Aug. 6, 1940. W. H. DE ST. CYR 2,210,618

METHOD AND APPARATUS FOR TREATING THE SKIN

Filed Sept. 15, 1939

Fig. 1.

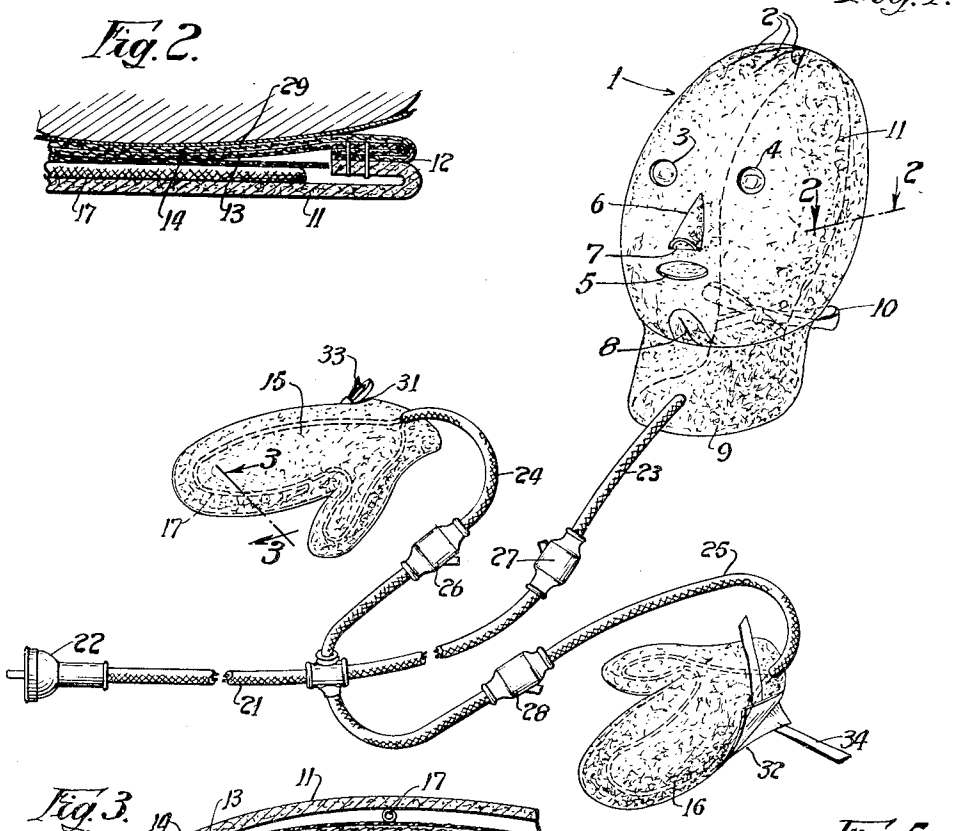


Fig. 2.

Fig. 3.

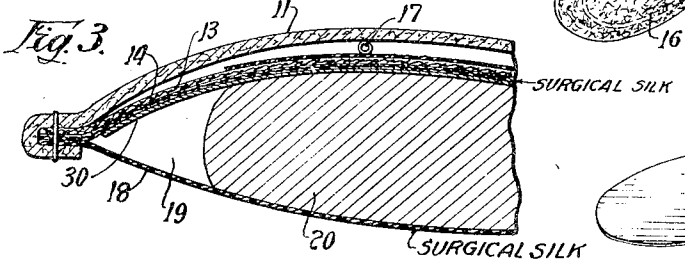


Fig. 5.

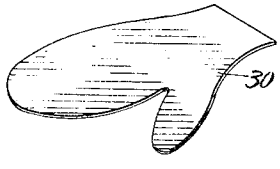
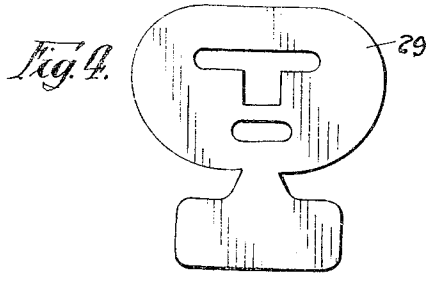


Fig. 4.



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UNITED STATES PATENT OFFICE

2,210,618

METHOD AND APPARATUS FOR TREATING THE SKIN

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Application September 15, 1939, Serial No. 295,137

5 Claims. (Cl. 128—402)

This invention relates to an apparatus and method for treating the skin and has for its primary object the provision of such a method and apparatus which will overcome skin dryness, refine the texture, reduce the skin lines, remove excess matter from the pores, and invigorate the skin by application of liquefied wax thereto with a minimum of discomfort to the patient from the heat.

Another object of this invention is to provide such a method and apparatus for so treating the skin with a maximum of efficiency.

Another object of this invention is to provide a method and apparatus for treating the skin with a low melting normally solid medicament and particularly with a medicament which is normally solid at temperatures above body temperature.

Other and further objects of this invention will be apparent as the same becomes better understood from an examination of the specification and claims in conjunction with the accompanying drawing wherein:

Fig. 1 is a perspective view of the heating apparatus;

Fig. 2 is an enlarged detailed fragmentary section taken at the line 2—2 of Fig. 1;

Fig. 3 is an enlarged fragmentary section taken at the line 3—3 of Fig. 1;

Fig. 4 is a plan view of the face and neck applicator cloth used in conjunction with the apparatus shown in Fig. 1; and

Fig. 5 is a perspective view of the applicator cloth for the back of the hand for use in conjunction with the apparatus shown in Fig. 1.

The beneficial effects of wax in a liquid form upon the skin have long been known. By its application the skin is cleansed and softened and lines therein are removed. According to the practices heretofore followed, however, there have been certain difficulties attendant upon the application of wax to the skin. To produce the proper results, the wax must be in the liquid form. Since ordinary paraffin wax melts at a temperature between 128° and 140° F. and sometimes even higher, its application in molten form causes much discomfort to the patient. It is also difficult to apply the wax to the skin in liquid form and obtain a uniform coating or application thereof. Moreover, it is desirable to maintain the liquid wax in contact with the skin for a considerable period of time. This, in turn, also offers many difficulties.

By means of my invention, these and other difficulties have been obviated. I have developed a method and apparatus by which it is possible to bring the wax or other medicament in liquid form into uniform contact with the skin and to maintain the same in such contact for a substantial period of time.

In the particular embodiment of my invention described herein and referring to the drawing, reference character 1 generally designates a heating pad for the face and neck. This pad 1 is shaped to fit the face by dart stitching as at 2. It has openings as at 3 and 4 for the eyes, and as at 5 for the mouth. The pad 1 is also provided with a suitable nose piece 6 affording a recess on its under side to fit the nose of the patient and provided with an opening 7 so that the patient may inhale and exhale through said opening. The pad fits snugly over the forehead and conforms thereto by virtue of the dart stitching 2 and conforms to the shape of the chin by virtue of dart stitching 8 and extends inwardly to the neck line where it is attached to an extension piece 9 which goes around the neck of the patient. The pad is held in place by tapes 10 which tie in back of the head and neck.

The heating pad is thus shaped to conform to the contour of the surface of the skin to be treated and is maintained at all times in close association therewith.

The pad includes an outer layer 11 of heavy flannel stitched at its edges 12 to an intermediate layer of cambric 13 and a layer 14 of surgical silk on the inner face of the pad. The space between the layer of cambric 13 and the heavy flannel 11 contains wire heating elements, which wires are covered with the usual asbestos covering, and are distributed over the face and neck portion of the pad in predetermined arrangement as to number, spacing and resistance so as to provide a uniform heating of the surface with which the pad is brought into contact. The heating elements are also so arranged as to provide a suitable temperature, usually between 100° F. and 140° F. and, preferably in the neighborhood of 120° F.

Although the above arrangement of materials comprising the pad is to be preferred, any suitable pad structure which conforms closely to the contours of the surface of the skin to be treated and which provides insulation for the heating element may be used. It is, of course, highly desirable if the pad is to be reused that the inner surface be composed of an oil impervious material such as the surgical silk above mentioned.

Heating pads 15 and 16 are similar to the pad

just described except as to plan configuration and certain other details which will be pointed out hereinafter and are provided for each hand of the patient for treatment to the back of each hand (but not the palms). These pads 15 and 16 are preferably in the shape of mittens, the heating side of each containing an outer layer 11 of heavy flannel, an intermediate layer 13 of cambric, and an inner layer 14 of surgical silk. As before, the space between the flannel 11 and the cambric 13 contains heating coils 17 which likewise are arranged as to space, number, and heating characteristics to provide a suitable temperature preferably in the neighborhood of 120°. If desired, these pads 15 and 16 may contain a second layer of surgical silk, here designated as 18, to form with the inside layer of surgical silk a pocket 19 for the reception of the hand 20 of the patient, the palm of the hand facing the layer 18 and the back of the hand facing the pad proper.

Any suitable or convenient electrical circuit for energizing the heating elements of the pad may be used. Thus an electrical cord 21, provided with the usual plug 22, may be connected through main branch 23 to the head and neck pad and through branches 24 and 25 to hand pads 15 and 16 to energize the heating elements of the pads. Simple switches 26, 27 and 28 are provided in the branches 24, 23 and 25, respectively, so that any one of the pads may be connected or disconnected without interfering with the operation of either or both of the other two pads.

To permit an application of the wax or other medicament in the molten form to the skin of a patient without causing extreme discomfort, it is highly desirable that the melting point of the wax be reduced. This result may be achieved by mixing with the wax another substance miscible therewith which possesses a melting point lower than that of the wax. Thus an oil which is liquid at normal temperatures may be mixed with the wax in a proportion which will produce a final composition having a desirable melting point. Any of a number of oils are suitable for this purpose. For example, mineral oil or cocoanut oil may be used.

I have found that a very satisfactory composition consists of a mixture of one pound of paraffin wax with two ounces of cocoanut oil and two ounces of mineral oil. The ingredients are melted together and thoroughly mixed, whereupon they are ready for application to the skin. This composition has a melting point of about 120° F. and may be readily used without discomfort to the patient.

The wax composition is preferably applied to the skin by means of thin white cloths 29 and 30 adapted for use with the face and hands of the patient respectively. These cloths may be of absorbent material and may be treated with the wax composition to deposit a substantially uniform layer of wax thereon. If desired, any suitable sheet material which will serve as a carrier for the wax composition may be used instead of the cloths herein shown. The wax composition is preferably applied to the cloths 29 and 30 by immersing the same in a molten or liquid bath of the composition. By such immersion the cloths will become impregnated or saturated with the composition. After immersion the cloths may be spread on a non-porous flat surface, where they are permitted to dry and harden, after which they are ready for use.

The wax composition should have a melting point substantially above body temperature in order that the patient may obtain the beneficial effects of the treatment. However, I prefer that the composition melt below the temperature of 140°, since contact with the skin of a higher melting substance in the liquid form, if maintained for any substantial period of time, would cause great discomfort to the patient. I find that a melting point of approximately 120° is desirable, but this temperature may, of course, be varied within the range set forth.

In operation, the wax is mixed with the melting point depressing oil to produce the medicament mixture and then applied to the sheet material or cloths 29 and 30 which are used for the application. The cloths are then permitted to cool to solidify the wax composition.

When a treatment is to be given, the cloths 29 and 30, impregnated with the wax composition, are placed upon the skin of the patient, the heating pad is then superimposed over these cloths and adjusted into tightly fitting position. The next step is to raise the temperature of the pad by energizing the heating elements to cause the wax composition to liquefy. It is important that the pad shall act to uniformly raise the temperature throughout its surface. The pad may then be maintained in position at the desired temperature for from 10 to 20 minutes or any other desired period of time. The heavy flannel used in the pad prevents loss of heat, and the surgical silk protects the wiring from the melted wax. After the treatment, the surgical silk is easily cleaned with alcohol.

By using my method and providing the aforesaid apparatus which is so designed as to uniformly distribute the heat over the skin to be treated and to apply such heat uniformly at the exact temperature necessary to liquefy the paraffin in the pieces 29 and 30, the danger of excess heat is avoided in any particular place and a minimum heat discomfort results.

Although I have described my improved method and apparatus in connection with the application of liquefied wax to the skin of a patient, it will be apparent that they may be readily adapted for use with other medicaments and are particularly useful in the application to the skin of low melting medicaments which are normally solid at body temperatures.

This application is a continuation-in-part of my copending application for an improvement in method and apparatus for treating the skin, filed August 3, 1937, Serial No. 157,178.

While there are shown and described certain embodiments of the invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as disclosed in the appended claims, in which it is intended to claim all novelty inherent in the invention as broadly as permissible, in view of the prior art.

I claim:

1. A method of treating the skin, which comprises applying to a sheet of absorbent material a low melting medicament, normally solid at body temperatures, said medicament being in the molten state, to impregnate said sheet with said medicament, cooling said sheet to solidify said medicament, placing said impregnated sheet on the skin to be treated, superimposing over said sheet a heating pad shaped to conform to the contours

of the surface of the skin, and heating said pad to liquefy said medicament.

2. A skin treating medicament of the character described, which comprises a mixture of approximately 80% paraffin wax with approximately 10% of cocoanut oil and 10% of mineral oil.

3. A method of treating the skin, which comprises impregnating a sheet of absorbent material with a molten medicament comprising wax mixed with oil in a proportion suitable to produce a composition melting between 120° F. and 140° F., cooling said sheet to a temperature below 120° F. to solidify said medicament, placing said sheet on the skin to be treated, said sheet being substantially co-extensive with the surface of the skin to be treated, superimposing over said sheet a heating pad adapted to conform to the contours of the surface of the skin, and heating said pad to liquefy said medicament.

4. A method of treating the skin, which comprises applying to a sheet of absorbent material a low melting molten medicament normally solid at body temperatures to impregnate said sheet with said medicament, cooling the sheet to a temperature below the melting point of said medicament to solidify the medicament, applying said impregnated sheet to the skin to be treated, placing a heating pad in contact with said sheet, and heating said pad to liquefy said medicament.

5. A method of treating the skin, which comprises heating a medicament normally solid at body temperatures to a temperature above the melting point thereof to liquefy the same, applying the molten liquefied medicament to a sheet of material, cooling said sheet to a temperature below the melting point of the medicament to solidify the medicament thereon, placing the sheet on the skin to be treated, heating the same to a temperature above the melting point of the medicament to liquefy the medicament, and maintaining said medicament in liquid form in contact with the skin for a substantial period of time.

WILLIAM H. DE ST. CYR.