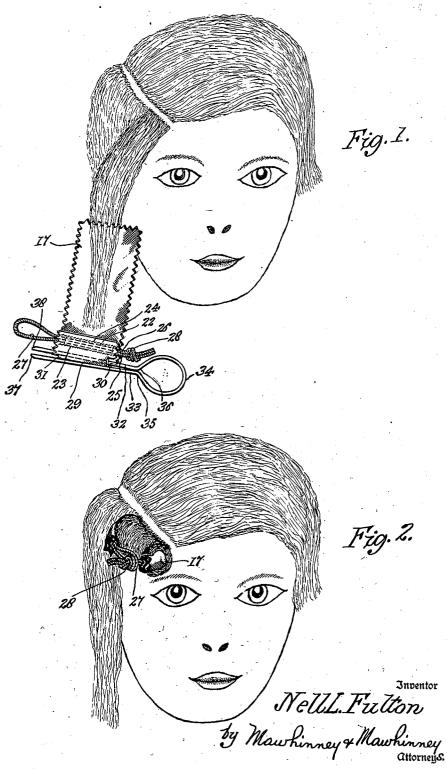
HAIR CURLER

Filed Sept. 12, 1942

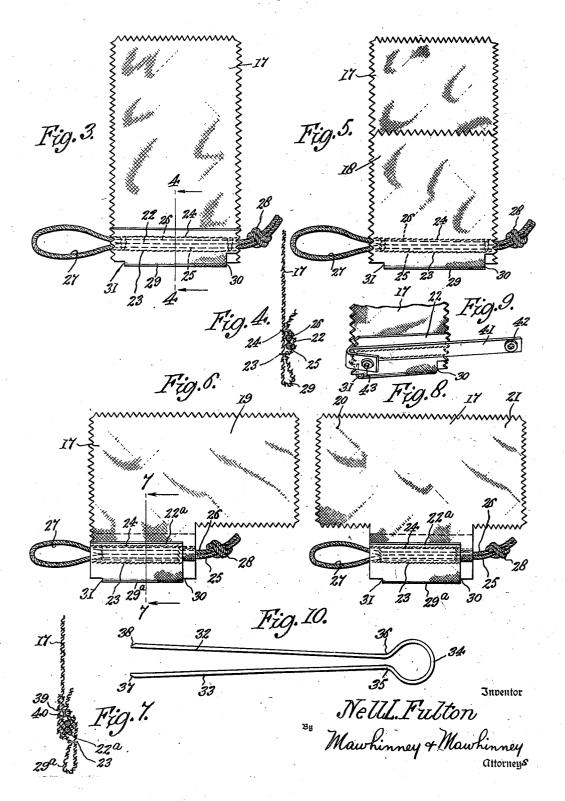
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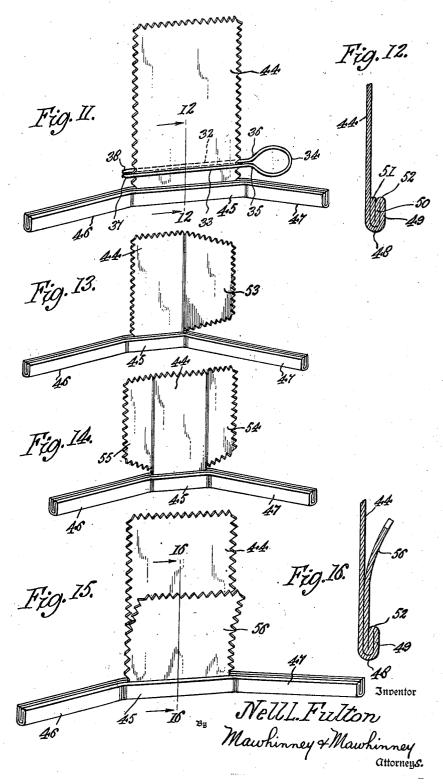
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## UNITED STATES PATENT OFFICE

2,308,167

## HAIR CURLER

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Application September 12, 1942, Serial No. 458,107

13 Claims. (Cl. 132-42)

The present invention relates to improvements in hair curlers and has for an object to dispense with the use of metal without sacrificing any of the advantages heretofore imparted by the metal to commercial hair curlers as variously constructed according to my prior Patents Nos. 1,584,527, May 11, 1926; 1,615,692, January 25, 1927; 1,824,883, September 29, 1931; 1,978,256, October 23, 1934; 1,991,147, February 12, 1935; Consider and 1,994,099, March 12, 1935; to mention some only of the more pertinent of my prior patents in this art.

Another object of the invention is to substitute for the so-called wire of my prior patents a cord or twine element, the ends of which can be tied to secure the curler in place on the rolled lock of hair, or wherein a complemental knot and loop in the opposite cord ends may be provided for more expeditious securing or clamping of the curler in place.

In the prior patents aforesaid the wire had not only a securing or clamping function, but also acted as a rolling agent, a function difficult for a flexible cord to perform; and to supply this deficiency I provide what I call a "stretcher" to roll the improved curler and to invest the curler during the rolling operation with the same or superior stiffness to that imparted by the old wire forms; and it is a further object of the invention to equip the improved hair curler with an additional hem, casing or other means by which to detachably receive the stretcher, whereby a single stretcher may serve all of the curlers employed by any one user or beautician operative.

Figure 8 is a form of curler.

Figure 9 is a form of curler showing a securing means.

Figure 10 is a ployed.

Figure 11 is a paper curler acc Figure 12 is a of Fig. 11.

Figures 13, 14 modified forms of Figure 16 is a form of curler.

The invention contemplates that all of the pocket styles of my prior patents and possibly others may be available in the improved construction of curler.

A further object of the invention resides in 40 the provision and construction of the stretcher, in the modification of my hair curlers to receive same, and in the principle of construction and method of operation in rolling permanents to stretch the hair.

A still further object of the invention is to produce a paper substitute for the cloth-wire hair curler in which economy of scarce, rationed and frozen materials is effected, while offering a satisfactory substitute to the trade in a period of emergency.

With the foregoing and other objects in view, the invention will be described more fully hereinafter and more particularly pointed out in the appended claims. In the drawings, in which like or corresponding parts are denoted by the same reference characters throughout the several views:

Figure 1 is a perspective view of an improved hair curler and stretcher constructed according to the present invention and shown initially in a state of application to a lock of hair.

Figure 2 is a similar view showing the improved curler rolled and secured in final position, with the stretcher removed.

Figure 3 is a front elevational view of one form of the hair curler.

Figure 4 is a section taken on the line 4-4 in Fig. 3.

Figure 5 is a front view of a modified form of curler.

Figure 6 is a front view of another modified form of curler.

Figure 7 is a section taken on the line 7—7 of 20 Fig. 6.

Figure 8 is a front view of a further modified form of curler.

Figure 9 is a fragmentary perspective view of curler showing a modified form of fastener or securing means.

Figure 10 is a plan view of the stretcher employed.

Figure 11 is a perspective view of a form of paper curler according to the invention.

Figure 12 is a section taken on the line 12—12 of Fig. 11.

Figures 13, 14 and 15 are perspective views of modified forms of paper hair curlers, and

Figure 16 is a section taken on the line 16-16 35 of Fig. 15.

Referring more particularly to the drawings, 17 designates the body member or part of a hair curler made of a flexible material, usually cloth, but which I propose may be made either of cloth or very tough paper of a nature, or treated, to resist the moisture encountered with dampened locks of hair.

Such body part 17 may be single thickness, as shown in Figs. 3 and 4, or combined with flaps 18 (Fig. 5), 19 (Fig. 6) or 20 and 21 (Fig. 8).

At the bottom of the body part is a hem or casing 22 (Figs. 3 and 4) formed between lines 23 and 24 of stitching passing through overlapped parts of the material, and in the casing 50 22, instead of a wire, I place a cord or twine fastener composed of doubled strands 25 and 26 fashioned to form a loop 27 at one end of the fastener and a knot or enlargement 28 at its opposite ends. The knot and loop project beyond 55 the ends of the hem 22 and constitute a fastener

couple in which the knot is detachably received into the loop, while the flexible character of the cord and the pressure put thereon by the rolled curl cause the loop to elongate and close on the knot, thus forming a very effective clamping arrangement without the use of metal.

Below or beyond the hem 22 is a second hem or casing which may be formed in any suitable manner, for instance by the bight of the folded material and the line 23 of stitches. The ends of this second hem 29 are cut-away as shown at 30 and 31 at relatively opposite sides of the curler to facilitate the entrance to either end of the hem 29 of the stretcher illustrated in Fig. 10.

Such stretcher comprises a pair of legs 32 and 33 carried by a bridge or ring 34, all of these parts being made preferably integral and of a variety of resilient or other metal available under present restrictions. The parts are crimped at 35 and 36 at the open side of the ring 34 to give the legs a set in which such legs diverge apart toward their free ends which are mutually beveled at 37 and 32 so that when forced together a pointed end results, facilitating the insertion of the tool in the casing hem 29.

In Fig. 4 the free end 39 of the material may in the case of Fig. 5 be continued up to a suitable distance to produce the flap 18.

In the form shown in Figs. 6 and 7 the cord hem 22<sup>a</sup> is formed by overlapping and stitching the body material, while the supplemental stretcher hem 29 is constituted of a separate piece of material enveloping the cord hem 22<sup>a</sup> and stitched to the body material by the line of stitching 39 which may or may not be the same as the stitching 40 for forming cord hem 22<sup>a</sup>.

It is obvious that the two hems may be formed in various other ways, and that the cord may be replaced by a tape 41 threaded through the hem 22 and suitably tied at its projecting ends or 40 equipped with mating snap fasteners 42 and 43.

Referring more particularly to Figs. 11 and 12, a form of curler made from tough paper is shown in which the body 44 is single thickness and formed in one piece with the rolling and fastening members 45, 46 and 47. In Figs. 12 and 16, the paper is shown as folded for strength into a four-walled structure nested within a single bight 48 in which the lower end of the body is overlapped upon itself to produce the wall 49 and infolded in U-form to create the walls 50 and 51 coextensive in height and length with the wall 49. The free edge of the material is protected by the opposed bights 48 and 52.

In Fig. 13, the variation consists of the side flaps 53; and in Fig. 14 there are two side flaps 54 and 55; while in Figs. 15 and 16 a flap 56 partially overlaps the main body 44 and is a continuation of the wall 51.

The operation of that form of the invention shown in Figs. 1 to 10, inclusive, is made apparent from Figs. 1 and 2, in which the lock of hair is placed over the body member and the device is then rolled up by use of the stretcher. The preferred length of the stretcher is indicated to allow the turning force to be applied at a point remote from the head and face. After the curler has been rolled the stretcher is pulled out from the second or supplemental hem and the ends of the cord or tape are united. The final position is as represented in Fig. 2. Where flaps are employed in conjunction with the body member, such flaps are folded over on the body member and upon the lock of hair to form a pocket

ents. The new curler is susceptible of any of the methods of use described in my prior patents.

The sprung legs 32, 33 of the stretcher are forced together in the fingers of the operator prior to inserting the device in the hem 29. When released, the legs 32, 33 spring out to frictionally bind the tool in the curler and also to give the necessary width to this stiffening member to create a rotary folding action.

The curlers may be used without the stretcher if desired, but the employment of this tool greatly facilitates the rolling operation.

The use of the paper form of curler shown in Figs. 11 to 16, inclusive, is according to methods previously described and well known from my other prior patents. After these paper curlers are rolled on the locks of hair the fastener tongues 46 and 47 are overturned upon the rolled curler, where, either by their own inherent stiffness or by tieing or securing by pins or other fasteners, they are held securely in place.

The spring bias given the stretcher legs will preferably be greater than the width of the extra or supplemental hem 29 whereby when the stretcher is engaged with the hem, such hem will be stretched or extended to its full width and the legs will be under tension and bind upon opposite walls of the flexible hem casing.

The cut-outs 30 and 31 present to the user an available end no matter which side of the curler happens to be used. In other words it is unnecessary to select a particular side of the curler for application to the hair lock. These cutouts are only partially around the circumference of the hem 29 to leave blank wall portions beside the cut-outs against which the legs of the stretcher may be thrust in opening the end of the hem 29.

The paper curlers may be used with or without the stretcher and the curlers may be made of cloth, paper or other available flexible material.

The one stretcher serves all of the curlers used by any one person. It contributes the stiffening and rolling function, while the cord or tape acts as the ultimate fastener.

The stretcher may be of any length desired and may be inserted so that the loop handle moves up against the pocket or hem. In the preferred method of operation only one leg of the stretcher goes through the hem with the other leg lying outside the hem. This prevents the stretcher from turning inside the hem. In Figure 11 on the paper curler the stretcher may straddle the paper.

I have illustrated and described preferred and satisfactory embodiments of the invention, but it is to be understood that various changes and modifications may be made in the curlers and stretcher without departing from the spirit of the invention, provided such changes fall within the scope of the following claims.

What is claimed is:

- 1. An improved hair curler comprising a body member, a fastener, and stretcher means in relation to said body member to roll the body member.
- 2. An improved hair curler according to claim 1 in which the stretcher means is detachable from the body member.
- 3. An improved hair curler according to claim 1 characterized by the stretcher means being stiff and having a handle remote from the body member.
- ber and upon the lock of hair to form a pocket 4. An improved hair curler according to claim as described more particularly in my prior pat- 75 1, further characterized by the fact that the

fastener is a doubled cord having a loop at one end and a knot at its other end.

5. An improved hair curler according to claim 1, further characterized by the fact that the fastener is a tape having complemental snap fasteners at projecting ends of the tape.

6. An improved hair curler comprising a flexible body member, a plurality of hems at the base of the body member, a fastener element in one hem.

7. A hair curler according to claim 6 in which the ends of the stretcher hem are cut-away to facilitate entrance of the stretcher shank.

the ends of the stretcher hem are cut-away at relatively opposite sides leaving lateral blank walls.

9. A hair curler according to claim 6 wherein the stretcher comprises a handle and outwardly- 20 end. sprung legs extending from the handle.

10. A paper form of hair curler comprising a

body member, and a fastener made integrally with the body member and having bendable tongues extending laterally beyond the body member.

11. A paper hair curler according to claim 10 in which the fastener is of four-wall thickness with a lower bight encompassing all such walls.

12. A paper hair curler according to claim 10 wherein the fastener is of four-wall thickness hem, and a stretcher receivable in the other 10 with a lower bight extending from the body member to the outer wall, and the inner walls being infolded in U-shape between the outer wall and body member.

13. An improved hair curler comprising a 8. A hair curler according to claim 6 wherein  $_{15}$  body member adapted to receive a lock of hair and adapted to be rolled upon such lock, and means for securing the rolled body member and infolded lock of hair comprising a doubled cord having a loop at one end and a knot at its other

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