Aug. 23, 1932. E. E. BALDWIN 1,872,644

HAIR CURLER

Filed Feb. 29, 1932

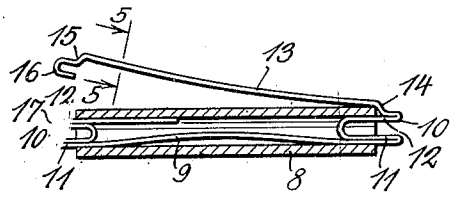


Fig. 1.

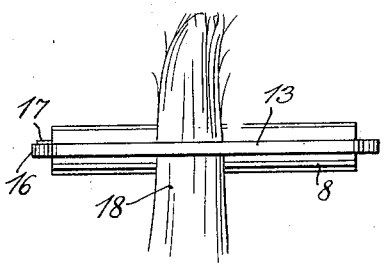


Fig. 2.

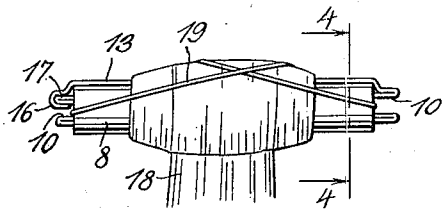


Fig. 3.

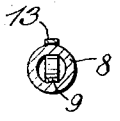


Fig. 4.

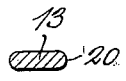


Fig. 5.

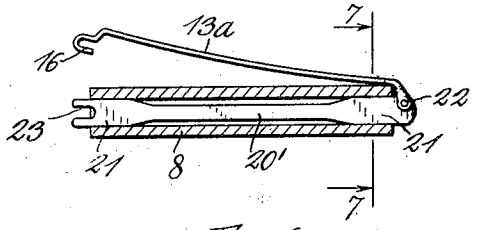


Fig. 6.



Fig. 7.

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UNITED STATES PATENT OFFICE

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HAIR CURLER

Application filed February 29, 1932. Serial No. 595,715.

This invention relates to improvements in hair curlers and has reference more particularly to a hair curler intended for use in curling the ends or tips of the hair.

It is the object of this invention to produce a simple and substantial hair curler that shall be so constructed that it can be easily made and assembled and which also shall have a yielding surface about which the hair is rolled which will hold the hair securely and also subject it to a slight tension.

This hair curler consists of a frame which is made of metal and which has a central portion of less cross sectional area than the ends. A rubber tube or the like, encloses the frame and has its ends supported on the enlarged ends of the frame. Due to the fact that the central portion of the frame is smaller than the ends, the rubber tube has no metal reenforcement at its center and therefore is free to yield. Secured to one end of the frame is a resilient clamping member that is provided at its free end with means for securing it to the opposite end of the frame.

Having thus briefly described the invention and some of the objects sought to be attained, the invention will now be described in detail and for this purpose reference will be had to the accompanying drawing in which the preferred embodiment of the invention has been illustrated, and in which:

Fig. 1 is a view showing a side elevation of the frame and a cross section of the rubber tube in which the frame is enclosed;

Fig. 2 is a plan view of the curler showing the manner of attaching it to the ends of a lock of hair;

Fig. 3 is a view showing the lock of hair wrapped around the curler and held against unwrapping by means of a rubber band;

Fig. 4 is a section taken on line 4—4, Fig. 3;

Fig. 5 is a section taken on line 5—5, Fig. 1 and indicates the shape of the metal strip or wire from which the frame is made;

Fig. 6 is a view similar to that shown in Fig. 1, but shows a slightly modified form of construction; and

Fig. 7 is a section taken on line 7—7, Fig. 6.

The frame that forms the support for the rubber tube 8 consists of a single piece of wire of a cross sectional shape shown in Fig. 5. This wire has a substantially straight or slightly curved portion 9, whose opposite ends are formed into two U-shaped portions that have been indicated as a whole by reference numeral 10. The U-shaped portions are formed by bending the metal back through an angle of one hundred eighty degrees as indicated by reference numeral 11 and then bending it outwardly as indicated by reference numeral 12. The two portions 11 and 12 form the sides of the U which is open at its ends as shown. Secured to, or formed integral with the side 12 of one of the U-shaped ends is a clamping member 13. This clamping member is preferably downwardly convex as shown in Fig. 1. Member 13 is provided with an offset 14 adjacent the point where it is connected to the member 12 and this spaces it from the upper surface of member 12 sufficiently to receive the end of the rubber tube 8. The free end of member 13 has a downwardly extending portion 15 which terminates in an inwardly opening hook 16. This hook is adapted to receive the end 17 of the U 10 adjacent the free end of the clamping device. When member 13 is pressed against the surface of the tube 8 and latched to the projecting portion 17, it will serve to clamp the ends of a lock of hair in the manner shown in Fig. 2, where reference numeral 18 indicates the hair that is to be curled. After the hair is clamped as shown in Fig. 2, it is then rolled onto the curler in the manner indicated in Fig. 3. After the hair has been rolled onto the curler to the extent desired, a rubber band 19 or a string is placed over the outside of the layer of hair and about the ends of the U-shaped portions and this rubber band or string holds the hair from unwinding from the curler. The hair can be slightly moist when wound onto the curler and after it is dried, it will assume a set that will give the desired wavy appearance when the hair is unwound from the curler and combed.

In Fig. 5 I have shown a cross section of the metal strip that is used in forming the frame and from this it will be seen that the two sides of the strip have been flattened. The

material is preferably formed from a metal wire that has been run between rollers so as to flatten the same, such a metal strip will have rounded sides 20 and will therefore be convenient to handle.

In Figs. 6 and 7 a slightly modified form of construction has been shown. In this embodiment the frame, instead of being made from a wire strip, is cut from a piece of sheet metal. The center portion of the metal strip which has been indicated by reference numeral 20′ is narrower than the end portions 21 and therefore when the tube 8 is in place it is supported at its ends by the end portions of the frame in a manner analogous to that shown in Fig. 1. It will be seen that the center of the rubber tube is unsupported and therefore is free to yield and this allows the tube to accommodate itself to the forces to which it is subjected. The clamping member 13*a* is pivoted to one end of the frame shown in Fig. 6 by means of a pivot pin 22 and the opposite end of the frame is provided with a notch 23 that corresponds to the inside of the U 10 shown in Fig. 1. The end of clamping member 13*a* has a hook 16 that can be engaged with the notch 23 in a manner analogous to what has been described above.

It will be seen from the above description that the frame employed in connection with this hair curler has enlarged ends which serve as supports for the rubber tube and the latter is therefore practically unsupported at its center point. One effect of this construction is that when the hair is wrapped around the curler, it will put the tube under compression and this will produce a force that will hold the hair slightly tensioned. Another advantage is that the hair will be uniformly held and will not be subjected to any excessive pressures and therefore the ends of the lock that has been curled will not have the impression of the clamping member as would be the case if the hair was subjected to pressure between two unyielding members.

From the above description it will be seen that the hair curler that forms the subject of this invention is of a very simple construction and so designed that the rubber tube that forms the outer surface of the body portion thereof is supported only at its ends and is therefore free to move transversely at its center and to be contracted by the force of the hair wrapped about the same.

Having described the invention what is claimed as new is:

1. A hair curler comprising a metal frame provided at one end with a notch, the frame having a smaller transverse area at the center than at the ends, a rubber tube, or the like, enclosing the frame, and a spring clamping device secured to one end of the frame and adapted to extend parallel with the outside of the tube, the free end of the clamping device having means for engaging the notch in the end of the frame to hold it in position.

2. A hair curler comprising a metal frame formed from a metal wire, or the like, one end of the frame having an inwardly extending notch, the two ends having a transverse dimension greater than that of the center of the frame, a rubber tube, or the like enclosing the frame and supported by the enlarged ends thereof and a clamping member secured to one end of the frame and provided with means at its free end for engaging the notch to hold it in contact with the outer surface of the tube.

3. A device in accordance with claim 1 in which the frame is made from a piece of wire.

4. A device in accordance with claim 1 in which the frame and clamping member are made from a single piece of wire.

5. A hair curler comprising, in combination, a frame member formed from a single metal strip having its ends bent into U-shape, the sides of the U being parallel with the length of the frame and the open end outward, a rubber tube enclosing the frame and supported at its ends by the sides of the U-shaped ends, and a clamping member secured to one end of the frame and provided with means for attaching it to the other end.

6. A hair curler comprising a frame having a smaller transverse area at the center than at the ends, a rubber tube, or the like, enclosing the frame and contacting with the ends of the frame, and a spring clamping device secured to one end of the frame and adapted to extend parallel with the outside of the tube, the free end of the clamping device and the corresponding end of the frame having interengaging latching means for holding the clamping device in operative position.

In testimony whereof I affix my signature.

ELNORA E. BALDWIN.