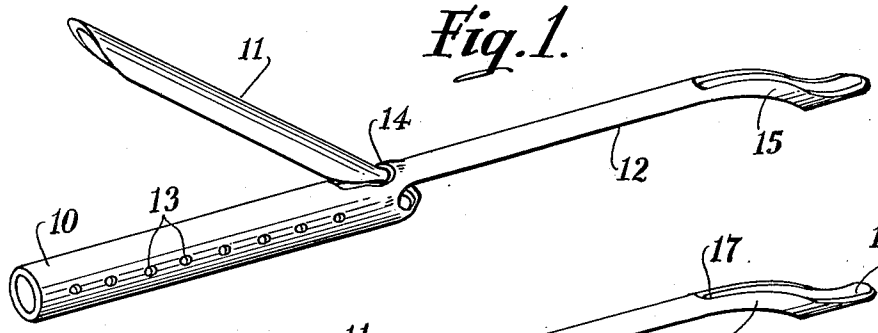
Nov. 14, 1950 L. J. HALL ET AL 2,530,197

HAIR CURLER

Filed Aug. 2, 1947

Fig. 1.



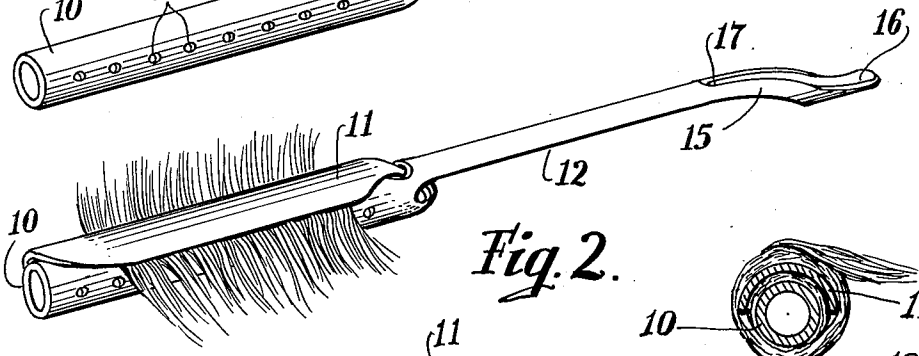


Fig. 2.

Fig. 4.

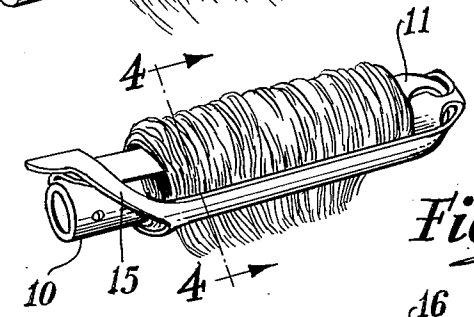


Fig. 3.

Fig. 5.

Fig. 7.

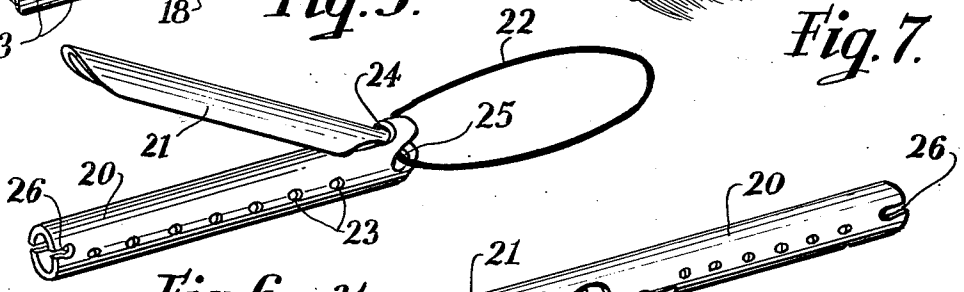


Fig. 6.

Fig. 8.

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HAIR CURLER

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7 Claims. (Cl. 132—44)

1

This invention relates to an improved hair curler.

Among the objects of the invention is the provision of an improved hair curler which is comfortable to wear, which is effective in operation, which is easy to use and relatively simple and inexpensive to manufacture.

Further objects will be apparent from the following detailed description of the drawings in which—

Fig. 1 is a perspective view of a curler embodying our invention showing it in open position ready to be used;

Fig. 2 is a perspective view of the curler showing it in its initial operating position with the end of the hair gripped between the flap and body portion;

Fig. 3 is a perspective view showing the curler in the final operative position with the hair wrapped thereon and with the curler in closed position;

Fig. 4 is a sectional view in the direction of the arrows on the line 4—4 of Fig. 3;

Fig. 5 is a perspective view broken away at both ends showing one economical manner in which the curlers may be made;

Fig. 6 is a perspective view of a modified form of curler in open position;

Fig. 7 is a perspective view of the modified curler showing it in closed position with the hair wrapped thereon; and

Fig. 8 is a perspective view showing an economical manner of manufacturing the modified type of curler.

Our curler is preferably made from a yielding resilient material so that it will be comfortable when worn and for this purpose we may employ rubber, synthetic rubber, vinyl resin or the like.

Referring to the first form of our invention, we have shown a unitary structure made from a tubular piece of rubber. The structure comprises a tubular body portion or mandrel 10, an integral flap 11 and a retaining piece or strip 12. The tubular body portion 10 may be perforated as shown at 13 so as to provide ventilation and serves as the support around which the hair is wound.

The flap 11 is concavo-convex in cross-section so that it may rest flat against the body portion as shown in Figs. 2, 3 and 4. It is integrally connected at one end to the end of the tubular body

2

portion 10 and is extended through the keyhole type of slot 14 formed in the wall of the tubular body portion opposite the point of connection between the body portion and flap. By forming the slot in keyhole fashion it facilitates the insertion of the flap through the opening but at the same time resists or prevents accidental withdrawal thereof. In this connection the flap is preferably slightly narrower through the area which normally projects through the keyhole slot. It will be seen that the flap may be shifted from open position as shown in Fig. 1 to closed position in engagement with the tubular body portion. The flap is of such a length as to extend to or within a short distance from the opposite end of the tubular body portion and the end thereof may be rounded as shown.

The retaining strip 12 is an elongated member integral with the end of the body portion and extending outwardly beyond the keyhole slot. At the end thereof it is formed with a loop portion 15 which may be extended around the opposite end of the tubular body portion 10 and flap 11 when the device is in closed position as shown in Fig. 3. The loop portion 15 is preferably cut at an angle or on the bias, as shown, to increase its diameter, making it easier to assemble around the end of the body portion. To facilitate the manipulation and operation of the device a protruding lip 16 may be formed at the end of the loop and this serves as a handle portion to be gripped between the fingers. A recess 17 corresponding in shape to the lip 16 is provided in the upper surface of the retaining strip, for economy in production so that the successive pieces may be inter-fitted together as it will appear from Fig. 5.

As shown in Fig. 5 the curler may be made from a tube of rubber or the like. Successive hair curlers may be cut from the same tube in opposite relationship. Thus, it will be seen that the keyhole slot 14, perforations 13, retaining means 12, loop 15, and flap 11 may be die-cut or otherwise formed in the tube. At the inner end of the flap, circular apertures 18 may be provided to form a better hinge and also to provide a narrower portion of the flap for extending through the keyhole aperture 14. By referring to the right-hand end of Fig. 5, it will be seen that a second hair curler may be simultaneously cut by arranging it in op-

posite and inverted relationship to the first one and that the portions of loop 15 interfit with each other perfectly when cut in this manner. Thus, the curlers may be cut from the tube with a minimum of waste material.

After the curlers have been cut in the manner indicated in Fig. 3, they are individually assembled by projecting the flap 11 through the keyhole opening 14 in the manner indicated in Fig. 1. When thus assembled the curler is ready for use.

In using the curler, the end of the hair to be curled is gripped between the flap 11 and the tubular body portion 10. The curler is then rotated to wind the hair around the body portion and the outer surface of flap 11. In this connection the hair is wound from the free end towards the roots. When thus wound, the retaining strip 12 is then closed in the manner shown in Fig. 3 to retain the hair and curler in position. This is accomplished by grasping the tab 16 in the hand, drawing it towards the opposite end of the curler and the loop portion 15 is then caused to encircle the end of the body portion 10.

A modified form of curler in which a separate retaining strip is employed is shown in Figs. 6 to 8. Thus, I have shown a curler having a tubular body portion 20, an integral flap 21 and a separate retaining strip in the form of a loop 22. As in the first form of my invention, the parts are made of yielding, resilient material such as rubber, synthetic rubber, vinyl resin or the like. The body portion may be perforated to provide ventilation as shown at 23 and a keyhole opening 24 similar to the opening 14 is provided through which the flap 21 is extended.

The retaining strip or loop 22 extends through the opening 25 between the connected end of flap 21 and the body portion 20. In this connection, the loop is placed over the flap 21 before it is inserted through the keyhole aperture 24. The opposite end of body portion 20 is provided with slots or apertures 26 with which the free end of loop 22 is engageable when in closed position as shown in Fig. 7.

Flap 21 is preferably of corresponding length to flap 11 and terminates a short distance from the end of the body portion 20. Loop 22 is of such a length as to be fully extended or slightly stretched when engaged in the slot 26.

The curlers may be economically cut from a tube in the manner indicated in Fig. 8. Thus, adjacent curler are cut in inverted and opposite relationship with the flaps 21 overlapping each other. Around the connecting portions of the flaps, the apertures 25 are formed so as to provide a reduced hinge portion which will extend through the aperture 24. The curlers may be die-cut from the tube or, if preferred, may be cut in any other manner.

After the tube is thus cut, loop 22 is placed over the connecting end of the flap 21, and the flap is projected through the loop and through aperture 24, producing the assembled curler as shown in Fig. 6. The curler is used in a similar manner to the first form of curler.

It will thus be seen that we have provided an improved hair curler which is comfortable to wear, effective in operation, easy to use and relatively simple to manufacture. Modifications may be made in the illustrated embodiment of our invention without departing from the invention as set forth in the accompanying claims.

We claim:

1. A hair curler made of flexible resilient material and comprising a tubular body portion formed with an opening in the wall thereof adjacent one end, a flap-like extension integrally connected by a hinge portion to the wall of the body portion substantially opposite the opening with the hinge portion extending beyond the opening and being folded over and projecting outwardly through the opening at an angle of less than 90° to the body portion, said flap-like extension being shiftable between closed position in contact with and parallel to the body portion and open position projecting outwardly at an angle therefrom and retaining means integrally connected to the wall of the body portion at the end in which the opening is formed and formed with a loop for encircling the opposite end of the body portion.

2. A hair curler as set forth in claim 1 in which the opening in the wall is of generally keyhole shape.

3. A hair curler made of flexible resilient material and comprising a tubular body portion formed with an opening in the wall thereof adjacent one end, a flap-like extension integrally connected to the wall of the body portion substantially opposite the opening and folded over and projecting outwardly through the opening, said flap-like extension being shiftable between closed position in contact with and parallel to the body portion and open position projecting outwardly therefrom, and retaining means cooperable to be releasably connected between the two ends of the body portion and comprising a strip integrally connected to the wall of the body portion and extending outwardly beyond the opening in said wall and formed with a retaining loop at the end thereof, said retaining loop being an angularly cut tube of the same diameter as the tubular body portion.

4. A hair curler as set forth in claim 3 in which the retaining loop has a tab-like extension projecting outwardly therefrom to serve as a handle for manipulating the retaining means.

5. A hair curler made of flexible resilient material and comprising a tubular body portion formed with a keyhole shaped opening in the wall thereof adjacent to one end, a flap like extension integrally connected to the wall of the body portion substantially opposite the opening and folded over and projecting outwardly through the opening, said flap like extension being shiftable between closed position in contact with and parallel to the body portion and open position projecting outwardly therefrom, and retaining means cooperable to be releasably connected between the two ends of the body portion and comprising a strip integrally connected to the wall of the body portion and extending outwardly beyond the opening and formed with a retaining loop at the end thereof said retaining loop being an angularly disposed tubular portion of the same diameter as the body portion.

6. The method of making hair curlers which comprises providing a tube of yieldable resilient material, then cutting the tube so as to provide two spaced tubular body portions each with an opening in the wall thereof near their adjacent ends and formed in opposite sides of the tube and each being formed with an integral flap-like extension in overlapping relationship and then bending the flap-like projection on each of the body portions and projecting it outwardly through the opening in the body portion.

7. The method of making hair curlers which comprises providing a tube of yielding resilient material, then cutting the tube so as to provide

a pair of spaced tubular body portions each with an opening in the wall thereof near their adjacent ends but formed in opposite sides thereof and each being formed with an integral flap-like extension and an integral retaining strip having a loop at the end thereof, the retaining strips and flap-like extensions on the two members being cut in inverted and opposite relationship with the loops in interfitting relationship, and then bending the flap-like extensions on each of the tubular body portions and projecting it outwardly through the opening in the body portion.

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MAY RUTH HALL.

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