Sept. 5, 1939. H. V. MICHAEL 2,171,885

METHOD OF PERMANENT HAIR WAVING

Filed June 13, 1938

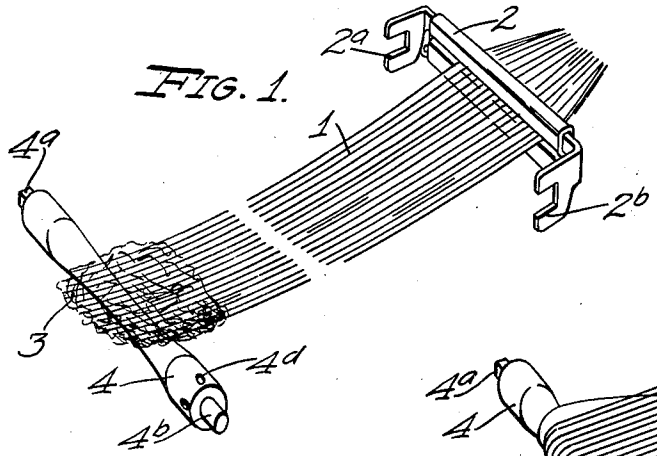


FIG. 1.

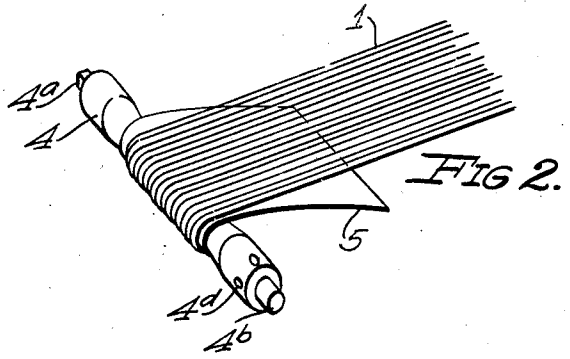


FIG 2.

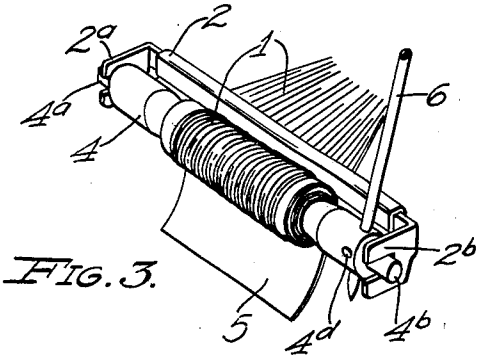


FIG. 3.

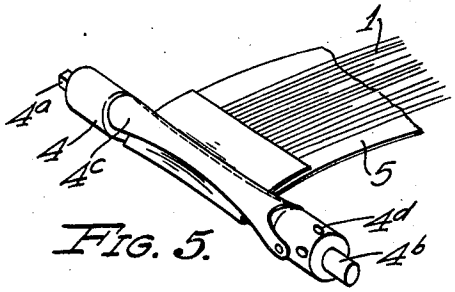


FIG. 5.

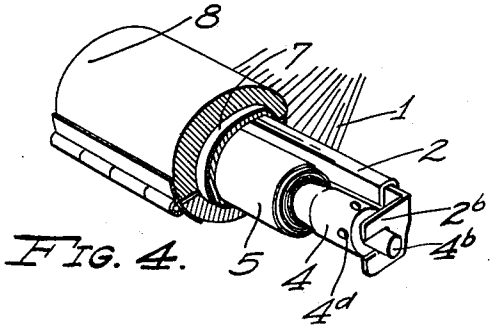


FIG. 4.

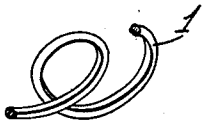


FIG. 6.

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2,171,885

METHOD OF PERMANENT HAIR WAVING

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Application June 13, 1938, Serial No. 213,411

10 Claims. (Cl. 132—36)

My invention relates to a method of treating hair for permanent waving.

One of the principal objects of this invention is to provide a novel method of waving or curling of hair whereby the wave or curl is more enduring or permanent under all conditions than that produced with the conventional or present methods.

Another important and correlated object of this invention is to provide a novel method of compressing or flattening the separate strands of hair to facilitate and stimulate the waving or curling of the hair and also the retention of the wave or curl.

A further object also is the provision of a method of this class which is simple and economical to practice.

With these and other objects in view, as will appear hereinafter, I have discovered a method of hair waving consisting of certain novel steps, as will be hereinafter described in detail and particularly set forth in the appended claims. Reference will be had to the accompanying drawing and to the characters of reference thereon, which illustrate a form of apparatus for practicing my method and also illustrate the steps in carrying out of the method, in which:

Fig. 1 is a fragmentary perspective view of a tuft of human hair about to be curled;

Fig. 2 is a fragmentary perspective view of the tuft partly coiled or wrapped around a curling element;

Fig. 3 is a perspective view of the tuft wholly coiled preparatory to the step of permanent curling or waving;

Fig. 4 is a fragmentary perspective view of the wholly coiled tuft of hair enclosed in a heating element;

Fig. 5 is a fragmentary perspective view showing a modified form of one step; and,

Fig. 6 is an enlarged view of a curled single strand of hair showing the relation of the curl to the flattened portion of the strand.

In common practice the hair is first saturated with a suitable hair waving solution, which treats the hair, and, when dry, retains it in the formed condition. After being saturated with the solution the hair is segregated into tufts 1 of the desired size for curling or waving. Or, the hair may first be segregated into tufts and each tuft saturated with the desired solution before it is coiled for curling.

The tuft, after being segregated or separated from the other hair, is clamped betwen separable rubber-covered jaws of a permanent wave protector or clamp 2, at the desired distance from the roots of the hair from which the curled or waved portion is to start.

The free ends of the strands of hair of each tuft, as it is prepared for curling, are loosely bound together, preferably by enfolding the ends in a small quantity of loose crepe wool 3, as shown in Fig. 1. The ends of the strands, thus bound together, are wrapped around a curling element or rod 4.

When the ends of the strands are fastened to the curling rod by being wrapped thereon with slightly more than one convolution, a thin but relatively hard-surface non-absorbent sheet 5, in the form of a strip, is placed between the wrapped and unwrapped portion of the tuft. The strands of the latter portion are then spread apart or separated and rolled on the sheet over or around the previously formed convolutions, as shown in Fig. 2, until this rolled portion engages the clamp 2. The sheet, in its most suitable form, is metal foil.

The square portion 4^a at one end of the rod is then placed into a slot 2^a at one end of the clamp, and a round portion 4^b, at the opposite end of the rod, is placed in a slot 2^b at the opposite end of the clamp. The square portion is concentric with the axis of the rod and is rotatable with respect thereto about such axis but with considerable frictional resistance. As the rod is in place, as stated, the end 4^b is rotated with respect to the square end 4^a by a pin 6, as shown in Fig. 3, so as to force the wrapped or coiled portion of the tuft tightly against the clamp 2.

The relatively stiff sheet or metal foil strip 5 is preferably of such length that the end portion is free when the rod 4 is fastened to the clamp 2, and this end portion is wrapped around the outer layer of hair wound on the rod, as shown in Fig. 4, before the steaming pad and heating means are applied, so that a substantially enclosed steam chamber is provided for the hair intended to be curled.

A steaming pad 7, consisting preferably of a waving composition saturated flannel cloth, backed by metal foil, is enfolded around the coiled tuft and the whole enclosed in a heating means 8 which may be the conventional electric heating cylinder.

As the hair of the tuft is laid in a spread-out or separated manner on the sheet or metal foil and wrapped tightly therearound, the individual strands are flattened, at least at the inner sides, as shown in Fig. 6. And as heat is applied and the waving solution caused to penetrate the

strands and to dry, the strands are shrunk, causing greater tension or tighter winding and increased action to flatten the hair. This causes the strands to retain the flattened shape. And as the tufts are removed from the apparatus, the strands are forced to assume a curled or waved shape about the flattened sides of the strands.

The crepe wool at the ends of the strands protect such ends against excessive heat and curling action and modifies the curling action applied to the intermediate parts of the strands.

The crepe wool may be omitted and a longer strip of metal foil **5** or other relatively stiff material used. Such strip is folded at one end around the ends of the strands of the tuft, and the folded portion clamped between the rod **4** and the finger **4c** pivoted thereon, as shown in Fig. 5. However, in as much as the ends of the strands are usually curled, or are easily curled, the metal foil or other similar covering, may produce excessive curling.

Though I have shown and described a particular method of curling or waving of hair, I do not wish to be limited to the same, but desire to include in the scope of my invention the method and step, substantially as set forth in the appended claims.

I claim:

1. The herein described method of waving hair, consisting in segregating strands of hair into a tuft, wrapping the ends of the tuft around a curling rod, laying a free, continuous, relatively hard-surface non-absorbent sheet between substantially all of the convolutions of the tuft wrapped around the rod, and applying heat thereto.

2. The herein described method of waving hair, consisting in segregating strands of hair into a tuft, wrapping the ends of the tuft around a curling rod, laying a free, continuous, relatively hard-surface non-absorbent sheet between substantially all of the convolutions of the tuft wrapped around the rod, fastening the rod, with the hair wrapped thereon, in a permanent wave clamp, and applying heat thereto.

3. The herein described method of waving hair, consisting in segregating strands of hair into a tuft, binding the ends of the strands of hair together, wrapping the ends of the tuft around a curling rod, laying a relatively hard-surface non-absorbent sheet between the rolled and unrolled part of the tuft and wrapping the latter part on the curling rod over the sheet, and applying heat thereto.

4. The herein described method of waving hair, consisting in segregating strands of hair into a tuft saturated with a waving solution, binding the ends of the strands of hair together, wrapping said ends around a curling rod, laying a relatively hard-surface non-absorbent sheet between the rolled and unrolled part of the tuft and wrapping the latter part on the curling rod over the sheet, fastening the rod, with the hair wrapped thereon, in a permanent wave clamp, enfolding the same in a steaming pad, and then applying heat thereto.

5. The herein described method of waving hair, consisting in segregating strands of hair into a tuft, wrapping the ends of the tuft around a curling rod, laying a free sheet of metal foil between the rolled and unrolled part of the tuft and wrapping the latter part on the curling rod over the foil, fastening the rod, with the hair wrapped thereon, in a permanent wave clamp, and applying heat thereto.

6. The herein described method of waving hair, consisting in segregating strands of hair into a tuft, enfolding the ends of the strands of hair of the tuft into crepe wool, wrapping the ends of the tuft around a curling rod, laying metal foil between the rolled and unrolled part of the tuft and wrapping the latter part on the curling rod over the foil, and applying heat thereto.

7. The herein described method of waving hair, consisting in clamping a wisp of hair, flatwise and tightly rolling the free portion of the hair, beyond the clamped portion, between successive convolutions of a free relatively hard-surface non-absorbent sheet, and then securing the rolled portion to the clamped portion.

8. The herein described method of waving hair, consisting in clamping a wisp of hair, flatwise and tightly rolling the free portion of the hair, beyond the clamped portion, between successive convolutions of a free relatively hard-surface non-absorbent sheet, then securing the rolled portion to the clamped portion, and then further tightly rolling the rolled portion with respect to the clamped portion.

9. The herein described method of waving hair, consisting in clamping a wisp of hair, enfolding the end of the wisp in a heat resisting material, flatwise and tightly rolling the free portion of the hair, intermediate the clamped and said enfolded portions, between successive convolutions of a relatively hard-surface non-absorbent sheet, and then securing the rolled portion to the clamped portion.

10. The herein described method of waving hair, consisting in clamping a wisp of hair, enfolding the end of the wisp in a heat resisting material, flatwise and eightly rolling the free portion of the hair, intermediate the clamped and said enfolded portions, between non-absorbent heat conducting material, and then securing the rolled portion to the clamped portion.

HARRY V. MICHAEL.