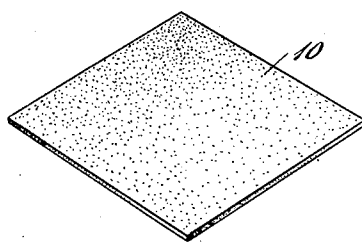
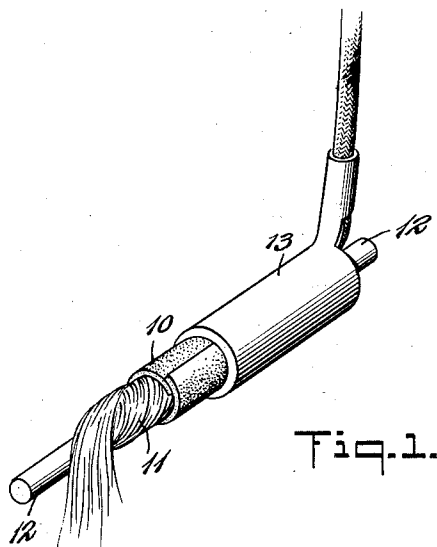


March 31, 1925.

1,531,291

L. INGRASSIA
HAIR WAVING PAD
Filed Jan. 10, 1923



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UNITED STATES PATENT OFFICE.

LEON INGRASSIA, OF NEW YORK, N. Y.

HAIR-WAVING PAD.

Application filed January 10, 1923. Serial No. 611,730.

To all whom it may concern:

Be it known that I, LEON INGRASSIA, a citizen of the United States, and resident of New York city, in the county of Kings and State of New York, have invented certain new and useful Improvements in Hair-Waving Pads, of which the following is a specification.

The invention relates to an improved hair protecting pad for use on a person's hair in the method of imparting a permanent wave to the hair, and the invention herein constitutes a development of the invention defined in my application, Serial No. 546,869, composition of matter, filed March 25, 1922.

In practicing the art of the so-called permanent hair waving, it has been a usual practice to saturate strips of flannel or cloth in a water solution of borax and sodium thiosulphate to wrap the wet cloth about the coiled hair and to insert the coil so wrapped in an electric heater where the hair is subjected to an intense heat treatment while protected by the wet flannel or cloth. A later development of this art is to eliminate the cloth strips and substitute therefor prepared pads, sometimes in the form of cloth envelopes in which the dry, powdered borax or sodium thiosulphate were contained. It is required of such prepared pads that the cloth envelope be porous so as to permit the seeping of the soluble or rather pasty salts to the outside of the envelope when applied in operative position on the hair under treatment. With these old form of envelopes the dry powder would sift out from its container and in shifting about in the envelope would become bulky, uneven and at best not provide the necessary protection uniformly over the entire portion of the hair. Attempts have been made to sew the envelope across its body portion so as to prevent the shifting of the dry powder but this sewing of the envelope did not prevent, but on the contrary, promoted the leakage of the powders from the container, especially when dry. Further the stitching necessitated the use of additional labor which materially added to the cost of manufacture and even then the stitched pad had to be contained in an additional envelope which further added to the cost.

Accordingly, the primary object of the present invention is to provide a form of pad which can be used as similar pads have been used heretofore in the art of perma-

nent hair waving, which will feature simplicity in construction with resulting economy in the cost of manufacture, which can be shaped to any desired configuration best suited for the particular use to which it is to be put, which will maintain until used both the amount of hair protecting salts indicated as well as the proportions of the salts and other ingredients with which the pad was originally constructed.

In the above identified application there was featured the use of mineral oil in combination with the known protecting salts which oil was shown therein to possess certain hair protecting virtues and assisted the action of the salts in minimizing the deleterious action of the extremely high temperatured heat employed in the art of permanent hair waving. The present disclosure contemplates the retention of the hair protecting virtues of this mineral oil and additionally features the utilization of oil, when dry, as a binder for holding the powdered salts together as a caked unit.

Another object of the invention is to simplify the usual steps of protecting the hair incidental to the usual permanent hair waving operation prior to the heat treatment and incidental to the general object of minimizing in cost the present disclosure features a form of pad which does not need any protecting covering or envelope to prevent loss of powder while being stored or ported.

Broadly I prepare the pad herein featured by forming a water solution of the desired salts, adding to the solution a small amount of mineral or other suitable oil, if a pad with the oil ingredients is desired, and while the solution is boiling dipping into the same a fabric, preferably felt, capable of being impregnated with the solution and then subjecting the pad to drying conditions until the water has evaporated. There is thus formed a somewhat rigid, dry pad which can be packed flat and stored in relatively small space until ready for use.

Various other objects and advantages of the invention will be obvious from a consideration of the preferred method of practicing the invention hereinafter described and from an inspection of the accompanying drawings and in part will be more fully set forth in the following particular description of one method and of one form of apparatus for practicing the method and the invention

also consists in certain new and novel operations and features of construction and combination of parts hereinafter set forth and claimed.

5 In the accompanying drawings:—

Figure 1 is a view of a coil of hair wrapped with a protecting pad illustrating a preferred form of the article feature of the invention; and

10 Figure 2 is a perspective view of the pad shown in Figure 1, in the flat condition in which it is normally packed.

In forming a pad, such as is shown in the drawings a fabric of a type capable of absorbing salt solutions is cut into the desired form and size, and for this purpose a cheap grade of sheet felt has been found to be entirely satisfactory. This felt either in the whole strip or cut into the shape desired of the final pads is immersed in a boiling solution of the desired salts until it is completely impregnated and saturated with the solution.

As an example of one such solution it is noted that a composition composed of sodium thiosulphate, mineral oil and borax mixed in the following proportions: borax, 64 parts; sodium thiosulphate, 5 parts; mineral oil, 5 parts, together with sufficient water to insure the dissolving of the salts and without material excess of water has been used with success. While this solution is actively boiling the pads are dipped therein, retained preferably for about ten minutes, after which they are removed, strung up and exposed in air to dry. This drying operation usually takes from 5 to 6 hours, and when completed, there is formed a somewhat stiff, yet readily bendable board which is dry to the touch and has the appearance usually shown by a salt incrustated fabric. Most of the salts are contained within the body of the fabric and the remainder forms an irregularly appearing crust on the opposite faces of the completed pad. Apparently the mineral oil acts as an adhesive to hold the powdered salts to the fabric for little, if any, of the powder becomes loosened from the pad. It is within the scope of this disclosure, however, to omit the oil and to depend upon the presence of the salts which are held by the fabric to supply the requisite protection to the hair in the subsequent heating step of the permanent wave operation.

Referring to the accompanying drawings, there is shown at 10 a pad prepared by following the methods hereinbefore suggested and which pad, as shown in Figure 2, is in the flat dry form in which such articles are packed in cartons for sale.

60 In the operation of waving the hair, a strand 11 is wrapped on a curling rod 12 following the usual practice. One of the dry pads shown in Figure 2 is dipped for a moment into a wet liquid, usually water, and the wet pad is wrapped about the coiled

strand after which the usual cylindrical electric heater is disposed in telescoped position. By using this pad the hair is effectively protected against scorching or burning; and even the ends of fine, blonde, grey or even white hair can be waved without damage to the hair.

The pad is thus prepared and used in place of the old form of pads or wet cloth strips facilitates an easy practicing of the permanent hair waving operation in that there is eliminated the necessity of wrapping long strips of wet fabric about the hair, the handling of messy, sticky, cloths is avoided, the untidiness of both operator and equipment characterizing the use of leaking envelopes is eliminated and there is provided a neat, one-piece compact pad which contains the exact amount of ingredients selected for the operation and in which the proportion of ingredients has been maintained and the ingredients disposed in uniform amounts across the entire face of the pad and this condition continues even when the pad is dampened.

The pad features economy in construction in that all stitching and other fabricating operations have been eliminated and any necessary or desired variations in the amount of materials needed for any particular treatment may be attained simply by the selection of the proper thickness and character of felt or other solution absorbing fabric.

Having thus described my invention, I claim:—

1. In the art of preparing a pad for use in subjecting hair to a waving operation, the method which consists in boiling a mixture containing borax, sodium thiosulphate and mineral oil, dipping into said boiling mixture a fabric capable of absorbing some of the mixture, removing from the boiling mixture the fabric so treated and permitting the treated fabric to dry.

2. In the art of preparing a pad for use in subjecting hair to a waving operation, the method which consists in boiling a mixture containing a solution of a hair preserving compound together with oil, dipping into said boiling mixture a fabric capable of absorbing some of the mixture, removing from the boiling mixture the fabric so treated and permitting the treated fabric to dry.

3. In the art of preparing a pad for protecting hair from the deleterious action of the high temperature heat employed in the method of permanent hair waving, the process which consists in saturating a felt pad in a solution of hair protecting salts together with mineral oil, drying the saturated pad to form a marketable article and then wetting the dry pad with water just prior to applying the pad to the hair to be waved.

4. In the art of permanent hair waving,

the method which includes the steps of saturating a fabric pad with a hair protecting substance containing oil, wrapping the hair to be treated in said oil containing pad and
5 subjecting the hair when so wrapped to a heat treatment at a temperature higher than the boiling point of water.

5. In the art of waving hair on the human head by subjecting the hair to a heat treatment, the method which includes the step
10 of protecting the hair from overheating by positioning between the hair and the heating means, a fabric impregnated with a hair preserving substance compounded with
15 a small amount of mineral oil.

6. In a pad for use in waving hair including a fabric containing within its outlines borax, sodium thiosulphate and mineral oil, in the proportion approximately of
20 borax, 64 parts, sulphate, 5 parts, and oil 5 parts.

7. A pad for use in waving hair including a fabric containing within its outlines borax, sodium thiosulphate and mineral oil.

25 8. A substantially dry pad designed to be wetted and applied to the hair in the art of

permanent hair waving, said pad impregnated with a hair protecting salt to which has been added a small amount of oil.

9. A pad for use in waving hair including a fabric impregnated with borax, and
30 mineral oil.

10. A substantially dry, caked pad for use in waving hair including a fabric impregnated with mineral salts cemented with a
35 small amount of oil.

11. A fabric pad for use in protecting hair in the art of permanent waving, said pad being impregnated with hair protecting salts and containing mineral oil.

12. A fabric pad for use in protecting hair in the art of permanent waving, said pad being impregnated with a substance containing mineral oil and hair protecting
40 salts.

13. A fabric pad for use in waving hair, containing a hair treating salt together with oil.

Signed at New York city, in the county of New York and State of New York, this
45 29th day of December, A. D. 1922.

LEON INGRASSIA.