

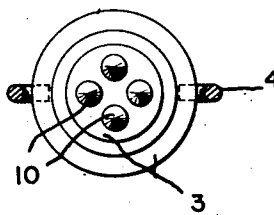
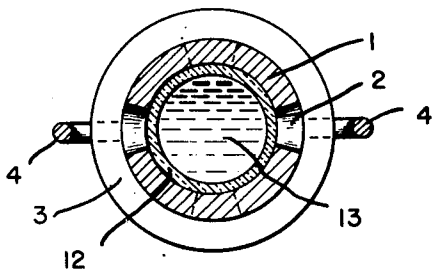
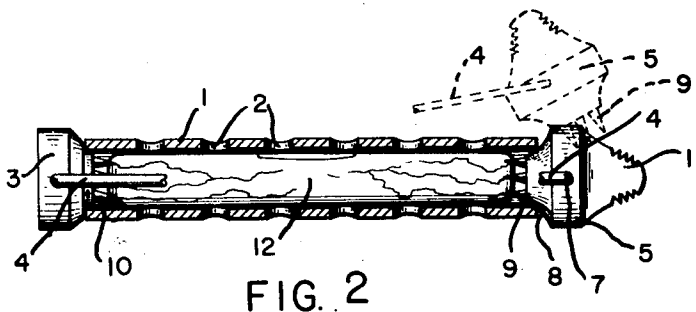
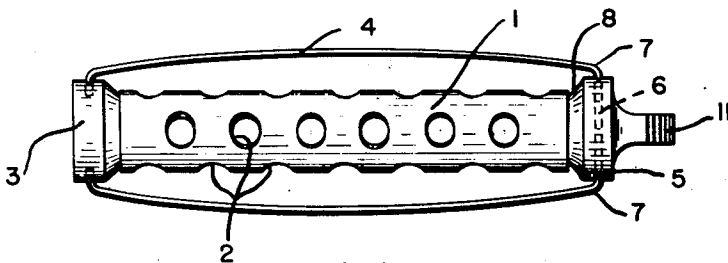
July 29, 1952

R. F. HOIPO

2,604,893

HAIR CURLER

Filed July 9, 1951



INVENTOR.
RICHARD F. HOIPO
BY
Richard P. Cardew
AGENT

UNITED STATES PATENT OFFICE

2,604,893

HAIR CURLER

Richard F. Holpo, Duluth, Minn.

Application July 9, 1951, Serial No. 235,691

2 Claims. (Cl. 132-40)

1

This invention relates to a unit for use in imparting a wave or curl to hair.

Home permanent waves are becoming increasingly popular because of their low cost. However, the various permanent wave kits which are purchased and used commonly have some common drawbacks; that is, the solutions which are used are strong and sometimes irritate a person's hands, and the solutions are difficult to apply properly in a localized area where waving is taking place without dropping some of the solution on floors, rugs, clothing, or the like.

It is, therefore, one of my principal objects to provide a means for applying wave solutions in a most convenient and efficient manner.

Another object is to provide a unit on which hair may be wound and held in place, and to provide a capsule of wave solution which may be inserted into the unit and fractured to soak the hair wound on the unit.

Another object is to provide an automatic fracturing means for the capsule which operates as the hair is clamped in place on the curler unit.

Another object is to provide a simple and inexpensive curler unit which may be used repeatedly, and to provide wave solution in capsules which are inexpensive whereby a so-called "refill-kit" may comprise a plurality of wave solution capsules and a plurality of neutralizer capsules, or, if desired, a plurality of wave solution capsules and a single bottle of neutralizer solution.

Another object is to provide a curler unit which is simple and convenient to operate.

These and other objects and advantages will become more apparent as the description of the invention proceeds.

In the accompanying drawing forming a part of this application:

Figure 1 is a side elevational view of one of my curlers in its operative or closed position.

Figure 2 is a longitudinal sectional view through the cylindrical body of my curler and showing a capsule mounted therein.

Figure 3 is an enlarged vertical sectional view transversely through the unit shown in Figure 1.

Figure 4 is an elevational view of one of the capsules for use in the curler body.

Figure 5 is a view of the face of one of the capsule puncturing end members of my unit to show the relative position of parts.

In the drawing, the reference numeral 1 indicates the elongated cylindrical body member of one of my curler units, the body member being provided with a plurality of spaced apertures

2

or holes 2-2 through the walls thereof, as shown. The cylinder may be of any desired material, of course, such as aluminum, plastic or the like.

On one end of the cylinder an end member 3 is fixedly mounted as by welding, crimping, cementing, or the like, the member 3 serving to close one end of the cylinder. The member 3 has an elongated spring wire ball 4 pivotally mounted thereon, the ball being attached at one end to the member 3 and being adapted to straddle the body member, as shown. At the opposite end of the ball 4 a closure member 5 is pivotally carried, the member 5 preferably being provided with an opening 6 through which the ball extends, the ball being bent sharply at each side of the member 5, as at 7, to hold the member 5 in place, and the ball being arched outwardly between the ends or caps 3 and 5 to provide a spring tension to pull the members 3 and 5 toward each other when they are in place on their respective ends of the cylindrical body.

The inner end of the member 5 is preferably substantially cone-shaped, as at 8, to fit snugly into the end of the body member 1, see Figure 2, and has a plurality of sharp projections 9 which extend into the interior of the body. Likewise, the inner end of the member 3 has similar, inwardly disposed projections 10, the purpose of which will become apparent.

The member 5 preferably has a toggle head 11 thereon which will facilitate the closing of the body member against the tension of the spring wire ball.

In operation, when a permanent wave is being given, a lock of hair is separated from the hair of one's head and is rolled tightly on the outer surface of the cylinder the desired distance that wave or curl is desired. A capsule 12 having a permanent wave solution 13 therein is inserted into the hollow body member. The capsule 12 is preferably of a frangible material, such as glass or plastic, having characteristics which encourage breaking in long lines, rather than shattering into small pieces, and is of a length slightly greater than the distance between the ends of the projections 9 and 10 when the member 5 is in its closed position, as seen in Figures 1 and 2.

When the capsule is in place, the cap or end member 5 is moved into place on the end of the body member, the wire ball serving to hold the lock of hair in place on the cylinder. Because of the contractile tension of the ball, however, the member 5 must be snapped into place by placing the cone-shaped portion of the member

3

8 against the outer edge of the cylinder, see dotted lines, Figure 2; then it may be snapped or pushed into place by pressing against the toggle. This gives enough leverage to overcome the tension of the ball, of course.

As the end member 5 snaps into place, the capsule 12 is engaged by the projections 8 and 10 and the spring tension of the ball forces the projections into the ends of the capsule, causing same to break, thereby releasing the wave solution which passes through the perforations 2 in the body member 1 and soaks the hair wound on the body, thoroughly.

When the desired time of saturation of wave solution has elapsed, the lock of hair may be neutralized with a neutralizer solution applied in the common manner to finish the waving operation.

It is to be understood that I have herein shown and described one specific embodiment of my invention, and that my appended claims are not necessarily limited specifically thereto, but should be construed as broadly as permissible in view of the prior art.

Having thus described my invention, what I claim is:

1. A hair curler comprising an elongated hollow body member having perforations there-through, means closing one end of said member, pointed lugs projecting inwardly from said closing means, a wire ball pivotally mounted at the closed end of said member, a cap member pivotally carried on said ball on the opposite end thereof from its mounting on said body, said cap being adapted to close the otherwise open end of said body member, said ball being of spring

4

wire and being arcuately shaped whereby it will apply tension to said cap to push the latter into said body member when said cap is in its closing position, means limiting the distance to which said cap may enter said body, said cap having lugs projecting inwardly from the inner end thereof.

2. A hair curler comprising an elongated hollow body member having perforations there-through, means closing one end of said member, pointed lugs projecting inwardly from said closing means, a wire ball pivotally mounted at the closed end of said member, a cap member pivotally carried on said ball on the opposite end thereof from its mounting on said body, said cap being adapted to close the otherwise open end of said body member, said ball being of spring wire and being arcuately shaped whereby it will apply tension to said cap to push the latter into said body member when said cap is in its closing position, means limiting the distance to which said cap may enter said body, said cap having lugs projecting inwardly from the inner end thereof, and a wave-solution-carrying-capsule adapted to be inserted into said hollow body, said capsule being of a length longer than the distance between said inwardly projecting lugs whereby when said cap is in place on its end of said body said lugs will be pressed into said capsule by the tension of said spring wire ball on said cap and said capsule will break releasing the solution carried therein to leave said body through the perforations therein.

RICHARD F. HOIPO.

No references cited.