Dec. 13, 1938. W. L. MOODY ET AL 2,140,243

HAIR WAVING PAD

Filed March 22, 1938

FIG. 1

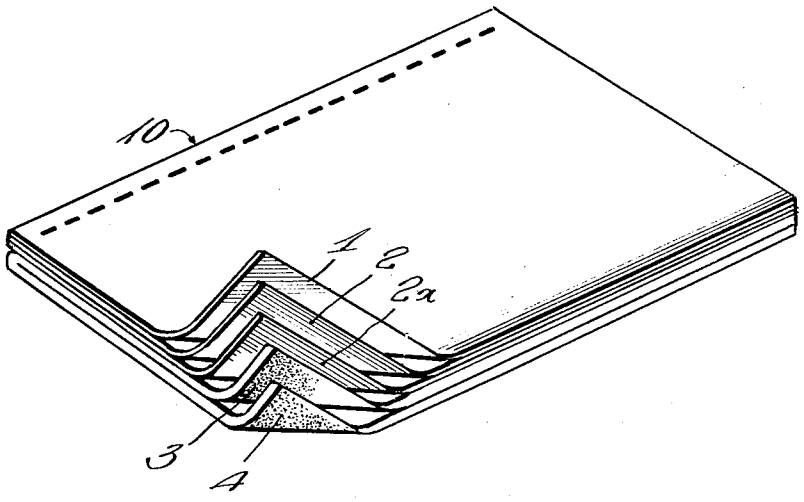
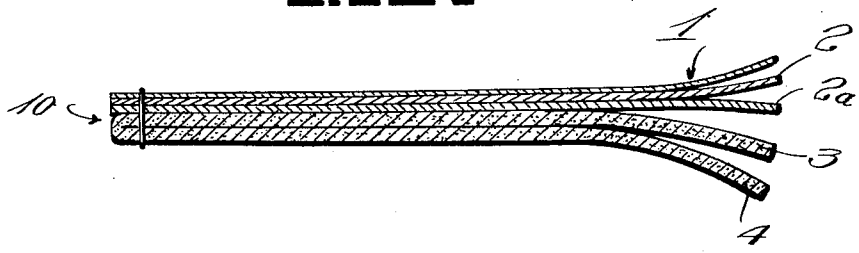


FIG. 2



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HAIR WAVING PAD

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3 Claims. (Cl. 132—36.2)

The present invention relates to hair waving and more particularly to a pad or the like impregnated with certain salts adapted to react on the application of the usual mild heat, as is the practice in permanent waving, to produce a waving or curling of a strand or curl of hair to which the pad may be applied.

One of the principal objects of the invention is the formation of a pad of the character indicated which requires no moistening on the part of the operator and which will produce an effective waving of the hair and which may be readily handled and efficiently used and applied.

Other purposes and aims will be apparent from the detailed description herein disclosed when taken in conjunction with the appended drawing forming a part hereof and in which

Figure 1 is a top view of a pad unit with the different elements or sheets of the unit separated at one corner thereof; and

Figure 2 is an end view of the pad of Figure 1 with the different elements or sheets of the pad unit separated along their free edges.

The pad unit P preferably comprises five sheets of material of the same width and length bound or sewed together along one edge 10 thereof to produce an article in book form. A convenient size of each sheet of the pad has been found to be a width of 2 inches by a length of 3 inches. On the outside of the pad, that is, the side that is adapted to be placed adjacent the heater, is a sheet of metal foil, such as aluminum, designated on the drawing by the numeral 1. Next to this sheet is a sheet of waxed paper 2, and a similar second waxed sheet 2a, after which there is a sheet of absorbent material 3, such as flannel or the like, and finally a similar second flannel sheet 4. Flannel sheet 3 is prepared by dipping same into a saturated aqueous solution of equal proportions of ammonium chloride and calcium chloride. The flannel sheet 4 is similarly prepared by dipping same into a saturated aqueous solution of equal proportions of sodium carbonate and sodium sulphite. In lieu of sodium carbonate and sulphite, other alkali or alkali earth carbonates and sulphites may be used; also other salts of ammonia may be used in lieu of the chloride. Such a pad as described above is manufactured and sold to the trade ready for use without any further treatment by the operator with water or other liquid.

Sodium carbonate is a mild alkali and when the pads 3 and 4 are applied to a strand of hair and heated, ammonia gas is liberated. This gas, as is well known, is a valuable agent in waving hair. The chemical reaction which takes place may be written as follows:

$$2NH_4Cl+Na_2CO_3\rightarrow(NH_4)_2CO_3+2NaCl$$
$$(NH_4)_2CO_3+heat\rightarrow 2NH_3+H_2O+CO_2$$

Aqueous solutions of sodium sulphite, or alkaline sulphites, are alkaline to litmus. The sulphites decompose on heating as represented by the following formula:

$$4Na_2SO_3+heat\rightarrow 3Na_2SO_4+Na_2S$$

The sodium sulphide formed causes the keratin of the hair to swell so that when a strand of hair is wound in the pad P, a permanent physical change is produced in the structure of the hair, which results in a substantially lasting curl or wave. The calcium chloride has a great affinity for moisture and absorbs a quantity from the air, thus tending to maintain the sheets 3 and 4 moist until used. This condition keeps the last named sheets from becoming too dry and brittle, thereby preventing caking of the salts with which these sheets are impregnated and the consequent chipping off thereof, and also obviates the necessity of moistening the sheets prior to using same.

From the above description it will be apparent that there has been formed a novel pad capable of producing excellent results due to the formation of valuable hair waving agents in situ, namely, ammonia gas and an alkali sulphide.

It is to be understood that various changes may be made in the specific disclosure without in any way departing from the spirit and scope of the invention and it is contemplated to cover all such changes and to be limited in this respect only as may be necessary by the scope of the claims hereto appended.

What we claim and desire to secure by Letters Patent is:

1. A hair curler pad comprising a sheet of absorbent material impregnated with an alkali sulphite and an alkali carbonate and a second sheet impregnated with an ammonium salt and calcium chloride.

2. A hair curling pad comprising a sheet of absorbent material impregnated with sodium sulphite and sodium carbonate and a second sheet impregnated with ammonium chloride.

3. A hair curling pad comprising a sheet of absorbent material impregnated with sodium sulphite and sodium carbonate and a second sheet of absorbent material impregnated with calcium and ammonium chlorides.

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