Aug. 18, 1936. W. N. VANATTA 2,051,231

APPARATUS FOR CURLING HAIR

Filed May 24, 1935

Fig. 1

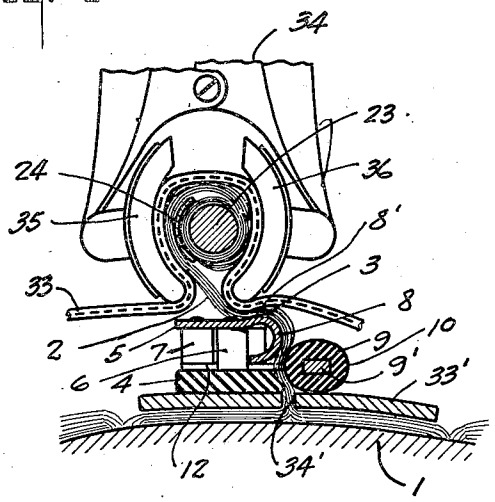


Fig. 2

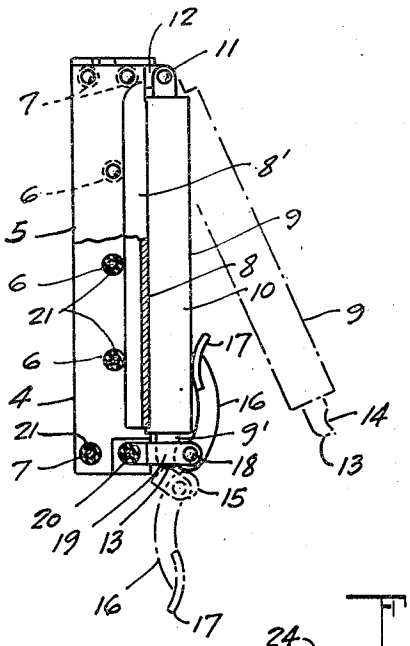


Fig. 6

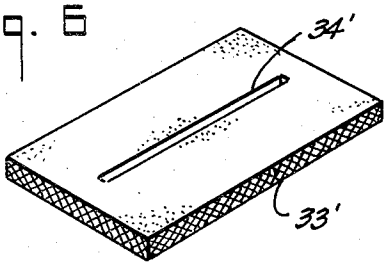


Fig. 5

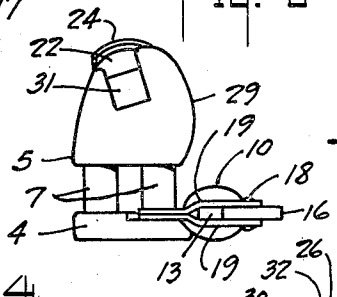


Fig. 3

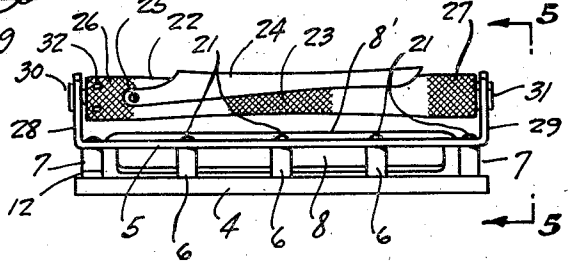
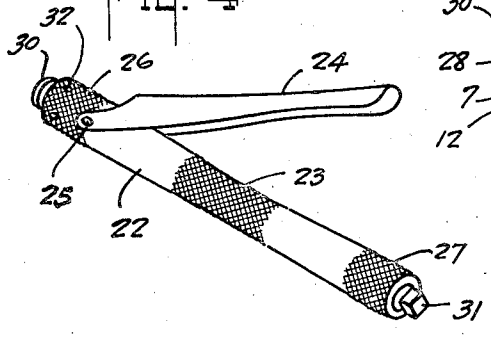


Fig. 4



INVENTOR
Willis N. Vanatta
BY John Flam
ATTORNEY

Patented Aug. 18, 1936 2,051,231

UNITED STATES PATENT OFFICE

2,051,231

APPARATUS FOR CURLING HAIR

Willis N. Vanatta, Ontario, Calif.

Application May 24, 1935, Serial No. 23,277

4 Claims. (Cl. 132—36)

This invention relates to "permanent waving" of hair by the aid of heat; and more particularly to apparatus for use in connection with such methods.

This application is a continuation in part of a prior application, filed October 24, 1934, in the name of Willis N. Vanatta, under Serial No. 749,789, and entitled: "Apparatus for curling hair".

It is now common to utilize in permanent hair waving, a protector that serves the dual purpose of clamping the strand of hair to be curled, adjacent the scalp, as well as of shielding or protecting the scalp from the heat generated by the heaters.

It is also well-known to provide a curling rod upon which the strand of hair is so wound thereon, being held by the protector on that side thereof that is opposite to the scalp. Then a pad carrying a suitable solution may be placed over the wound hair on the curling rod. The application of electric heat can then be accomplished, as by the aid of a pair of electrically heated jaws embracing the pad placed over the hair.

It is one of the objects of this invention to improve in general, apparatus of this character.

It is another object of this invention to make it possible to maintain the scalp at a more comfortable temperature during the application of heat, and without the necessity of creating a cooling draft upon the head.

It is still another object of this invention to provide a protector so arranged that air can freely circulate past the parts of the clamp, thereby ensuring that the scalp will not be subjected to any uncomfortable degree of heat.

This invention possesses many other advantages, and has other objects which may be made more easily apparent from a consideration of one embodiment of the invention. For this purpose there is shown a form in the drawing accompanying and forming part of the present specification. This form shall now be described in detail, illustrating the general principles of the invention; but it is to be understood that this detailed description is not to be taken in a limiting sense, since the scope of the invention is best defined by the appended claims.

Referring to the drawing:

Figure 1 is a view, mainly in section, of apparatus incorporating the invention, shown as in use;

Fig. 2 is a top plan view, partly broken away, of a protector clamp incorporating the invention;

Fig. 3 is a side elevation thereof;

Fig. 4 is a pictorial view of a curling rod utilized with the invention;

Fig. 5 is an end elevation of the protector; and

Fig. 6 is a pictorial view of a protector felt pad that may be used in connection with the apparatus.

The scalp 1 of the user is indicated in Fig. 1. A strand of hair 2 is shown as being in the process of treatment. This strand of hair is clamped by a protector 3, adjacent the roots of the hair. A felt pad 33' (Figs. 1 and 6) can be interposed between the protector 3 and scalp 1 to provide additional shielding. This pad can have a slit 34' through which the strand 2 passes. The length of the slit 34' also serves to define the width of the strand 2 treated in an operation.

The construction of the clamp is most clearly illustrated in Figs. 1, 2, 3 and 5.

The protector includes a lower bar 4 made from heat insulation material, such as a phenolic condensation product, or other material that is heat resistant. It serves to shield the scalp 1 from the source of heat utilized in curling the hair. Cooperating with the bar 4 is another bar 5. This bar 5, which is made from metal, is joined to bar 4 but in widely spaced parallel relation thereto, as by a series of intermediate posts 6 and end posts 7, which posts are preferably all made from insulation material. Pins or rivets 21 can pass through these posts. The separation between bars 4 and 5 is considerably greater than the thickness of either of these bars; and since the posts 6 and 7 are spaced apart, cooling air can easily circulate between the posts and in every direction between the bars. These features are of considerable importance, as by their aid, it is assured that the clamp can be kept cool.

One edge of bar 5 is turned over toward bar 4 to form a rounded portion 8. This rounded portion cooperates with the corresponding edge of bar 4 to form a groove-like space past which the strand of hair 2 is drawn. Furthermore, the portion 8 has a lower edge spaced from bar 4, to leave an unimpeded passageway for air past this lower edge. The portion 8 is formed with a convex outer surface rising to a height slightly above the top surface of that part of bar 5 which rests on posts 6 and 7, as shown most clearly in Figs. 1 and 3 by reference character 8'.

The strand is held in position in the groove-like space between the two bars 4 and 5, by the aid of another clamping element 9. This clamping element comprises a metallic bar 9' overlaid with a yielding sleeve 10, as of soft rubber. The strand 2 is thus held tightly between the sleeve

10 and the adjacent portions of bars 4 and 5. The rubber sleeve 10 serves further to shield or protect the scalp 1 from transmission of heat to the scalp 1 from the source of heat utilized in the process.

The manner in which the clamping element 9 is supported and held in open or closed position can best be described in connection with Figs. 2, 3, 4 and 5. The bar 9' at one end carries a clevis 11, pivoted to the end of a flat strip 12 held between the end spacer posts 7 and bar 4. The free end 13 of bar 9' is flattened and has a slight concavity 14 for coaction with a cam surface 15 on a catch member 16. This catch member 16 is provided with a finger grip 17. It is pivoted as by the aid of a pin 18 between a pair of spaced bars or links 19. The inner end of the spaced bars or links 19 are pivoted on a pin 20 passing through the right hand spacer post 7 as viewed in Figs. 2 and 5.

The open position of clamp 3 is illustrated in dot and dash lines in Fig. 2. In this position the bars 19 have been retracted by rotating them about pin 20 in a clockwise direction. In order to close the clamp, the end 13 of bar 9' is passed between the bars 19, and catch member 16 is rotated in a counterclockwise direction so as to urge the cam surface 15 into the cavity 14.

The protector and clamp 3 also serves to support the curler rod 22 after the strand of hair 2 is wound thereon. This curler rod is shown to best advantage in Fig. 4. It includes a metal member having a reduced center portion 23 and a hinged hair retaining member 24. The inner surface of member 24 is curved to correspond generally with the contour of the curler rod 22. Furthermore, member 24 can be hinged as by a pin 25 adjacent one end of the rod 22. In using the curler rod, the free end of the strand 2 is placed between the portion 23 of rod 22 and member 24. Then the curler rod is held in the hands and turned so as to wind the hair 2 over the rod 22 and member 24. To facilitate this winding operation, roughened or knurled surfaces 26 and 27 are provided adjacent the extremity of rod 22.

After the strand of hair 2 is wound in the rod 22 in this manner, it can be held in place by the aid of the upright portions 28 and 29 of bar 5. These upright portions are provided with appropriate slots cooperating respectively with the round end 30 of the rod 22 and the square portion 31 of the rod 22. As is now well understood in the art, the square portion 31 is connected to rod 22 through a one way clutch arrangement, whereby after the curler rod 22 is placed in position as shown in Fig. 3, the strand of hair 2 can be wound more tightly around the rod 22 as by placing an appropriate instrument into the apertures 32 located adjacent one end of the rod 22, and turning the rod 22 with it, while portion 31 is stationary. The slot accommodating the square portion 31 is just wide enough to permit the entry of the square portion 31, and to prevent it from turning when rod 22 is rotated by the instrument entering aperture 32.

As shown most clearly in Fig. 1, after this winding operation is completed, an absorbent pad 33 carrying appropriate chemicals can be placed over the wound hair. Thereafter an electric heater device 34 can be utilized, having a pair of heating jaws 35 and 36, cooperating to hold the pad 33 securely against the wound hair. These jaws 35 and 36 are hollow and appropriate electrical heating elements are disposed therein to provide the necessary degree of heat.

After a suitable period, the heater 34 can be removed and the strand 2 can be unwound.

The intensity of heat provided by the heater 34 is such that the scalp 1 must be shielded therefrom. This is accomplished as stated heretofore by the clamping mechanism 3 and felt 33'. By utilizing a metallic bar 5 spaced at all points from the heat insulation bar 4, there is a greater assurance that no uncomfortable heating can occur. This is due to the provision of a wide air and clear space between the bars 4 and 5. Furthermore, there is a better opportunity for transfer of heat through other channels than through the scalp 1 by this construction. The scalp 1 is kept comfortable and there is no necessity of directing a blast of air between the protector structure 3 and the scalp 1.

Furthermore, the provision of knurled surfaces 26 and 27 ensures against slipping of the rod 22 during the hair winding operation.

I claim:

1. A protector for use in connection with a source of heat, having a pair of clamping members, one of said clamping members comprising a pair of bars, forming a groove between them for cooperating with the other clamping member, and one of said bars being made from heat insulation material, and the other bar being made from metal, and widely spaced from the other bar, and curved to form an exterior convex surface along a side of the bar, the lower edge of the curved portion being spaced from the insulation bar.

2. A protector for use in connection with a source of heat, having a pair of clamping members, one of said clamping members comprising a pair of bars, forming a groove between them for cooperating with the other clamping member, one of said bars being made from heat insulation material, and the other bar being made from metal and having a rounded convex side, forming an arcuate clamping surface contacting with the hair adjacent the scalp, said bars being entirely out of contact with each other, and spacer posts for widely spacing said bars from each other.

3. A protector for the scalp and used in connection with a source of heat; said protector having a pair of members between which the hair is adapted to be clamped, one of said members comprising a bar made from thin metallic material and having a turned over rounded side having an exterior convex surface adapted to cooperate with the other clamping member, and a bar of heat insulation material extending parallel to said metal bar but widely spaced from said bar and next to said side, to define a groove-like space for cooperation with the other clamping member.

4. In a protector structure, a pair of members between which the hair is adapted to be clamped, one of said members comprising a pair of bars, one of said bars being formed from thin metallic material and spaced from the other bar at all points, said metal bar having a depending side that is exteriorly convex and projecting toward the other bar, the lower edge of said side being spaced from the other bar, and the convex surface rising slightly above the flat part of said metal bar.

WILLIS N. VANATTA.