

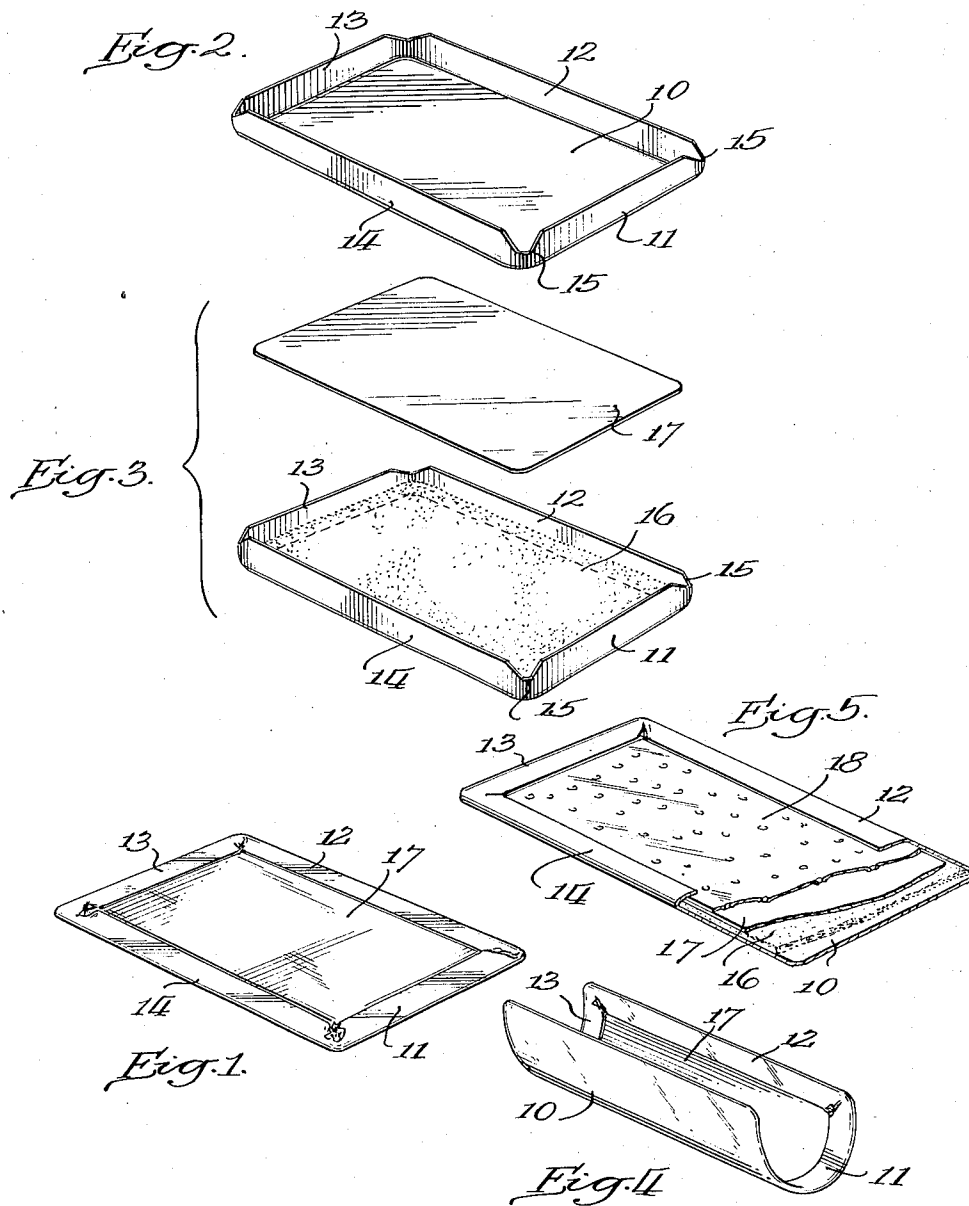
March 14, 1939.

H. BONAT

2,150,598

PERMANENT WAVING PAD AND METHOD OF MAKING SAME

Filed July 28, 1938



Inventor.
Harry Bonat
By *Marion S. Gayne*
Att'y.

UNITED STATES PATENT OFFICE

2,150,598

PERMANENT WAVING PAD AND METHOD
OF MAKING SAME

Harry Bonat, New York, N. Y.

Application July 28, 1938, Serial No. 221,687

14 Claims. (Cl. 132—36.2)

This invention relates generally to a novel and improved construction of permanent waving pad and method of making the same, said pad being particularly adapted for use in the class of hair waving in which a so-called permanent wave is imparted to a pre-formed tress of hair by placing the hair in close association with the pad in which a heat producing chemical reaction is taking place.

This chemical method of permanent hair-waving, as is well-known, involves the use of a pad in which any suitable chemical or chemicals may be enclosed, which, when moistened, give rise to an exothermic reaction, with the result that the heat requisite to the proper treatment of the hair is produced.

The present invention more particularly has especial relation to a new and improved construction of pad for enclosing the chemical or chemicals, as well as a new and improved method of forming said pad with the enclosed chemicals therein securely retained.

A main object of the present invention resides in the novel and improved method of producing a waving pad of the character described, which comprises the steps of providing a tray formed of pliable metal of sufficient thickness and strength to maintain itself in predetermined position when in use, said tray being provided with bendable extensions on the free longitudinal edges thereof, then filling said tray with a supply of chemicals, then disposing over said chemicals within said tray a member or sheet of porous absorbent material, and then folding said extensions of the tray over the corresponding edges of the porous sheet material to seal the chemicals within the tray.

Another object of the invention is to provide a waving pad of the character described, said pad comprising a backing sheet of pliable metal and a sheet of porous absorbent material, and chemical means enclosed in said pad between said backing sheet and said absorbent material, and means formed integral with said backing sheet adapted to be folded over said absorbent material for securing the backing sheet and absorbent material to each other and for confining the chemical means therebetween.

A still further object of the invention is to provide a waving pad of the character described, comprising a tray of pliable metal having extensions formed on the free longitudinal edges thereof, a supply of chemicals disposed within said tray and a sheet of porous absorbent material disposed over said chemicals, said extensions be-

ing looped over the corresponding edges of the porous absorbent sheet to thereby securely hold the absorbent sheet in place within the tray and to confine the chemicals between said absorbent sheet and the bottom wall of said tray.

A still further object of this invention resides in the novel and improved method of forming a waving pad of the character described, which comprises the steps of providing a tray of pliable metal open at its upper end, placing a supply of chemicals along the bottom wall of said tray, disposing a sheet of porous absorbent material over said chemicals, and then folding the side walls of said tray over the corresponding edges of the porous absorbent sheet for retaining the latter and the chemicals within the tray.

A still further object of the invention is the provision of a novel and improved construction of waving pad of the character described, which will be simple in construction and assembly, comprising only a few parts, which may be produced along lines convenient for low-cost manufacture, and which will, at the same time, be highly efficient for carrying out the purposes for which it is designed.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists in certain novel features of construction, arrangement and combination of parts hereinafter fully described, illustrated in the accompanying drawing, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

For the purpose of facilitating an understanding of my invention, I have illustrated in the accompanying drawing, a preferred embodiment thereof, from an inspection of which, when considered in connection with the following description, my invention, its mode of construction, assembly and operation, and many of its advantages should be readily understood and appreciated.

Referring to the drawing in which the same characters of reference are employed to indicate corresponding or similar parts throughout the several figures of the drawing:

Fig. 1 is a view in perspective of a waving pad constructed in accordance with my invention;

Fig. 2 is a view in perspective of the pliable metal tray;

Fig. 3 is a view in perspective showing the tray

filled with chemicals and the absorbent sheet ready to be disposed thereof;

Fig. 4 is a view in perspective of the completed pad shown in Fig. 1, the same being rolled to a semi-cylindrical shape;

Figure 5 is a perspective view of a modified form of pad.

Stated generally, the present invention comprises a highly simplified method of producing a so-called chemical pad for permanent hair waving, said pad comprising a tray of pliable metal of sufficient thickness and strength to maintain itself in predetermined position when applied to a tress of hair during the heating operation. Said tray is adapted to receive and hold a supply of chemicals, which chemicals are confined in the tray and are prevented from leaking therefrom by means of a sheet of porous absorbent material being disposed over the chemicals within the tray with the side edges of the tray being bent over the corresponding edges of the porous absorbent sheet to securely hold said sheet in assembled position within the tray. In practice, the application of moisture to the absorbent sheet will bring about the exothermic reaction and the device may be applied to the pre-formed curl or tress of hair by bending the same about the tress of hair.

Referring to the drawing more specifically by characters of reference, the reference character 10 designates generally a tray formed of any suitable metal, such, for example, as commercially pure aluminum or the like, which metal should have the quality of being readily manipulable, although being of sufficient thickness and strength to obtain the necessary heat retaining qualities and to maintain itself in any predetermined position about the pre-formed tress of hair when in use to prevent its detachment or dropping off during the heating operation.

The tray 10 is preferably of rectangular form and may be of such size as to properly enclose a pre-formed curl or tress of hair. The tray 10 is provided along its entire periphery with the up-standing bendable extensions 11, 12, 13 and 14, said extensions being cut away, as shown at 15, at each of the corners of the tray for a purpose to be presently more fully described. Adapted for disposition within the tray along the bottom wall thereof is a supply of exothermic material, usually in powdered form, the particular composition of which is not set forth here since it is, per se, not part of the present invention proper, and since, moreover, it may be varied greatly, as is well-known, in the art.

The only essential characteristic of the chemical materials used is that it should be capable, upon the application of moisture thereto, of generating the required amount of heat to impart a permanent wave to the wound tress of hair. The combination of chemicals employed with my device may preferably be of the type in which the ingredients are comparatively stable and inactive in the dry state, thereby minimizing the tendency to age during periods of storage in a moist atmosphere.

After the exothermic material 16 has been placed within the tray along the bottom wall thereof, as shown in Fig. 3, I place over said chemicals a sheet of porous absorbent material 17, which may be of such material as flannel, gauze or absorbent paper. The size and shape of said sheet is such as to completely cover the chemicals disposed within the tray 10. The side extensions 11, 12, 13 and 14 are then bent

or folded over the corresponding edges of the sheet 17, said extensions being folded to a position substantially parallel to the bottom wall of the tray and into an abutting relation with the ends of the sheet 17 as shown more clearly in Fig. 1 of the drawing. This completes the assembly of the pad, in which position it will be noted that the chemicals are securely held against leakage between the absorbent sheet 17 and the bottom wall of the tray. The cut-away corner portions 15, will facilitate the folding over of the extensions 11 to 14 to the positions shown in Fig. 1.

It will be noted that no envelope is necessary for holding the chemicals, the elimination of said envelope resulting in saving in the number of operations required for assembling the device, as well as in the cost of the envelope, in addition to reducing the number of parts that must be handled in the manufacture and assembly of the device.

In practice, the device may be supplied to the trade in substantially flat form and when ready for use, it is merely necessary for the operator to apply moisture to the absorbent sheet 17 and to bend the entire device about the pre-formed curl or tress. The yieldable character of the metal used enables this operation to be performed readily, and as already pointed out above, the metal from which the tray 10 is constructed is of sufficient inherent strength to retain its position on the curl during the waving operation. The nature of the metal employed for the tray 10 will also permit of a good and secure seal between the absorbent sheet 17 and the edges of the tray, thereby resulting in a tight seal, thus preventing the escape or leakage of any of the chemicals from the finished pad.

In the modified form shown in Fig. 5, the same combination of elements is employed in addition to which there is provided a sheet of aluminum 18, which sheet is disposed directly above the absorbent sheet 17 before the edges 11, 12, 13 and 14 are turned down, so that the latter will hold the aluminum sheet 18 in assembled position, as shown in Fig. 5. The sheet 18 is perforated throughout its entire area, so that upon the application of moisture thereto, the assembled pad will act substantially in the same manner as if the sheet 18 was not there. The purpose of the sheet 18, however, is to protect the absorbent sheet 17 against injury during packing and shipping, and while the same is being stored in stock.

It is believed that my invention, its mode of construction and assembly, and many of its advantages should be readily understood from the foregoing without further description, and it should also be manifest that while a preferred embodiment of the invention has been shown and described for illustrative purposes, the structural details are nevertheless capable of wide variation within the purview of my invention as defined in the appended claims.

I claim:

1. A hair waving pad of the character described, comprising a metallic tray, chemical means disposed within said tray, a porous absorbent sheet disposed in said tray and covering said chemical means, and means formed integral with said tray adapted for securing said sheet and chemical means within the tray.

2. A hair waving pad of the character described, comprising a metallic tray having extensions formed on the free longitudinal edges thereof, chemical means disposed within said

tray and a porous absorbent sheet disposed in said tray and covering said chemical means, said extensions being folded over the corresponding edges of the said sheet for securing the latter and chemical means within the tray.

3. A hair waving pad of the character described, comprising a metallic tray of substantially rectangular formation and having bendable extensions formed on the edges thereof, chemical means disposed within said tray and a porous absorbent sheet covering said chemical means, said extensions being folded over the corresponding edges of said sheet for holding the sheet and chemical means in association with said tray.

4. A hair waving pad of the character described, comprising a tray of impervious non-soluble material, a sheet of porous absorbent material and chemical means disposed between said sheet and said tray, said tray being provided with means formed integral therewith for securing said sheet thereto and for confining the chemical means between said sheet and said tray.

5. A hair waving pad of the character described, comprising a metallic tray, chemical means disposed within said tray, a porous absorbent sheet disposed in said tray and covering said chemical means, a perforated metallic sheet disposed directly above said absorbent sheet, and means formed integral with said tray adapted for securing said sheets and chemical means within the tray.

6. A hair waving pad of the character described, comprising a metallic tray, chemical means disposed within said tray, a porous absorbent sheet disposed in said tray and covering said chemical means, a metallic sheet also disposed in said tray and covering said porous absorbent sheet, said metallic sheet permitting the passage of moisture therethrough to the porous absorbent sheet, and extensions formed integral with said tray along the edges thereof adapted for being folded over the corresponding edges of said sheets for securing the latter and chemical means within the tray.

7. A hair waving pad of the character described, comprising a vessel of impervious material provided with peripherally extending uninterrupted walls contiguous to the edges thereof, a sheet of porous material, and chemical means disposed within said vessel, said walls being folded over the corresponding edges of said sheet for securing said sheet and said chemical means within said vessel.

8. A hair waving pad of the character described, comprising a flat vessel of impervious material, provided with peripherally extending uninterrupted walls contiguous to the edges thereof, a sheet of porous material, and chemical means uniformly distributed within said vessel upon the bottom thereof, said walls being folded over the correspondingly adjacent edges of said sheet, securing said sheet and confining said chemical means within said vessel.

9. A hair waving pad of the character described, comprising a vessel of impervious material, provided with peripherally extending uninterrupted walls contiguous to the edges thereof, a sheet of porous material, a perforated metallic sheet disposed directly above said sheet of porous material, and chemical means disposed

within said vessel, said walls being folded over the corresponding edges of said perforated sheet for securing said perforated sheet and said sheet of porous material to said vessel, and securing said chemical means within said vessel.

10. A hair waving pad of the character described, comprising a flat vessel of impervious material, provided with peripherally extending uninterrupted walls contiguous to the edges thereof, a sheet of porous material, a perforated sheet of impervious material, and chemical means uniformly distributed within said vessel upon the bottom thereof, said walls being folded over the correspondingly adjacent edges of said perforated sheet, securing said perforated sheet, said sheet of porous material, and said chemical means within said vessel.

11. The method of forming a hair waving pad, which comprises the steps of first, forming a tray of impervious non-soluble material, provided with integrally formed upstanding peripherally uninterrupted walls contiguous to the edges thereof, filling said tray with a substantially uniform layer of chemical means, disposing a sheet of porous absorbent material over said chemical means, and then simultaneously folding all of the walls over the edges of said sheet for tightly securing said sheet and said chemical means within said tray.

12. The method of forming a hair waving pad, which consists of first, forming a shallow vessel of impervious non-soluble material provided with integrally formed, peripherally uninterrupted walls contiguous to the edges thereof, disposing a layer of chemical means along the bottom of said vessel, further disposing a layer of absorbent material upon said first-mentioned layer, said absorbent layer being of substantially the same shape as the bottom of said vessel, albeit slightly smaller than same, and simultaneously folding said walls once upon said second mentioned layer to retain both of said layers within said vessel.

13. The method of forming a hair waving pad, comprising the steps of first, forming a tray of impervious non-soluble material provided with shallow, peripherally continuous side and end walls and a bottom, then uniformly distributing a layer of chemical means upon said bottom, covering said layer with a sheet member of porous material, and then tightly pressing said walls down and upon said sheet without unduly wrinkling the corners thus formed by said walls, said last-mentioned step being accomplished by providing said walls with recesses therein adjacent the corners of said vessel in the tops of said walls.

14. A hair waving pad of the character described, comprising a shallow vessel of impervious material, provided with peripherally extending, uninterrupted walls contiguous to the edges thereof, said walls being provided with recesses in the edges thereof at all corners formed therefrom, a sheet of porous material, and chemical means disposed within said vessel, said walls being folded over the correspondingly adjacent edges of said sheet, securing said sheet and said chemical means within said vessel, the border of said pad thus formed being free of bulges by reason of said recesses.

HARRY BONAT. 70