Dec. 20, 1949 E. TASHO 2,491,939

HAIR WAVING APPLIANCE

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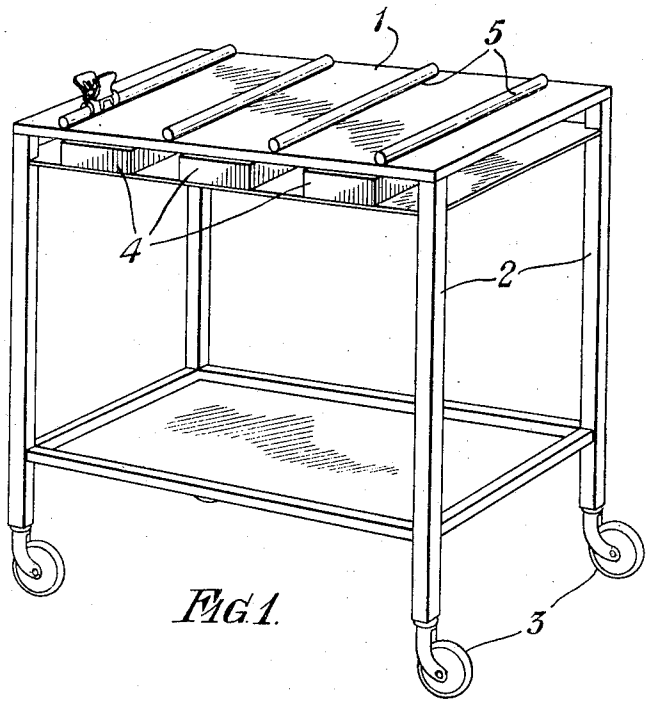

FIG. 1.

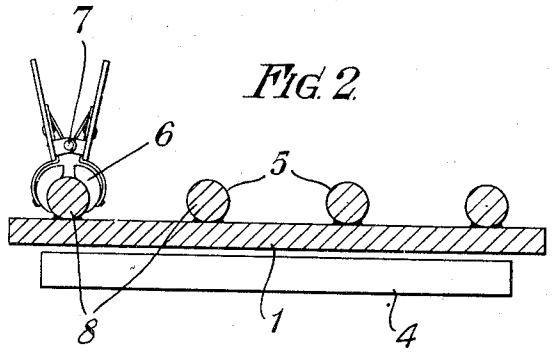

FIG. 2.

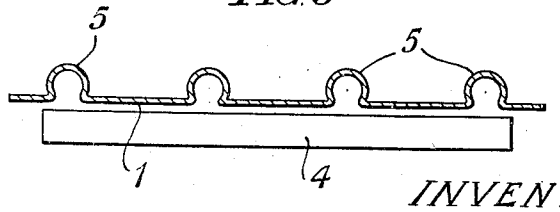

FIG. 3.

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FIG. 4.

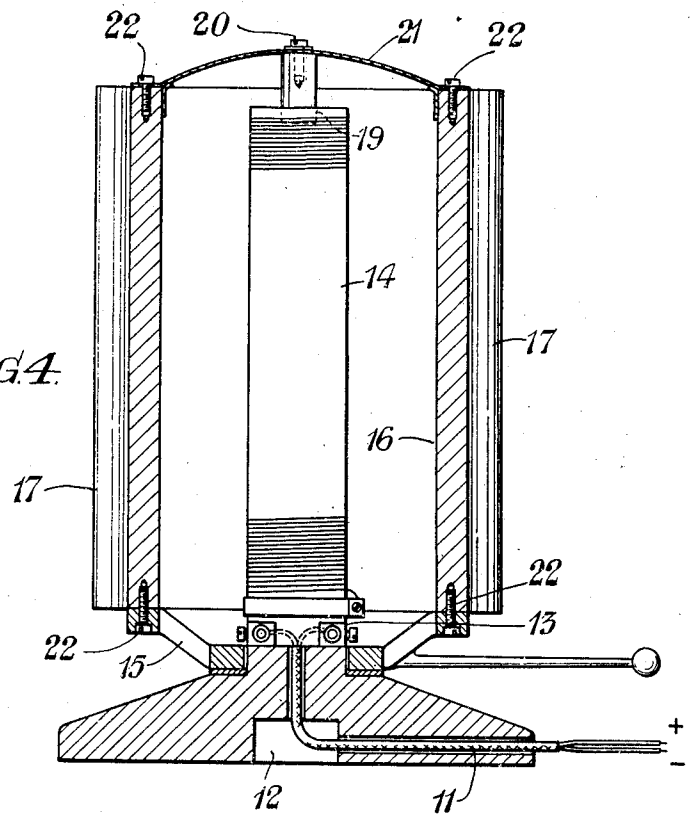


FIG. 5

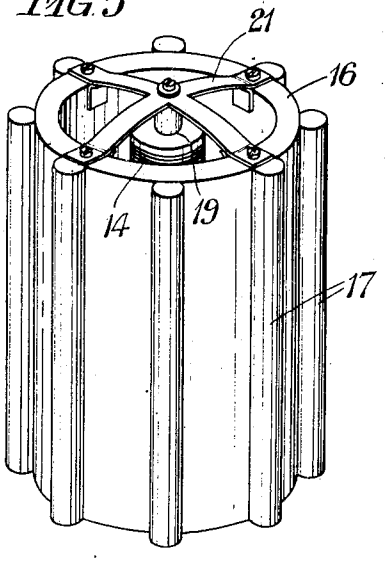
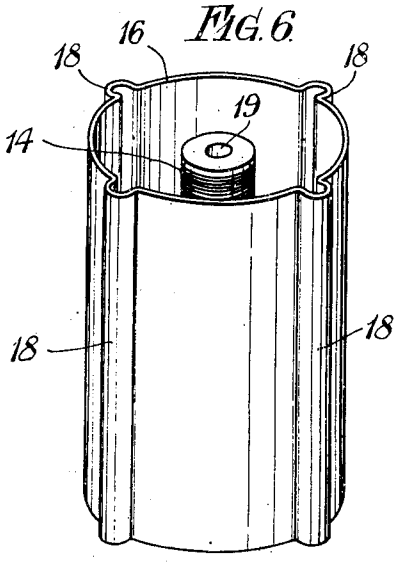


FIG. 6.



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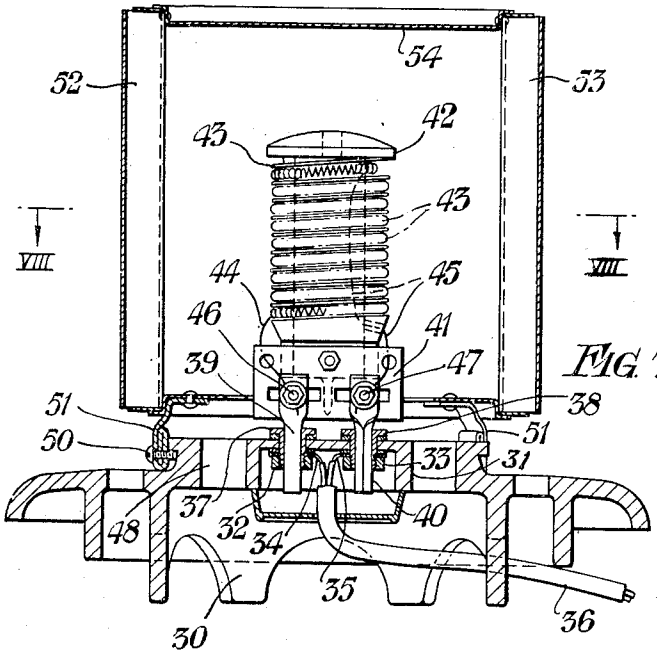

FIG. 7.

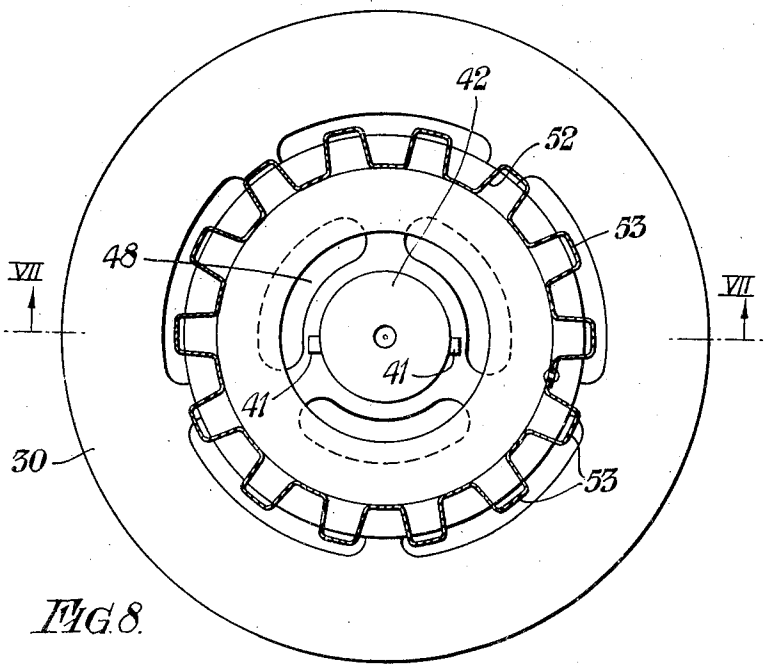

FIG. 8.

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UNITED STATES PATENT OFFICE

2,491,939

HAIR-WAVING APPLIANCE

Ernest Tasho, Hatfield, England

Application April 1, 1948, Serial No. 18,458
In Great Britain April 3, 1947

1 Claim. (Cl. 219—24)

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This invention relates to permanent hair waving appliances and is particularly concerned with appliances of the kind wherein a number of heater clips is employed and each of which is preheated to the required temperature and then clamped about a tress of hair treated with a waving re-agent and wound on to a curler. The winding of the hair upon the curler may be of the spiral type in which the tress of hair is wound on to the curler from root to tip in the form of a helix, or the winding may be of the point or Croquignole type in which the tress of hair is wound on to the curler from tips to roots so that the tips are innermost. Alternatively, any other form of winding may be used.

The means for preheating the heater clips normally comprises a multiplicity of tubes or hollow rods which are heated internally and about which the clips are engaged. The disadvantage of such an arrangement is that the clips placed on one of the tubes or rods are not necessarily heated to the same temperature as clips placed on other rods with the result that in use some clips become cold more quickly than others when clamped about the tress of hair on a curler. Due to this reason the processing period of certain of the tresses varies as regards the processing period of other tresses so that all the tresses are not processed to the same degree.

The object of the present invention is to provide a method of and means for ensuring that all the heater clips are uniformly heated so that there is no variation between the processing periods of the various tresses.

Broadly, according to the present invention, the method of heating clips of hair waving appliances of the kind referred to consists in resting the clips upon a hot plate or engaging them with suitable projections on the plate in such a manner that the multiplicity of clips are all uniformly heated.

The means provided by the invention for carrying the above method into effect for uniformly heating the clips comprises a single hot plate capable of receiving at one time at least all the clips that are necessary for the processing of the tresses formed from one head of hair.

In its simplest form the hot plate may be any conventional form of hot plate having a smooth surface upon which the clips are merely rested or, the surface of the plate may be such that it offers rib-like projections upon which the clips may be clamped. In this respect the rib-like projections may be obtained by corrugating the heating surface or by fitting a number of parallel and equidistantly spaced rods to a hot plate having a smooth surface.

The hot plate may be heated in any suitable manner either electrically by means of electric heating elements associated with the hot plate

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or by means of gas in which case a suitable gas jet or jets or oil burners etc. is or are fitted in close proximity to the hot plate. Alternatively the hot plate may be made hollow and steam heated.

The heating of the hot plate may be easily controlled by a thermostat adapted for use in conjunction with the type of heating employed so that all the clips are heated to a predetermined degree and there is no possibility of the clips being heated to different degrees as may occur if they were distributed upon a number of heated rods or tubes which were individually heated.

For convenience in use it may be preferred to support the hot plate on a trolley or to incorporate the hot plate in design of a trolley so that the latter can be easily wheeled into a position accessible to the hairdresser. If desired, however, the apparatus may be made portable and carried about in a suitable case.

The heating plate may be provided with a heating plate of cylindrical shape provided on its outer surface with longitudinal ribs with which the clips can be engaged.

The ribs may be formed integral with the cylinder by forming outwardly directed flutings therein.

Alternatively the ribs may be formed by bars, rods or tubes of any suitable cross section so as to obtain maximum contact with the clips.

The cylinder is adapted to be mounted vertically around a heating element mounted vertically on a suitable support.

The heating of the cylinder may be effected electrically or by a gas or oil burner.

In order that the invention may be easily understood and readily carried into effect reference will now be made to the accompanying drawings which illustrate diagrammatically various embodiments of the invention by way of example.

In the drawings:

Fig. 1 is a perspective view showing the hot plate incorporated in the design of a trolley, and

Figs. 2 and 3 are two detail views, drawn to a larger scale showing two ways in which the hot plate may be formed with rib-like projections upon which the clips may be clamped.

Fig. 4 is a vertical section of a second form of heating appliance for hair waving clips.

Fig. 5 is a perspective view of the upper portion of Fig. 4.

Fig. 6 is a view similar to Fig. 5 of a modified form of construction.

Fig. 7 shows a sectional elevation of a further form of heating appliance for hair waving clips.

Fig. 8 is a section on the line VIII—VIII of Fig. 7.

Referring firstly to Figure 1, the hot plate 1 constitutes the top of the trolley and is supported

at its four corners by legs 2 to the lower ends of which are fitted swivel wheels 3. Supported below the hot plate 1 is or are one or more heating elements 4 which may be electric heating elements or alternatively gas jets, oil burners or primus stove type of heaters. If desired, however, the hot plate 1 may be steam heated in which case it is made hollow and is adapted to be connected to a source of steam supply.

The upper surface of the hot plate may be made entirely smooth so that the heating clips are simply rested on it or, as shown, the said surface may comprise a number of parallel and equidistantly spaced rib-like projections 5 which can be gripped and embraced by the jaws 6 of the clip 7. In view of the small scale of Fig. 1 only a single clip is shown in position so as to leave the ribs exposed.

The rib-like projections 5 may be formed in any suitable manner and as shown in Fig. 2 may comprise rods 8 which are spot welded or otherwise secured to the plate 1 so that in effect they become an integral part of the plate. Or, as shown in Fig. 3, the rib-like projections may be obtained by corrugating the hot plate 1.

In all instances, whether the hot plate 1 be electrically, gas or steam heated, a thermostat may be incorporated for controlling the heating means when the temperature of the plate has reached a predetermined maximum whereby overheating of the clips is avoided. It will be appreciated that as all the clips are heated by a hot plate which is common to them all there will be no variation in the temperature between any of them, and they will all be uniformly heated which is an essential requisite in permanent waving.

The hot plate constituting the heating means is inexpensive to manufacture, easy to maintain and repair and requires little adaptation to render it suitable for electric, gas or steam heating, or any other form of heating.

The hot plate may be a standard hot plate already fitted with electric heating elements and in this respect temperature control may be effected by what is known to the trade as a Simmerstat switch or similar device.

In addition the working temperature of the hot plate can be varied as desired. In cases where the clips 7 are simply rested on the hot plate 1 then the surface of each clip which contacts the plate may be suitably machined so as to present the maximum area of contact. Although the projections 5 have been described as being parallel and equidistantly spaced they may of course be arranged in any suitable manner.

Referring to Figs. 4 and 5, a base 11 is provided with a contact box 12 for connection to a suitable source of current such as electric mains. On the support is provided a socket 13 into which is fitted an electric resistance heating unit 14.

On the base 11 is fitted a spider 15 for supporting a cylindrical hot plate 16 provided with spaced rib-like projections. As shown in Fig. 5 the projections are in the form of rods 17 which are spot-welded or otherwise secured to the cylinder 16, whereas in Fig. 6 the projections are formed by flutings 18 in the cylinder 16 and are thus integral therewith.

At its upper end the heating unit 14 is provided with a recess 19 for the reception of a central pivot 20 of a spider 21 of which the ends of the arms are secured to the upper end of the cylinder 16.

The spiders 15, 21 are preferably secured to the opposite ends of the cylinder 16 by screws 22'.

When the heating element 14 extends the full height of the cylinder 16 there is generally a difference in temperature at the upper end thereof as compared with the lower end thereof.

This has been found to be of advantage as all clips arranged in the same horizontal plane are heated substantially to the same temperature.

Instead of heating the appliance as above described it will be understood that it may also be heated by a gas or oil burner.

Referring now to Figs. 7 and 8 a base 30 is provided with a contact box 31 having two terminals 32, 33 by means of which the wires 34, 35 of a conductor 36 are connected to a source of current. On the support are provided sockets 37, 38 with which engage pins 39, 40 provided on a block 41 of insulating material supporting a heating unit 42 around which is coiled a heating resistance 43. The ends 44, 45 of the heating resistance are connected to terminals 46, 47 on the pins 39, 40.

The base 30 is provided with openings 48 for the admission of air.

The base 30 has a projecting rim 49 with which engage screws 50 provided in lugs 51 secured to the lower end of a cylindrical hot plate 52. The cylinder 52 is provided with a number of spaced substantially rectangular ribs 53. Clips 6, such as shown in Fig. 2 are adapted to be engaged with the ribs for the purpose of being heated.

The upper end of the cylinder 52 is closed by a top 54.

What I claim as my invention and desire to secure by Letters Patent is:

An apparatus for heating hair waving clips comprising a base having an upper rim, a circular support concentric with said rim and spaced therefrom to form an air opening, sockets for receiving the plug of an electric attachment fixed in said circular support, each socket having a connection for a source of electric current, an electric heating element having a base and prongs projecting downwardly from said base and removably engageable with said sockets, a cylindrical hot plate having a base connected to said upper rim and spaced therefrom, said latter base having a central opening to accommodate said heating element; said hot plate surrounding said heating element in substantially concentric relation thereto and being fluted rib-like axially around the entire body thereof, the walls of each rib-like flute being open to said heating element, whereby the walls of each flute are heated uniformly by said centrally disposed heating element.

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