Dec. 20, 1949 J. M. BEER 2,491,845

HAIR CURLER

Filed Jan. 28, 1947

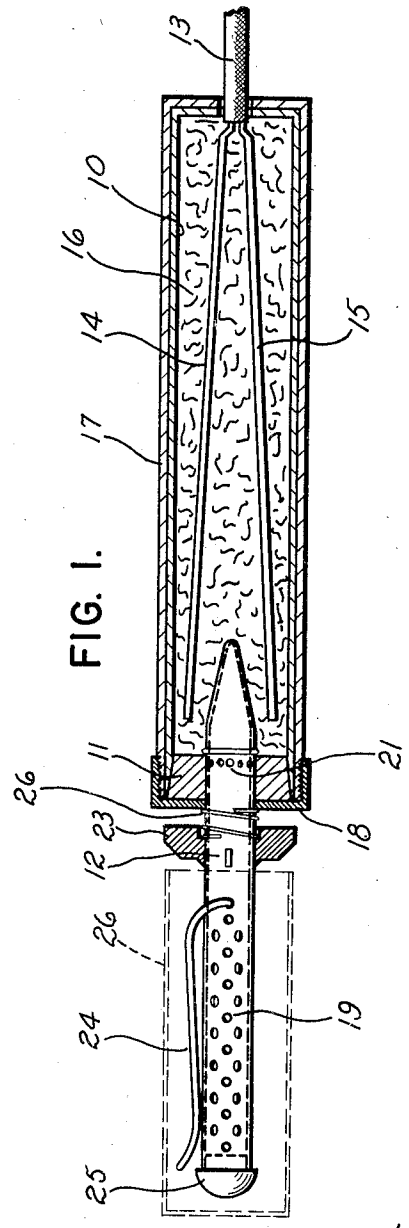


FIG. 1.

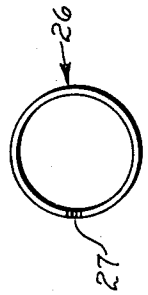


FIG. 3.

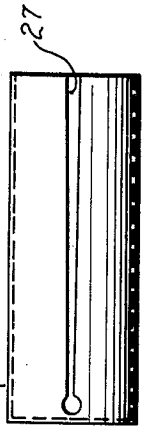


FIG. 2.

John M. Beer
Inventor

By McMorrow, Berman & Davidson
Attorneys

Patented Dec. 20, 1949

2,491,845

UNITED STATES PATENT OFFICE

2,491,845

HAIR CURLER

John M. Beer, Buffalo, N. Y.

Application January 28, 1947, Serial No. 724,752

2 Claims. (Cl. 132—33)

1

This invention relates to hair-curlers which are heated by electric resistance elements.

It is the object of the present invention to provide a hair-curling device with means by which a hair-retaining solution can be injected into the curled lock of hair.

It is another object of the invention to provide a hair-curling and vapor-applying device which has a valve forming a part of the tube on which the hair is curled and retained, and operable by axial adjustment of the tube.

According to the invention, a container is filled with absorbent wool, such as asbestos or copper wool, and with a solution which is to be injected into the hair. The container has electric heating elements extended into one end thereof for the purpose of vaporizing the solution to be applied to the hair. The opposite end of the container has a plug with a central opening through which extends a tube, the tube having valve holes normally aligned with the plug but adapted, as the tube is thrust inwardly, to depart from the plug to receive vapors produced within the container. A handle of heat-insulating material surrounds the container. The tube is perforated on its forward end and has a wire clamp by which a lock of hair which has been rolled up upon the tube over the perforation will be retained in place. On the tube adjacent to the handle is a plastic turning wheel by which the tube is rotated at the time the lock of hair is curled thereupon. Once the lock of hair has been retained on the tube it is covered with a protector cap so that vapors will be kept from the scalp. Between the turning-wheel and the end of the handle is a spring which normally maintains the tube so that its valve openings are closed by the plug. A ring on the tube keeps the tube from being ejected from the plug by the spring. This ring, as the tube is forced outwardly, engages with the inner face of the plug thereby to retain the tube. When vapors are to be directed to the hair, the tube is forced inwardly to expose the valve openings to the heated vapor within the container.

For a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which

Figure 1 is a longitudinal cross-sectional view taken through the container and handle and showing the tube in full lines entering the container.

2

Figure 2 is a side-elevational view of the protector cap.

Figure 3 is an end view of the cap.

Referring now to the figures, 10 is an elongated container having a plug 11 in its open end through which is extended a hollow tube 12. The opposite end of the container has an opening for receiving a conducting cable 13 from which extend heating elements 14 and 15. Surrounding these elements within the tube is a filling 16 of absorbent material, such as asbestos and copper wool, adapted to contain and absorb the hair-treating solution to be vaporized.

Surrounding the container 10 is a handle sleeve 17 receiving the cable 13 at one end and fixed to the container at the opposite end by an internally threaded cap 18.

The tube 12 has valve openings 21 adapted to be normally covered by the plug 11. In the opposite end of the tube, there are provided perforations 19 through which vapor is forced when the tube 12 is moved axially inwardly, to expose the valve openings 21 to the vapors within the container 10. On the tube 12 is a turning wheel 23 of plastic, which can be rotated by the thumb of the user to curl up a lock of hair upon the tube. A spring device 24 will retain the curled lock of hair upon the tube. A plastic plug 25 closes the outer end of the tube 12. When the hair has been finally curled upon the tube 12, a protector cap 26, Figs. 2 and 3, is slid over the curled hair. In the cap is a tapered slit 27 through which the end of the hair-lock, adjacent to the head, is received as the cap is slid over the lock of hair. This cap will protect the scalp from the heated vapors. When once in place the tube 12 may be thrust into the container to expose the valve openings 21 to allow them to receive the vapors of the hair-treating solution. The inward movement of the tube is against the action of a coiled spring 26 surrounding the tube between the turning-wheel 23 and the cap 18. Vapor will leave the perforations 19 and enter the lock of hair. When the hair has been sufficiently supplied with the vapor, the tube is released and is returned by the spring to a position where the valve openings 21 are again closed by the plug 11. The lock of hair is then removed and then a second lock of hair may be similarly treated.

Having now described my invention, I claim

1. A hair curling device, comprising a tubular container open at one end and adapted to hold absorbent material saturated with hair curling

solution to be vaporized, an electrical heating element arranged within the container for vaporizing the solution, a plug secured within the open end of the container and having a bore, a tubular member slidably mounted within the bore and extending axially outwardly beyond the plug and having its ends closed and adapted to be shifted axially in the bore, one end portion only of the tubular member projecting into the container, the tubular member being provided outwardly of the plug with perforations and in its portion disposed within the bore of the plug with valve apertures, a knob mounted upon the tubular member outwardly of the plug and forming a stop to limit the inward shifting of the tubular member, a spring arranged between the knob and plug to bias the tubular member axially outwardly so that the valve apertures remain normally covered by the bore, and resilient means carried by the tubular member adjacent the perforations to clamp the hair to the tubular member, the member being shiftable axially inwardly to uncover the valve apertures for admitting vapor into the tubular member to curl the hair.

2. A hair curling device, comprising a tubular container having ends, one end being provided with an axial bore, the container being adapted to hold material containing hair curling solution to be vaporized within the container, an electrical heating element arranged within the container for heating and vaporizing the solution, an elongated tubular member slidably mounted within the bore and extending axially outwardly of the adjacent end of the container, the tubular member having closed ends and being adapted to shift axially in the bore, the inner end portion only of the tubular member projecting inwardly of

the end having the bore, the tubular member being provided outwardly of the container with perforations and at its portion normally covered by the bore with valve apertures, a coil spring surrounding the tubular member and operatively connected to said member and end having the bore and serving to maintain the tubular member axially outwardly so that the valve apertures are covered by the bore, a leaf spring mounted upon the tubular member adjacent to the perforations for clamping the hair to the member, and detachable means surrounding the tubular member adjacent to the perforations for protecting the scalp from contact with the vapor, the tubular member being shiftable inwardly to uncover the valve apertures for admitting vapor into the member.

JOHN M. BEER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
374,831	Harrington	Dec. 13, 1887
1,204,987	Jacobs	Nov. 14, 1916
1,524,721	Sartory	Feb. 3, 1925
1,596,844	MacDonald	Aug. 17, 1926
1,604,165	Hubbell	Oct. 26, 1926
1,609,683	Graham	Dec. 7, 1926
1,638,896	Van Dijk	Aug. 16, 1927

FOREIGN PATENTS

Number	Country	Date
639,089	France	June 13, 1928