Nov. 16, 1937. E. O. FREDERICS 2,099,424

HAIR WAVING HEATER

Filed May 29, 1933

Fig. 1.

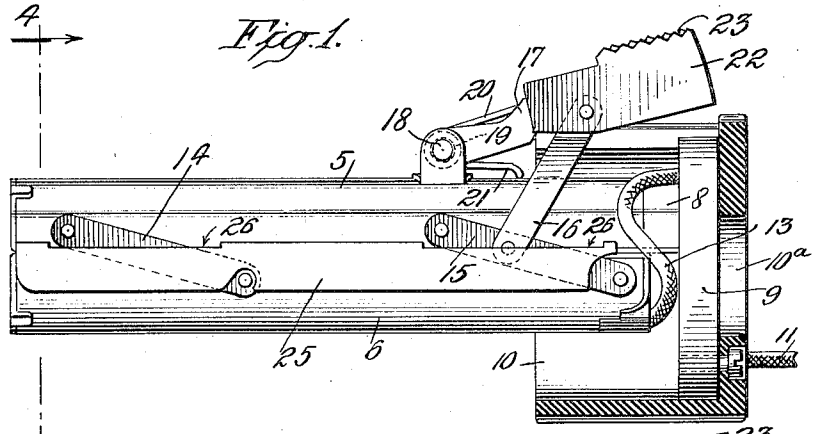


Fig. 2.

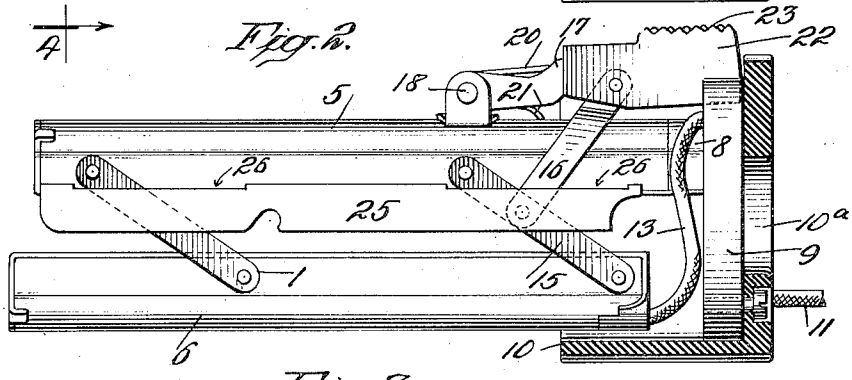


Fig. 3.

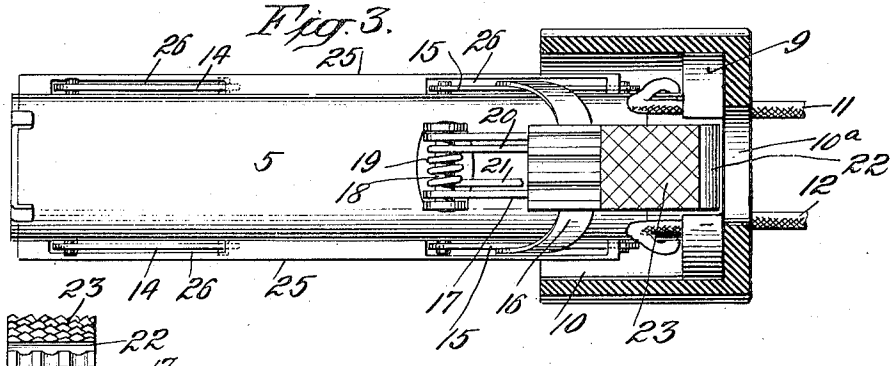
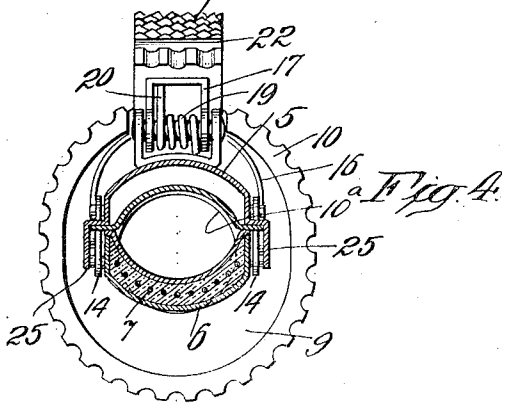


Fig. 4.



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HAIR WAVING HEATER

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Application May 29, 1933, Serial No. 673,344

9 Claims. (Cl. 132—36)

This invention relates to an improved heater for use in connection with the waving of hair, and more particularly to a heater adapted for employment in connection with imparting to the hair a permanent spiral wave.

Heaters heretofore used in the waving of hair by the spiral process, as compared to those used where a so-called Croquignole wave is desired, have commonly been hollow cylinders of such a fixed size that the wound body of hair generally has not filled the hollow space in the cylinder. This is due to the fact that these heaters have necessarily been made sufficiently large to accommodate readily various amounts of hair. The member on which the hair is wound as a consequence, usually extends at an angle to the axis of the cylinder, so that some surfaces of the coil of hair come closer to the source of heat than others and air spaces intervene between other portions of the hair and the heater. This has resulted in uneven heating of the hair.

An object of the present invention is to provide a heater for the purpose indicated, which shall have its heating elements constructed so as to be held in firm contact with the hair along the entire length of the heating surfaces, to provide for even heating of the whole coil of hair, and which, at the same time, shall be capable of being readily manipulated and applied to the hair. A further object is to provide such a heater formed of a plurality of heating elements adapted when in use to form a substantially closed chamber within which the coil of hair is retained while it is being heated, in the presence of steam, or other treating vapor or solution. A more specific object is to provide such a heater in which the heating surfaces are efficiently utilized, and in which the operating mechanism is located at one end of the heating surfaces, that is to say, at the opposite end of the heater from that adjacent the head, and in which the operating mechanism is combined with a heat insulating handle so that it may be held and operated by one hand.

A feature of the invention is the provision of a heater of this character which is simple and inexpensive to construct, wire and assemble. Other objects and advantages of the invention will become apparent as the description of one form of heater constructed in accordance with the invention proceeds.

Referring now to the accompanying drawing forming a part hereof:

Fig. 1 is a side elevation, partly in section, of one form of heater constructed in accordance with the invention.

Fig. 2 is a similar view but showing the heating elements in open position ready to receive a coil of hair.

Fig. 3 is a plan view, also partly in section, of the heater shown in Figs. 1 and 2, and

Fig. 4 is a section taken on the line 4—4 of Fig. 1 looking in the direction of the arrows.

In the drawing, the heater is shown as comprising a pair of opposed elements 5 and 6, each of which may include a metal casing of any suitable construction enclosing an electrical resistance or heating element 7, one of which is shown diagrammatically in Fig. 4. The two sections 5 and 6 preferably have their inner opposed faces concave so as to form a substantially cylindrical or elliptical chamber whose surfaces are adapted to engage a coil of hair. Each section may conveniently be formed of a pair of curved, stamped metal parts secured together in any suitable way, as by over-turned tabs, rivets or by welding, to produce a completely closed unit for housing the heating element 7. The upper member 5 may be provided with a suitable extension 8 secured, in any convenient manner, to an oval or circular disc or base plate 9 which is in turn secured to or mounted on the inner wall of an annular or oval-shaped, hollow handle 10 composed of heat insulating material such as wood, hard rubber, bakelite, or the like, and having an opening 10a generally aligned with the space between the heater elements. The plate 9 is preferably also formed of heat insulating material and has an opening aligned with the opening 10a. The handle 10 may advantageously be detachably connected with the plate 9 by means of screws or the like so as to afford ready access to elements concealed by the handle. Through the opening 10a one end of the rod on which the hair is wound may extend, and steam generated from the solution used in the process may escape. Extending into the handle 10 are leads 11 and 12 for carrying current to the heating elements, the latter being preferably connected in series, one lead being accordingly connected to the heating element in member 6, which is connected by wire 13 to the heating element in member 5, while the latter, in turn, is connected to the other lead.

Provision is made for spreading the heating elements 5 and 6 to permit the ready insertion between them of a coil of hair and also to accommodate the heater to coils of different sizes. The arrangement provided for moving the sections toward one another during the heating, is adapt-

ed to maintain their opposed faces in parallel relation. For this purpose, pairs of spaced links 14, 15 may be pivoted to the sections 5 and 6, and the ends of a yoke member 16 may be pivoted to arms 15 between their ends, the center of the yoke being pivotally connected to an operating lever 17 fulcrumed as at 18 upon the heating element 5 which, as explained before, is rigidly carried with the handle 9. In order constantly to urge the sections 5 and 6 toward one another, a suitable spring 19 may be provided, this being suitably coiled about the pivot 18 and having arms 20 and 21 urging the lever 17 outwardly from the member 5. The hollow handle 9 is so arranged and is of such size interiorly as to permit the proper relative motion of the section 6 with respect to the section 5, as shown in Fig. 2, and may extend over the ends of the heating elements sufficiently to permit the operator to get a good grip on the handle without danger of burning his hand through contact with the heating elements. The end of the lever 17 may be formed of heat insulating material 22 having a roughened thumb engaging surface 23, and the plate 9 may be cut away to permit the lever 17 to be depressed until the portion 22 or the yoke 16 abuts against the top of element 5, to limit the movement of the parts.

In order to aid in preventing the escape, at the sides of the device, of steam which may be generated in the course of the heating, suitable flanges 25 may be secured in any convenient manner to one of the heating elements and may be adapted to overlap the other heating element when the two are in operative positions. These flanges may conveniently be formed as an integral part of the top plate of the heating element 5. The laterally extending portions of the flanges 25 may be suitably cut away as shown at 26 to permit the links 14, 15 to extend therethrough. When the device is in use, it is desirable to employ some type of clip, of any suitable known construction, to tightly clamp the end of the usual pad around the tuft of hair which is coiled within the pad. This clip is applied at the end of the heater opposite the handle 9, and adjacent the head, to prevent steam from escaping from this end of the device, and burning the scalp. When the device is substantially filled by the coil of hair, any steam generated thus tends to remain in the device unless it finds its way out through opening 10.

When it is desired to open the jaws or, in other words, spread the heating elements, it is simply necessary to grip the handle 9 in one hand and place the thumb upon the surface 23, to depress the lever 17 and swing the heating element 6 from its position in Fig. 1 to its position in Fig. 2. Thereupon, the coil of hair to be heated may be inserted endwise in between the heating elements, and the thumb removed from the lever 17, thus permitting the heating elements to be pressed against the hair between them with a uniform pressure along their entire length.

There is thus provided a simple compact heater which admirably satisfies the various requirements while being simple and inexpensive to manufacture.

The terms and expressions which have been employed are used as terms of description and not of limitation, and there is no intention, in the use of such terms and expressions, of excluding any equivalents of the features shown and described, or portions thereof, but it is recognized that various modifications are possible within the scope of the invention claimed.

I claim:

1. A heater for use in imparting a spiral wave to hair, comprising a pair of opposed heating elements, a handle rigidly secured to one end of one of said elements, and means for moving the other element with respect to the element rigid with the handle while positively maintaining the same angular relation between them, said means including a device for yieldingly urging the elements toward one another.

2. A heater for use in imparting a spiral wave to hair, comprising a pair of opposed heating elements, a handle rigidly secured to one end of one of said elements, and means for moving the other element with respect to the element rigid with the handle while maintaining the same angular relation between them, said means including parallel linkage and a device for yieldingly urging the elements toward one another, and a pivoted thumb operable lever connected to said linkage.

3. A heater for use in imparting a spiral wave to hair, comprising a pair of opposed heating elements, a handle rigidly secured to one end of one of said elements, pivoted means for moving the other element with respect to the element rigid with the handle while maintaining said elements in parallel relation, said handle overlying and surrounding the adjacent ends of both heating elements, and means depressible within said handle for operating said pivoted means.

4. A heater of the character disclosed comprising a plurality of elongated heating elements arranged to form a tubular enclosure, a handle carried by said elements and enclosing one end thereof, and manually operable means associated with said handle for moving all portions of one of said elements bodily to substantially the same extent with relation to another and to said handle while positively maintaining the same angular relation between the elements.

5. A heater of the character disclosed comprising a plurality of elongated heating elements arranged to form a tubular enclosure, a handle carried by said elements, said handle having an aperture in line with said enclosure to provide for endwise extension of a coil of hair inserted between said heating elements, and manually operable means associated with said handle for moving all portions of one of said elements bodily to substantially the same extent with relation to another and to said handle while positively maintaining the same angular relation between the elements.

6. A heater of the character disclosed comprising a plurality of elongated heating elements arranged to form a tubular enclosure, means for yieldingly urging said elements together, and means for spreading said elements throughout their length while positively maintaining them in the same angular relation to provide for endwise insertion of a coil of hair to be heated.

7. A heater of the character disclosed comprising a plurality of elongated heating elements arranged to form a tubular enclosure, a handle carried by said elements, pivoted, manually operable means associated with said handle for moving one of said elements bodily with relation to another and to said handle while maintaining the same angular relation between the elements, and means along the longitudinal edges of said elements for closing off the gap between the adjacent edges thereof when they are held spaced apart.

8. A heater of the character disclosed comprising a plurality of elongated heating elements arranged to form a tubular enclosure, a handle carried by said elements, pivoted, manually operable means associated with said handle for moving one of said elements bodily with relation to another and to said handle while maintaining the same angular relation between the elements, and extensions at the sides of one of said elements for closing off the gap between the adjacent longitudinal edges thereof when they are held spaced apart.

9. A heater for use in imparting a spiral wave to hair, comprising a pair of opposed heating elements, a handle rigidly secured to one end of one of said elements, and means including parallel links each pivotally connected to each of said heating elements at fixed points for moving the other element with respect to the element connected to the handle and for maintaining said elements parallel to each other during such movement.

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