening if desired, whereupon the hair returns spontaneously to the shape formed therein by operative association with member A, that is, the natural shape of member A, thereby achieving the desired shape in the hair.

Figures 4 and 5 illustrate a variation of the device of my invention which is particularly suitable for construction from metal. Member D is a flexible spiral spring somewhat similar in function and use to member A illustrated in Figures 1, 2, and 3. To member D are attached reticulate clamps E, preferably spring loaded, and illustrated in Figure 4 in the open position. In operation this embodiment of the invention is uncurled, the clamps E are opened, hair is placed along the extended length of the spring member D, clamps E are closed, and the hands are removed from the device and hair. The combination of the device and hair then returns spontaneously to the natural or rest position thereby forming a spiral curl and providing a means for maintaining the hair in the desired curled position while setting is in progress.

Figure 6 illustrates yet another variation of this invention wherein the members F are composed of fairly limp plastic and are equipped with hooks G about which a stretched rubber band or other elastic material is placed, desirably in part an integral part of the device, when in the desired linear position on the hair. On removing the hands the combination of the device and hair automatically assumes the spiral form which the device alone assumes in the absence of hair on the release of forming pressure.

Figures 7 and 8 illustrate still another form of the device of this invention wherein the entire device consists of a multiperforated tubular member which is shaped in a flat spiral and which has a longitudinal slit along the inside edge of the spiral for the purpose of permitting the opening of the tube in the extended position as shown in Figure 7. In operation the spiral is stretched out to a linear position, opened up along the split H, the hair is inserted along the linear dimension, the tube is then closed containing the hair therein, and the combination of the device and hair is allowed to return spontaneously to the natural or rest position, as shown in Figure 8, thereby imparting to the hair the desired spiral form corresponding to the natural or rest form of my spiral device.

Figure 9 illustrates the device of my invention on the head of a subject. This indicates also how the device can be pinned close to the head, if desired, and shows the necessary operative association of hair and the new device.

In all these variations of my invention, the material or materials of construction can be plastic, metal, rubber, or the like, alone or in combination. Thus Figure 1 illustrates an entirely plastic device, while Figure 2 shows a member A composed of a core K of metal and a sheath of plastic which is also the material of members B and C. Figure 4 is illustrated to be entirely metal as is Figure 5, while Figure 6 is a combination of plastic, rubber, and fibrous netting. Figures 7 and 8 are composed of suitable plastic, for example, nylon. All these variations can be made in many sizes and/or number of turns of curl as well as strength of spiral member so that wide adaptability to size and shape of pin curls as well as to styles of coiffure is possible. Thus the invention is generic to hair of any length, that is, long hair or short hair, to hair which is naturally curly, artificially curled, or straight, or to hair which is fine, medium, or coarse in texture.

It should be especially noted that many other variations in my inventive device are possible besides those described here for purposes of illustration. Thus, for instance, referring to Figures 4 and 5 the spiral member can be on the inside of the spiral in the natural or rest position rather than on the outside as indicated. Furthermore the spiral members of Figures 1, 2, and 3 can have only one part while the other side can be merely a limp member attached through clamps C; in this manner the device can be so constructed that only hair-holding members B are visible when the combination of the device and hair are in operative association on the head. Also in a variation similar to Figure 6 an extended plastic or metal spiral can be inserted in a suitable slot provided for that purpose after the hair retaining portion has already been installed on the hair so that the combination of the device and hair will automatically assume the spiral form which the device alone would assume in the absence of hair. In a further variation hair clips resembling those of Figures 4 and 5 whose purpose is to aid in holding the hair more firmly can be used as integral parts of the variations of Figures 1, 2, 3, or 6, for example, to supplement the hair retaining features shown.

The most important features of my curl-forming device are the spiral member characterized by its flexibility so that it can readily be opened to a much less spiral form and means for securely engaging hair with the said spiral member in open position and retaining the hair in operative association with the spiral member upon release of the forming pressure whereby the combination of the device and enveloped hair returns spontaneously to the natural or rest position of the device alone, whereby the hair is semi-permanently curled in the desired spiral form corresponding to the natural or rest form of my spiral device.

The most important features of my process are engaging hair firmly in linear association with the extended form of my device and allowing the resulting combination of hair and the device to return spontaneously to the spiral configuration corresponding to the natural or rest form of the device itself whereby on standing the hair is so formed semipermanently, retaining said form in itself after removal of the device from operative association therewith, that is, whereby the hair is semi-permanently curled in the desired spiral form corresponding to the natural or rest form of the spiral device.

My invention is thus a device for curling and setting hair which device is reticulate or weblike in character permitting fluids to pass through the device. It comprises a spiral-forming member and reticulate material, and it has a natural and an unnatural form, the natural form being a closed, substantially spiral, at-rest, and tight form and the unnatural form being an extended, substantially non-spiral form spontaneously returning to said natural form. The extended or unnatural form has two states or configurations: the completely open state in which the device receives the hair and the folded configuration in which the hair is enveloped just prior to the return to the spiral form. As shown in the figures, the spiral-forming means may be positioned in the center or at the edges of the device. The process of my invention is curling and setting hair wherein the hair is placed in the extended, open form of a device having a spiral-forming member and, coacting with said member, reticulate material to receive and to encircle said hair, closing said reticulate material about said hair, and allowing said member to return to its natural, at-rest spiral configuration. The reticulate nature of the device permits passage of fluid to and from the hair within or held by the device.

As many widely different embodiments of this invention can be made without departing from the spirit and scope thereof, it is to be understood that the invention is not limited to the specific embodiments hereof, except as defined in the appended claims.

I claim:

1. A web-like, elongate device for curling and setting hair in the presence of fluid which device comprises a spiral-forming means and a reticulate member, said spiral-forming means causing said device to assume a natural, closed spiral form when at rest and to return resiliently to said closed spiral form when the said device has been forcibly opened to assume an unnatural, extended form and then has been released, said spiral-forming means being substantially coextensive with the said device and the said reticulate member permitting passage of fluid to and from said hair.

2. A device in accordance with claim 1 wherein the spiral-forming means and the reticulate member are integral.

3. A device in accordance with claim 1 provided with clamping means.

4. A device in accordance with claim 1 provided with means for fastening the device in curled position.

5. A device in accordance with claim 1 in which the spiral-forming means is positioned longitudinally and centrally in said device.

6. A device in accordance with claim 1 in which a spiral-forming means is positioned longitudinally at the edges of said device.

7. A device in accordance with claim 1 in which a portion thereof is made from a plastic material.

8. A device in accordance with claim 1 in which a portion thereof is made from a metal.

9. A device in accordance with claim 1 in which a portion thereof is made from rubber.

10. A device in accordance with claim 1 in which a portion thereof is made from a plastic material and the remainder thereof is made from a metal.

11. A web-like, elongate device for curling and setting hair comprising a spiral-forming means and a reticulate member, said spiral-forming means causing said device to assume a natural, closed spiral form when at rest and to return resiliently to said closed spiral form when the device has been forcibly opened to assume an unnatural, extended form and then has been released, said spiral-forming means being substantially coextensive with the said device, the said unnatural, extended form being substantially a non-spiral form having an open configuration to receive said hair and a folded configuration to envelop said hair.

12. A process of curling and setting hair wherein hair is placed in the extended, open form of a web-like device having a natural, at-rest spiral configuration and having a spiral-forming member and having, coacting with said member, reticulate material to receive and to encircle said

hair; closing said reticulate material about said hair; and allowing said member to return to its natural, at-rest spiral configuration.

13. A process in accordance with claim 12 which includes the step of fastening the resulting unit close to the head.

14. A process in accordance with claim 12 which includes the step of treating said hair with a chemical.

15. A process in accordance with claim 12 which includes the step of removing the said reticulate material and said spiral-forming member after the desired setting is attained.

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