Sept. 22, 1936. V. J. GENTILE 2,055,099

PERMANENT WAVING SACHET

Filed June 6, 1934

Fig. 1

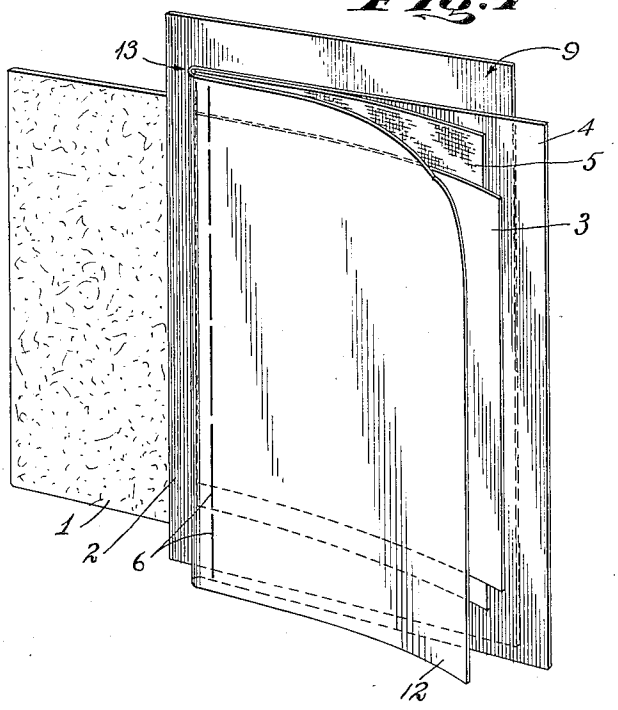


Fig. 2



Fig. 4

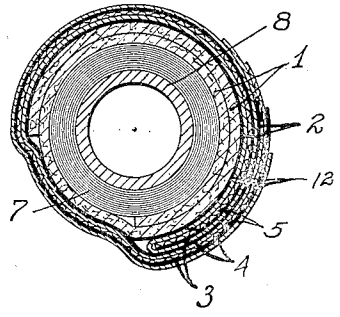
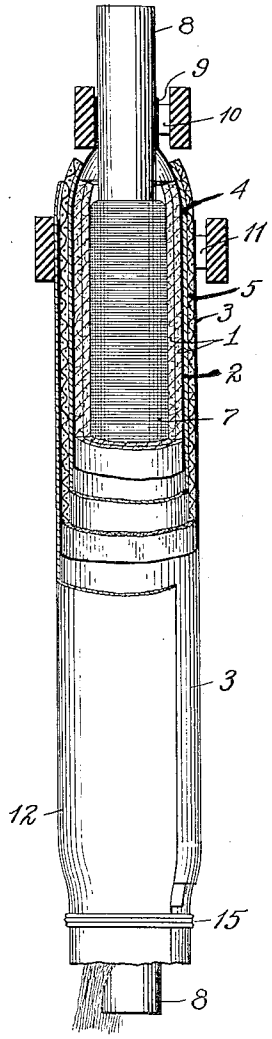


Fig. 3



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PERMANENT WAVING SACHET

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2 Claims. (Cl. 219—24)

My invention relates to sachets, so-called, used for the permanent waving of hair.

In order to apply the heat to the hair tress uniformly (and sometimes for other reasons also), it is preferable that the heat be developed in a continuous or substantially continuous sheet of material wrapped closely around the tress, rather than at a single locality at one side of the tress or at several spaced localities distributed around or lengthwise of the tress as is the case where the heat is produced by passing an electric current through a resistance wire. Heretofore this uniform heat distribution has been accomplished by placing a metal foil at each side of the pad carrying the hair lotion, these serving as electrodes whereby the electric heating current is passed through the lotion and the pad and thereby the heat is developed within the pad. It has been found however that in some instances the latter sachets discolor the hair. Furthermore, since the lotion in the lotion pad is itself used as the moisture conducting the current between the electrodes, I believe that for the best results both the lotion and the lotion pad must be selected and designed with some view to the electrical and thermal effects as well as with a view to those effects on the hair which are the primary purposes of the lotion.

I have discovered, I believe, that the discoloration of the hair sometimes experienced with these sachets is due to decomposition of the lotion chemicals by the electric current and subsequent chemical action between reaction products and some material of the hair.

By my invention I provide for uniform heat distribution by producing the heat in a sheet wrapped closely around the tress as before, but at the same time I eliminate the objections and difficulties indicated. That is to say, the arrangement is such that the lotion can not be decomposed by the electrical action of the current, and consequently the hair can not be discolored by the products of such chemical decomposition; the lotion and lotion pad can be selected with the sole view to the lotion effect desired on the hair; and the heat-producer can be selected and designed with the sole view to the electrical and thermal effects desired. Furthermore the temperature achieved by one of my sachets is subject to control independently of the quantity and kind of lotion employed on the hair, and both the lotion carrier and the source of heat can be brought into close proximity to the hair tress regardless of whether the tress be large or small.

The accompanying drawing illustrates a preferred form of my invention. Fig. 1 is a perspective of my sachet, its elements being somewhat spread apart to show them more clearly. Fig. 2 is a transverse section of the same. Fig. 3, partly in section, illustrates the sachet in use. Fig. 4 is a transverse section of the showing of Fig. 3.

Primarily my arrangement illustrated includes a pair of plate-like electrodes 2 and 3 and moisture and lotion carrying means, all of which are sufficiently flexible to permit the same to be wrapped around a tress 7 of hair wound on a rod or tube 8, called a curler, with a portion of said means (the heat-source or sheet-like heat-producer) located between said electrodes to complete an electrical circuit from electrode to electrode and a portion, carrying hair lotion, located externally of the electrodes when the members are wrapped about the tress (Figs. 3 and 4). Preferably the lotion carrier and the moisture carrier are separate and distinct elements, and the lotion carrier 1, electrodes 2 and 3, and the moisture carrier 4—5 are preferably fastened together into a unit by stitching 6 along one edge of each of the members (Figs. 1 and 2).

Obviously for sanitary or other reasons cloth or other material can be applied outside the curler or outside the wound tress or both, but no such wrappings are here shown since the use of such wrappings is optional and forms no part of this invention. The lotion pad or carrier 1 is disposed, preferably, on the hair side of the inner electrode 2 (Fig. 4) rather than outside the outer electrode 3 where perforations through the heating system 2, 3, 4—5 would be necessary presumably to give the lotion or its vapors access to the hair and thus lotion or its vapors would be brought into the path of the current. The lotion pad 1 may be of any length, width and thickness to suit the situation, and can be made of any material best suiting it to carrying and applying the desired lotion, say of felt. The lotion being entirely outside the current path, the lotion too can be selected without reference to the possible effect of electricity upon it or its effect as a heat-producer when subjected to electric current. The electrodes 2 and 3 are made usually of a metal foil. The inner electrode 2 is usually made of somewhat greater length than the lotion pad 1, and usually of at least sufficient width to wrap completely around and thus completely envelope the wound tress; for certainty, or in order to provide a wider path for the current between the two electrodes than is obtained by a single wrapping (and thus secure a greater heat production),

the inner foil may be wider than this (Fig. 4). The outer electrode 3 may be of about the same length as the inner electrode, and of sufficient width to about totally enclose the inner electrode when rolled up with it about the tress (Fig. 4). One or both the electrodes may be extended beyond these lengths or widths, or in both length and width, however, to permit ready attachment of electric conductors leading to them from the source of current. Thus to permit attachment of the conductors to the electrodes, I usually extend, in effect, a tab 9 lengthwise from the inner electrode 2; as shown this extension may be the full width of the inner electrode (Fig. 1). Also I usually make the connection to the outer electrode 3 at the outer edge of the latter, leaving this exposed for this purpose; in effect, a tab extending the full length of the outer electrode (Figs. 3 and 4). A releasable clamp carrying a conducting member 10 will then serve to make the electrical connection to the inner electrode 2 through the extension 9 while another carrying a conducting member 11 will serve for the outer electrode 3. The sheet-like heat-producer carrier 4—5 for the moisture which completes the circuit and causes the production of heat, is disposed between the two electrodes 2 and 3 (Figs. 1 and 2). Unless the electrodes are otherwise insulated from each other at their edges, this carrier 4—5, or a member of it, should have a length and a width at least equal to the length and width of the smaller of the two electrodes; for certainty I usually make it of greater length and width. Usually too I extend its lower end sufficiently to permit sealing of the lower end of the sachet from the scalp as hereafter described. Various materials are suitable for this moisture carrier, as will be understood; for example, paper 4 or cloth 5; for a paper, I prefer one that maintains its unity despite wetting and thus serves properly to keep the electrodes from making a metal to metal contact, such as a parchment paper. Usually I prefer a cloth carrier or the inclusion of a cloth in the carrier however, in order that that carrier may absorb the proper amount of moisture and absorb it quickly. Usually I employ both a paper 4 and a cloth 5 in order to obtain simultaneously complete assurance against short-circuiting, quick absorption and any desired absorption capacity. For the moisture or liquid for this carrier, any one of various known liquids and electrolytes can be used. Some will produce higher temperatures than others, so that substantially any desired temperatures can be achieved by choosing a suitable electrolyte. If the electrodes are of such width as to encircle the tress for more than one complete turn (Fig. 4) it is necessary of course to insulate the outer surface of the outer electrode 3 from the inner surface of the inner electrode 2 where these overlap. While this might be done by so locating and/or winding the lotion carrier 1 that the latter lies between the two electrodes at the overlap, I prefer to keep the lotion carrier out of the current path even here where it would be separated from the hair. Also I believe it better not to risk the chance of a short circuit by improper winding. Preferably therefore I provide for positive insulation between such two overlapping surfaces by providing insulation to accompany one of these surfaces and this may be made of an absorbent material and given moisture so as to take part in the heat production. It may have the form of a paper sheet 12 disposed outside the outer electrode 3 (Figs. 1 and 2) and of appropriate length and width. As with respect to 4—5, I usually extend the lower end of such a sheet for sealing (Figs. 1 and 3). Preferably such a sheet 12 is connected to the main moisture carrier 4—5 at the stitched edge to permit of ready assembly of the elements with assurance that the two electrodes will be out of contact with each other at their stitched edges; preferably to this end the main moisture carrier, or one of its elements is made wide enough to constitute part 12 as well, being folded around that edge of the electrode which is adjacent the stitching; thus 4 and 12 are integral parts of the same paper and this paper is (at 13) folded around the appropriate edge of the outer electrode 3 (Figs. 1 and 2). When stitching the various elements together as indicated at 6, I usually use a few quite long stitches rather than many short ones; this avoids a possibility of a permanent or serious short circuiting of the electrodes by the stitching. Other means for fastening the elements together can be used however.

When stitched as indicated at 6 or otherwise fastened together at this place, the various elements form the leaves of a book as it were, and thus are readily handled. By preference however the lotion carrier 1 extends from the stitching in the opposite direction from the remaining elements (Figs. 1 and 2) in order that in use the whole of the lotion carrier may be placed readily and naturally entirely within the remaining elements which constitute the heat-producing section of the sachet (Fig. 4). To use the sachet illustrated, the tress 7 of hair is first wound on the curler 6. Then the lotion carrier 1 is dipped into the lotion, absorbing an appropriate quantity, and the moisture carrier 4—5, with or without the sheet 12, is dipped into an appropriate conducting liquid which may or may not be the same lotion. Then beginning with the unstitched edge of the lotion carrier 1 the sachet is wound over and pressed to the tress (Fig. 4). The two electrical conductors are then attached to the two electrodes 2 and 3 respectively, for example by snapping on the clips or clamps 10 and 11 (Fig. 3). Usually the interior of the sachet is sealed from the scalp by a clamp, such as a winding of string 15, placed around the gathered lower ends of 4—5 and 12 (Fig. 3). The current being turned on and passing through the moisture in the carrier 4—5 (and possibly 12), heat is thereby developed externally of the lotion carrier 1. As will be understood, current of only very low voltage is required, a voltage too low to be unpleasant should one of the electrodes get into contact with the scalp. By making the moisture carrier 4—5 (and possibly 12) more or less absorbent, or by controlling the amount of moisture supplied to these parts, or by the selection of a suitable moistening agent for these parts, the current can be shut off at the proper time by the evaporation of this moisture; it will be observed that by suitable design or selection the current can be shut off and the heat-production stopped in this way either some desired time before or after the lotion has completely evaporated, or substantially simultaneously with the evaporation of the lotion. In the alternative of course, the current can be shut off by hand or automatically by external devices of known kind. When the operation is finished, the sachet is readily unrolled of course.

It will be understood that my invention is not

limited to the details illustrated and described except as appears hereafter in the claims.

I claim:

1. A unitary lotion-applying-heater for hair waving comprising a heating portion and a lotion portion, said heating portion having a sheet of insulating material folded to form a pocket, an electrode plate inserted into said pocket, a second electrode plate located outside and along one side of said folded sheet, and a means to carry moisture located between the electrode plates, said sheet, electrode plates and moisture-carrying means being fastened together along the fold of said sheet, and said lotion portion being plate-like in form and having one edge fastened to said heating portion along the fold of said sheet, and extending away from said fold in the opposite direction, whereby the lotion portion can be wrapped around a hair tress on a curler and then the heating portion wrapped around the lotion portion.

2. A unitary lotion-applying-heater for hair waving comprising a heating portion and a lotion portion, said heating portion consisting of two electrode plates and a current-carrying heat-producing sheet located between said plates, said electrode plates and sheet being flexible so that they can be wrapped around a hair tress on a curler and being joined together along one edge, and both said plates and heat-producing sheet extending away from said junction edge in the same direction, and said lotion portion being plate-like in form and flexible for wrapping around the hair tress, said lotion portion having ane edge joined to said junction edge of said heating portion and extending away from the junction in a direction opposite to the direction at which said electrode plates and heat-producing sheet extend from the junction.

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