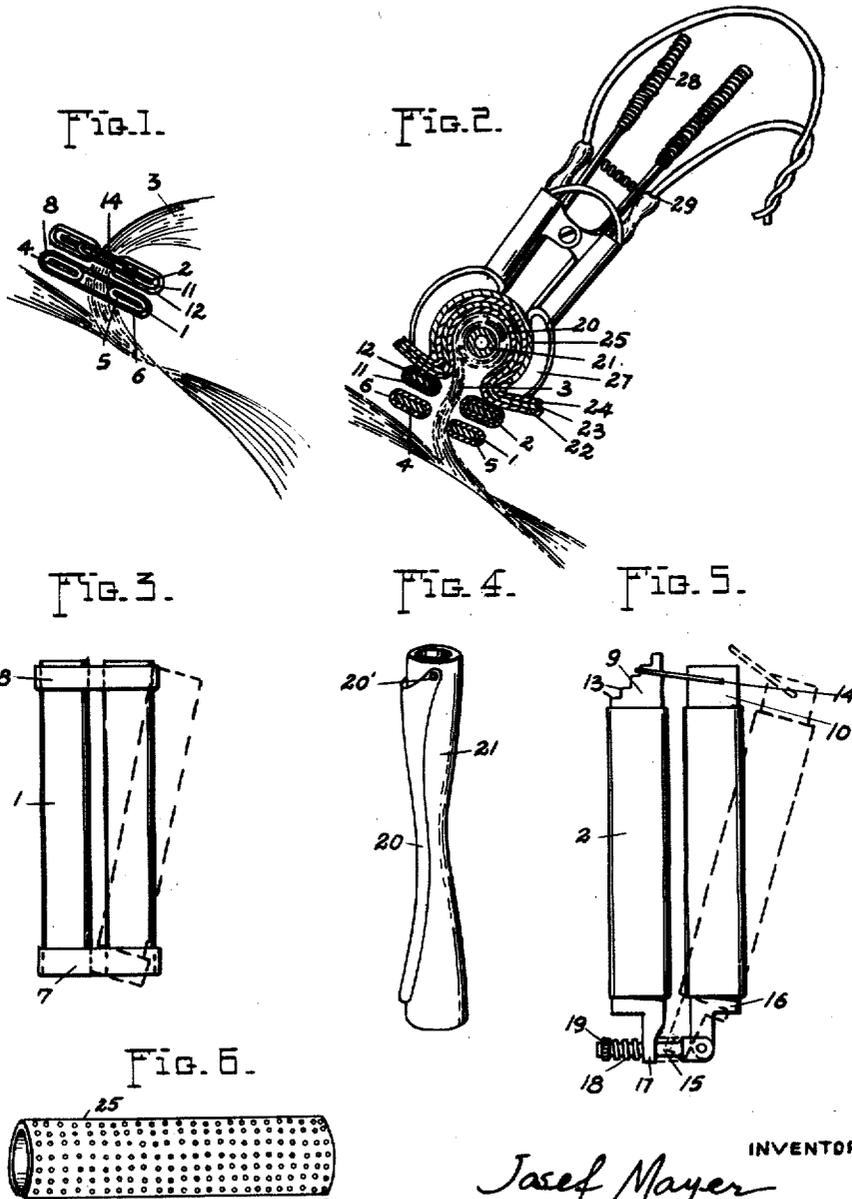


J. MAYER

May 30, 1933.

HAIR WAVING METHOD  
Original Filed March 19, 1925

Re. 18,841



INVENTOR

*Josef Mayer*

BY

*Harvey R. Hargwood*

ATTORNEY

# UNITED STATES PATENT OFFICE

JOSEF MAYER, OF KARLSBAD, CZECHOSLOVAKIA, ASSIGNOR TO THE PHILAD COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO

## HAIR WAVING METHOD

Original No. 1,622,957, dated March 29, 1927, Serial No. 16,784, filed March 19, 1925, and in Germany April 9, 1924. Divided and application filed September 14, 1926, Serial No. 135,439. Reissue No. 17,393, dated August 6, 1929, Serial No. 346,174, filed March 11, 1929. This application for reissue filed March 20, 1933, Serial No. 661,862.

This invention relates to the waving of hair upon the human head, and more particularly to the production of lasting waves such as are known as "permanent" waves.

5 An object of this invention is to provide an improved method of waving which will be effective in results and simple in performance.

10 Another object is to provide an improved method of waving hair which will more closely simulate naturally by wavy or curly hair.

Other objects will hereinafter appear.

15 The invention will be better understood from a description of apparatus constituting one practical embodiment of part of said invention and of the process performed by this apparatus constituting one practical embodiment of another part of said invention, 20 the apparatus being illustrated in the accompanying drawing, in which:

Figure 1 is a fragmentary side elevation of a portion of a person's scalp with one strand of hair engaged by two clamps;

25 Figure 2 is a similar view showing the strands wound upon a curling rod and covered with covering material and an electric heater, parts being shown in cross-section;

30 Figure 3 is a plan view of one of the clamps illustrated above;

Figure 4 is a perspective view of the curler rod or tube;

Figure 5 is a view similar to Figure 3 but showing the other clamp used; and

35 Figure 6 is a perspective view of a perforated metal holder.

40 There are at present two styles of permanent hair curling or hair waving in use. In the older or "spindle wind" type of waving, a strand of hair is coiled from its roots helically upon a curling rod, while in the newer or "Croquignole" style of waving, which, as it is applied to the human head, is a development of the present invention, the hair 45 strands are wound from their free ends toward the scalp, turn upon turn, upon a curler. The hair in the older spindle type of waving is bunched together to form a substantially round strand, while in the Cro- 50 quignole style of waving, in accordance with

my present invention, the hair is spread out and held in substantially a single plane to form a flat strand. After winding upon the curler, the hair is in both cases subjected to the action of a suitable heating device to impart permanency to the curl in the case of the first process and to the wave in the second case.

55 The heating device for the spindle type of permanent curling generally consists of a sleeve-like heating body, adapted to be passed over the curler when wound with hair, and either left open or closed at its ends during the heating process. Such a sleeve-like heating device can, however, not be used in the case of the waving of a flat hair strand, inasmuch as the hair extending between the curler and the head along the length of the curler prevents its application to the curler.

60 Apparatus which I have provided is shown in the accompanying drawing in which 1 indicates an inner clamp, and 2 an outer clamp. The strand of hair 3 is separated from the remaining hair and then the clamp 1 applied. This holds the strand 3 substantially at right 65 angles to the scalp whereby it may receive further treatment as hereinafter fully described.

70 The clamp 1 consists of a pair of bars or plates 4 and 5 which may be fibre, metal or other comparatively stiff material. Each of these bars is covered with a covering of cloth 6 which may be a good grade of flannel. This covering is permanently arranged in place and may be, if desired, saturated with a treating solution. A rubber band 7 is preferably 75 connected permanently to one end of the bars 4 and 5 so as to act as a hinge while a removable rubber band 8 is associated with the opposite end and acts to produce a final clamping action for holding the clamp 1 in place.

80 The clamp 1 holds the strand 3 properly for further treatment but in order to further screen the head from the heater in the final treatment, the second clamp 2 is used, which, in addition to screening, acts to clamp the hair 3 tightly so that little or no vapor can pass along the hair to the scalp.

85 The clamp 2 consists of plates or bars 9 and 10 preferably of metal, each bar being shown

as provided with a suitable covering. Preferably, a permanently positioned asbestos covering 11 is provided for each of the bars 9 and 10 and over this asbestos wrapping is arranged a wrapping 12 of cloth which is preferably a good grade of flannel. These wrappings are left on the plates 9 and 10, though, if desired, they may be slit longitudinally therefrom at any time in order that the same may be repaired or new ones supplied. In treating the hair, the flannel 12 is preferably saturated with a treating solution.

It will be noted that bar 9 is provided with a notched or stepped end 13 for receiving a link 14 which is pivotally mounted on the bar 10. At the opposite end, a clevis bolt 15 is pivotally mounted on an extension 16 of bar 10 and projects through a suitable aperture in an extension 17 of bar 9. A spring 18 surrounds the shank from the bolt 15 and is put under the proper tension by nut 19 threaded onto the end bolt 15. This arrangement gives a resilient gripping action, and by arranging the link 14 on the desired step 13, the bars 9 and 10 may be kept parallel and maintain the strand 3 flat and under compression throughout its full width. Preferably, the tension on spring 18 is sufficient to cause the bars 9 and 10 to firmly grip the strand 3 and in a certain sense, seal the same against the passage of vapor toward the scalp.

The use of the clamp 2 is important in that it prevents the hot vapors from passing toward the head when the heater is in use.

After the parts have been arranged as described, the outer end of the strand 3 is placed beneath the tongue or gripping strip 20 pivotally mounted at 20' on a curling rod or tube 21 which is of less diameter at the center than at the ends, and which tapers from the ends toward the center. After the strand of hair 3 has been clamped by tongue 20, the curler 21 is rotated until the hair is rolled on the curler to substantially the position shown in Figure 2. A wrapping 22 of flannel is then applied and with it a solution of any desired kind as for instance a mixture of water, bi-carbonate of soda and carbonate of magnesia, and over this wrapping a second wrapping 23 of waxed paper is applied, the waxed paper being longer than the curler 21 so that the ends may be twisted for completely enclosing the hair.

The waxed paper with its various coverings acts to hold the vapor within the rolled hair and thereby act thereon so that the hair will be given a substantially permanent curvature or wave.

In order to reenforce and protect the waxed paper, a covering 24 of parchment is applied over the paper and finally a metallic clamping member 25 is applied over the parchment as shown in Figure 2. The member 25 is perforated and is resilient so that

it can be readily sprung into position and will somewhat grip the roll of hair.

A heater is next applied substantially in the position indicated in Figure 2. This heater is of the type shown in my Reissue Patent No. 17,585 and extends for the full length of the curler rod. It consists of two arcuate shells 26 and 27 which contain electrical heating elements (not shown), the shells being provided with pivoted handles 28 urged apart by a spring 29 which causes the shells to grip the wrapped coil of hair. The electric current is then turned on and the hair subjected to heat and the moisture of the above mentioned solution to produce the permanent wave desired.

After the heat has been applied for the desired time, the heater is removed and the various parts shown in Figure 2 are removed. The hair is preferably then combed out straight and finally allowed to fall into waves.

While I have described the above embodiments of my invention in some particularity, it is obvious that many other embodiments will readily occur to those skilled in this art, and I do not, therefore, limit myself to the specific details described but claim as my invention all embodiments thereof falling within the scope of the appended claims.

I claim:

1. A process for producing permanent waves including winding flat strands of hair on tubular members, covering the wound hair with cloth impregnated with a hair treating solution, enclosing the cloth in wax paper, sealing the ends of the wax paper, covering the wax paper with a protecting covering of parchment, positioning a metallic flexible retainer over said parchment, and finally applying heat to said retainer, said heat being sufficient to penetrate said coverings and the wound hair.

2. The process of producing permanent waves comprising applying a clamp to a strand of hair for holding the same in position for treatment, applying a second clamp for preventing vapor from passing from the outer part of the hair to the roots, rolling the hair on a supporting member, covering the rolled hair with a substantially waterproof covering member, positioning a metallic flexible retainer over said covering member, and finally applying heat to said retainer, said heat being sufficient to penetrate said covering member and the hair while wound and covered.

3. The process of waving hair upon the human head which comprises dividing the hair into flat strands, gripping one strand adjacent the scalp of the wearer with a clamp, winding said strand spirally from its end to near said clamp upon a rod, covering said strand with absorbent material containing hair treating solution, next covering

said strand and material with a moisture retaining envelope, and then applying heat to said strand.

5 4. The process of waving hair upon the human head which comprises dividing the hair into flat strands, surrounding one strand adjacent the scalp of the wearer with a clamp, winding said strand from its end to near said clamp upon a rod, treating said strand  
10 with a solution and enclosing the strand in a substantially moisture-tight envelope, covering said envelope with a sectional heater extending to said clamp, and then causing said heater to apply heat to said strand.

15 5. The process of waving hair upon the human head which comprises gripping a flat strand of hair adjacent to the scalp with a moisture-tight clamp, winding said strand spirally from its end upon a rod nearly to said clamp, enclosing said strand together  
20 with moisture in a moisture retaining envelope, enclosing said strand and envelope within a heater extending about the same to the clamp, and then causing the heater to supply heat to the strand.

25 6. The process of waving hair upon the human head which comprises dividing the hair into strands, gripping a strand adjacent the scalp of the wearer with the clamp, extending the strand from the clamp so that  
30 the filaments of the strand lie substantially in the same plane, winding the strand spirally from its end toward the clamp upon a rod, covering the strand with absorbent material containing hair treating solution and with a  
35 moisture retaining envelope, securing the rod against rotation upon the clamp, and then applying heat to said strand.

In witness whereof, I have hereunto set  
40 my hand this 28th day of February, 1933.

JOSEF MAYER.

## DISCLAIMER

Re. 18,841.—*Josef Mayer*, Karlsbad, Czechoslovakia. HAIR WAVING METHOD.  
Patent dated May 30, 1933. Disclaimer filed May 20, 1938, by the assignee,  
*The Philad Company*.

Hereby enters this disclaimer to claim 6 of said patent.  
[*Official Gazette June 14, 1938.*]