Dec. 2, 1958 E. M. CAMPBELL 2,862,508

HAIR CURLER

Filed May 11, 1956

Fig. 1.

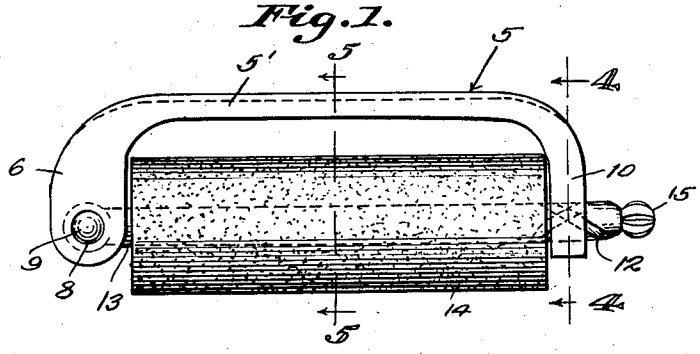


Fig. 2.

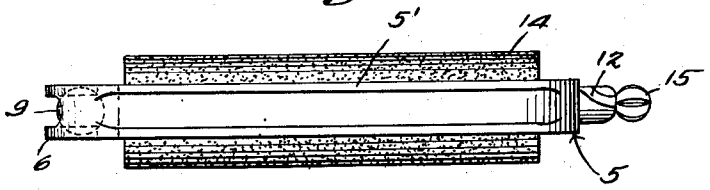


Fig. 3.

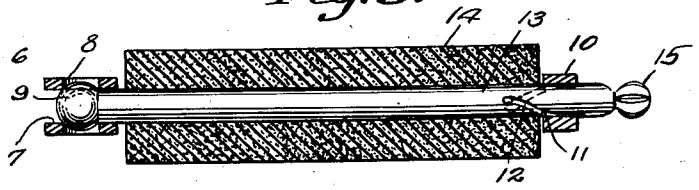


Fig. 4.

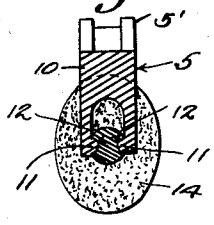


Fig. 5.

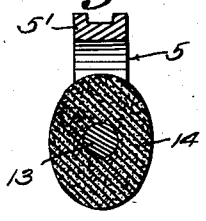
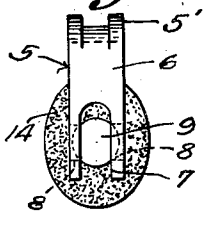


Fig. 6.



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HAIR CURLER

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5 Claims. (Cl. 132—39)

This invention relates to hair curlers, and is designed for use in preparing home permanent waves as well as nightly pin-ups.

An important object of the invention is to provide means to eliminate the use of end papers and objectionable solutions that are applied by daubing a cloth or cotton saturated with the solution on the hair.

Another object of the invention is to provide a curler including a sponge roller adapted to be saturated with the liquid used in hair treatment, so that when the hair is wound on the roller in forming a curl, the curler will capture and hold all brittle ends of the hair and at the same time, saturate the curl from the inside out, with the solution being used.

Another important object of the invention is to provide a curler wherein the head rests on the sponge portion of the curler and it does not rest on the rigid portion of the curler when the curler is used for nightly pin-ups, thereby lending to the comfort of the user.

Still another object of the invention is to provide a sponge covered roller having a spiral groove formed at one end of the shaft of the roller, for the reception of lugs forming a part of the bearing of the curler frame within which the shaft operates, so that the lock of hair wound on the sponge roller will be tightened on the roller as the sponge roller rotates when the head of the person wearing the curler is moved over the pillow, during the sleeping period.

Other and further objects and advantages of the invention will be hereinafter described and the novel features thereof defined in the appended claims.

Referring to the drawing:

Fig. 1 is a side elevational view of a curler, constructed in accordance with the invention.

Fig. 2 is a plan view thereof.

Fig. 3 is a longitudinal sectional view through the curler.

Fig. 4 is a sectional view taken on line 4—4 of Fig. 1.

Fig. 5 is a sectional view taken on line 5—5 of Fig. 1.

Fig. 6 is an end view of the curler.

Referring to the drawing in detail, the curler comprises a substantially U-shaped frame indicated generally by the reference character **5**, including a bight forming a bar **5'**, the end **6** of the frame being bifurcated at **7**. The bifurcated end is provided with aligning bearing openings **8** to accommodate the bore **9** which is held in said bearing openings by frictional contact.

The other end **10** of the frame is also bifurcated and is provided with short ribs **11** that extend inwardly from the bifurcations thereof, the short ribs **11** being designed to fit within the spirally formed grooves **12** as formed in one end of the shaft **13** for the purposes to be hereinafter more fully described.

The shaft **13** provides a support for the sponge roller **14** which is secured to the shaft **13** to rotate therewith.

As better shown by Fig. 3 of the drawing, the shaft **13** is of a length to extend beyond the end **10** of the frame **5**, where it is provided with a knob **15** affording

means for effecting rotation of the shaft **13** and sponge roller **14**.

The roller **13** is substantially oval in cross section as better shown by Figs. 4, 5 and 6 of the drawing, so that when the roller **14** is moved in one direction, the thicker portion of the roller will move closer to the frame **5** thereby tightening the curl on the roller.

Thus it will be seen that due to this construction, as the person wearing the curler moves her head during the sleeping period, the roller contacting with the pillow will cause the roller to rotate tightening the curl.

In using the curler, the sponge roller is dipped in the solution to absorb the necessary quantity of the liquid. The lock of hair is now rolled on the roller in the usual way to form the curl and the shaft **13** is forced between the bifurcations of the end **10** of the frame to grip the shaft in a manner as described, with the short ribs **11** disposed within the grooves **12**, locking the shaft against movement.

The pressure caused by rolling the lock of hair on the oval sponge roller to move the enlarged portions of the oval sponge roller to clamp the hair between the roller and bar **51'** resulting in the hair treating solution being forced from the sponge roller to cause the lock of hair to become saturated with the solution from the inside out, and will continue to supply the hair treating solution to the hair as pressure is directed to the roller.

It will also be noted that the tension created by the tendency of the curl to unwind, working against the natural tendency of the short ribs **11** disposed with in the spiral grooves **12** to hold the shaft **13** and roller against movement, will create pressure squeezing the lotion therefrom.

It will of course be understood that the frame **5** is constructed of semi-rigid material capable of slight flexing so that the shaft **13** may be readily and easily removed or replaced as desired.

Having thus described the invention—what is claimed is:

1. A hair curler comprising a substantially U-shaped body including ends and a bight, said bight forming a bar, bearings carried by said ends, a shaft mounted for rotation within said bearings, a roller constructed of absorbent material secured on said shaft adapted to be saturated with hair treating lotion, said roller operating in parallel spaced relation with said bar clamping hair therebetween, said roller being oval in cross section providing a thick portion and a thin portion, said shaft having spirally formed grooves adjacent to one end thereof, ribs extending from the bearing at one end of said bar cooperating in said grooves adapted upon flexing of said bight to extend the legs of said U-shaped body to rotate said roller in a direction to position said thick portion adjacent said bight in order to clamp a lock of hair between said roller and bar, squeezing the lotion from said roller into the lock of hair wrapped on said roller, treating the hair and forming a curl.

2. A hair curling device comprising a frame including a bar, a shaft rotatably mounted on said frame in spaced relation with said bar, a sponge roller having an oval cross section providing a relatively thick portion, secured on said shaft to rotate therewith in clamping a lock of hair saturated with hair treating lotion wound on said roller between the roller and bar in contact with said bar, and mechanism normally holding said shaft and roller against movement but adapted upon flexure of said frame to rotate said bar to juxtapose said thick portion to said bar for squeezing the lotion from said roller upon application of pressure to said roller saturating the lock of hair wound thereon.

3. A hair curling device comprising a frame including a bar, a shaft rotatably mounted within said frame in

parallel spaced relation with said bar, an absorbent roller, oval in cross section providing a thickened area, secured on said shaft adapted to be saurated with a hair treating lotion and on which a lock of hair is rolled, and mechanism for effecting rotation of said roller relative to said frame whereby said thickened area moves into clamping relation with said bar, squeezing lotion from the roller onto the lock of hair rolled thereon treating the lock of hair in forming a curl.

4. A hair curling device comprising a U-shaped frame including a bar, a shaft having one of its ends rotatably mounted at one of its ends on said frame, a bifurcated bearing on said frame, one end of said shaft being removably held within the furcations of said bearing, an absorbent roller, oval in cross section providing a thickened section, secured on said shaft, and said roller adapted to cooperate with the bar when said shaft is rotated to juxtapose said thickened area to said bar in clamping a lock of hair wound on said roller in forming a curl, squeezing lotion from said roller to the lock of hair as said roller is rotated.

5. A hair curling device comprising a U-shaped frame including a main bar, a shaft rotatably mounted on said frame, a roller, oval in cross section providing thickened roller area, secured on said shaft to rotate therewith, said roller being constructed of absorbent material adapted to contain hair treating lotion, mechanism at the end of said frame in contact with said shaft for effecting movement of said roller whereby said thickened area of said roller moves towards said bar in clamping relation therewith upon rotation of said shaft and roller by contact of said roller with the head of the wearer while the frame is held stationary.

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