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HEATING PADS

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Fig. 1.

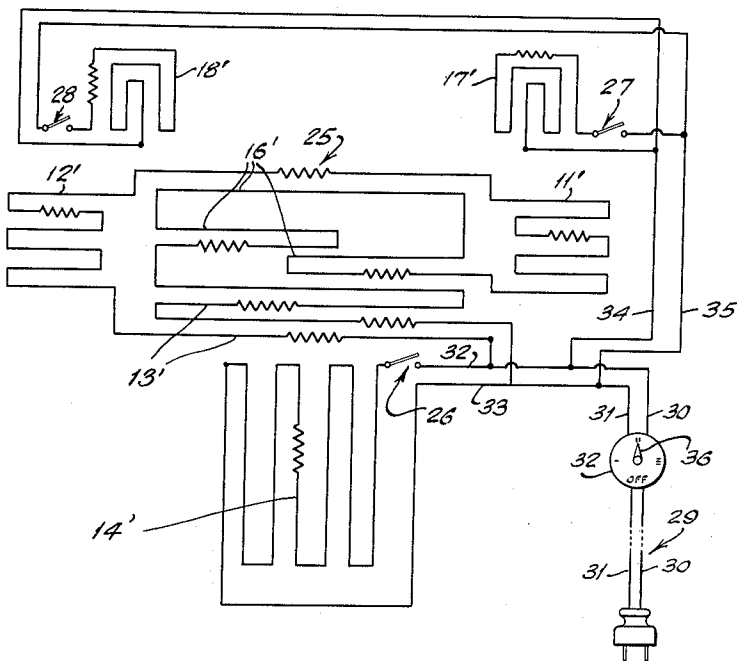
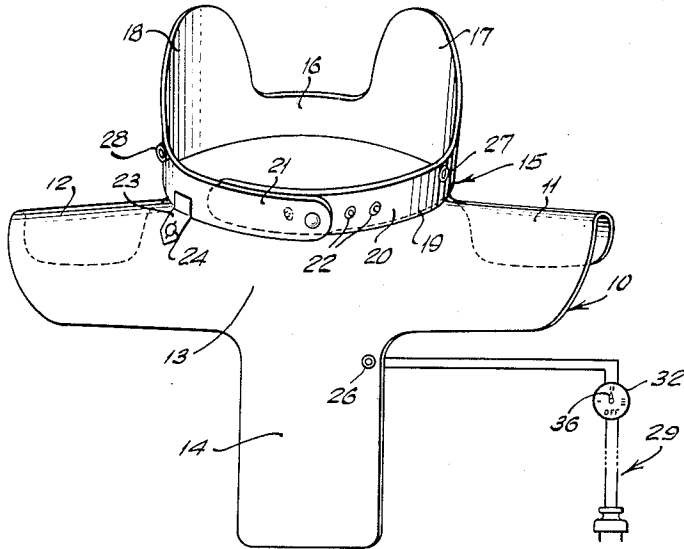


Fig. 2.

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**HEATING PADS**

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3 Claims. (Cl. 219-46)

This invention relates generally to heating devices for therapeutic treatment of certain body portions, similar to that disclosed in co-pending application Serial No. 306,656, filed August 27, 1952, for Body Heating Devices, and is particularly adapted for supplying warmth to the upper chest and shoulder portions, the bronchial chest area, the neck and the ears for relieving congestion in these areas due to colds or similar affections.

In the afore-cited co-pending application the principal aim of that invention is the relief of colds, headaches, sinus and other ailments by the application of heat to the head areas. In extending experiments with that device, it has been determined that when heat is applied to the neck and ear areas as well as to the shoulders, the upper frontal chest and the bronchial chest areas, deep-seated cold affections often resulting in serious ailments become readily relieved.

The prime object of the present disclosure therefore is the provision of a combination heating device which will provide controllable warmth to the neck, the ears, the upper shoulder areas, the upper chest areas and to the bronchial chest area, and which device is relatively simple and inexpensive in construction but very effective in its use.

A further object of this invention is the provision within a combination heating device of the type indicated of a main section comprising a heating pad covering the shoulder and the upper chest areas and the bronchial chest area, and with which main section there is associated an adjustable band-like neck section adapted for heating the neck, and from which neck section extends a pair of ear heating flaps, and wherein the upper portion of the main section and the neck section have a common, continuous resistance element, and wherein individual resistance elements are provided for each of the ear flaps and the bronchial chest portion of the main section.

A further object of this invention is the provision of a combination heating device comprising a main section for applying heat to the upper shoulder portions, the upper chest portion and the bronchial chest portion, and to which main section is fixedly attached a relatively wide, adjustable band-shaped neck-enclosing section from which extend ear covering flaps, and wherein the attachment of the neck section to the main section is effected along the lower edge of a relatively short end portion of the neck section, the line of attachment extending from one of the shoulder areas to approximately the center of the upper frontal chest area of the main section, the neck section thus forming a relatively short fixed end portion and a substantially longer free mobile portion which is adjustable relative to and is adapted to cooperate with the fixed end portion of the neck section, and wherein means are provided at the adjustable mobile portion and at the other upper shoulder area of the main section to detachably hold the mobile portion against the main section after adjustment of the neck section.

A further object of this invention is the provision within the ear flaps and within the bronchial chest portion of the main section of independent and independently controllable resistance elements which are connected in parallel, as is also the resistance element for the main and neck sections.

A still further object of this invention is the provision of a thermostatically controlled main switch interposed between the main supply line and the heating device, by

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means of which main switch the supply of electric energy to all of the resistance elements in the device and the intensity of the supplied energy are simultaneously regulated, irrespective of whether or not only one, two or all independent resistance elements are being energized, and which main switch is adapted to automatically cut out the supply of electric energy when any part of the heating device reaches a certain maximum temperature.

The foregoing and numerous other objects of the present invention will become more fully apparent from the ensuing description in conjunction with the accompanying drawings forming an essential part of the present invention, but being intended primarily for the purpose of explaining the instant device, without restricting it to the actual showing, and wherein:

Fig. 1 illustrates a heating device in accordance with the present invention; and

Fig. 2 shows an electric diagram indicating the various heating elements employed in the several parts of the device and their controls and connections with the main supply source.

As illustrated, the device comprises a main section 10 having sub-sections 11 and 12 adapted to cover the upper shoulder areas, sub-section 13 for the upper frontal chest area and sub-section 14 applied to the bronchial chest area. Secured to the upper edge along a relatively short line extending from shoulder section 11 to approximately the center of the upper frontal chest area is a neck section 15 comprising a relatively wide adjustable neck-encircling band 16 and a pair of ear flaps 17 and 18 extending upwardly from band 16.

As will be seen in Fig. 1, a relatively short frontal portion of the lower edge of band 16 is fixedly secured to main section 10 as indicated at 19, whereby the neck section is formed into a fixed end portion 20 while the rest of the neck section is free and mobile. That mobile portion of the neck section terminates in an adjustable end 21, there being provided on both portions 20 and 21 cooperating snap fasteners or any other suitable connecting means 22 adapted to facilitate adjustment of the neck section to varying sizes. Adjustable end portion 21 is provided with a tab 23, adapted to engage button 24 affixed to main section 10 at a point adjacent shoulder area 12. The tab and button serve for detachably securing the neck section to main section 10 after adjustment of the neck section is effected. Obviously any other suitable means for holding the neck section against the main section in the vicinity of shoulder area 12 may be employed.

In the electrical diagram of Fig. 2 there is shown a main resistance element 25 which is adapted for heating the shoulder areas, the front upper chest area and the neck. The portions of resistance element 25 for heating the shoulder areas are indicated at 11' and 12', those portions for heating the upper frontal chest area are marked at 13' and the portions for heating the neck are denoted at 16'. There is provided an independent element 14' for heating the bronchial chest area, and independent heating elements 17' and 18' are designed for heating the two ear flaps 17 and 18, respectively. All of the three independent heating elements are equipped with individual, manually operable switches. Thus switch 26 serves heating element 14', and the ear flap heating elements are controlled by switches 27 and 28.

The supply of energy to the several heating elements is effected by main supply line 29 composed of two conductors 30 and 31 which are connected with thermostatically controlled main switch 32. The latter governs the supply of energy simultaneously to all of the resistance elements. Extending from main conductors 30 and 31 are branches 32 and 33 leading to resistance element 14' for the bronchial area. These branches are independent-

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ly controlled by switch 26. Other branches 34 and 35 supply current to the two ear flap resistances which are individually controlled by switches 27 and 28. Although the individual switch controls for these ear flaps are not absolutely essential, it is preferred to provide them, however they may be readily omitted.

As has been said above, main switch 32 is thermostatically controlled so that when any part of the heating device reaches a certain maximum temperature, switch 32 will automatically either cut off or substantially reduce the intensity of the current supply to the heating device. Such instruments as switch 32 are well known in the art and need not be explained and do not constitute a part of the present invention except as to its location in relation to the different resistances of the heating device. However, main switch 32 is so arranged that it will control the supply of current to the heating device irrespective of whether all, any number of or any one of the resistances are in use. Since the resistance element of the main section has no specific control, main switch 32 is relied upon to permit the heating of the shoulder areas, the frontal upper chest portion and the neck to the desired temperature to which the main switch is adjusted. As will be seen from Fig. 2 main switch 32 is provided with a movable indicator 36 which may be set to any one of three positions or to the "off" position, at which latter no current is supplied to the heating device.

The adjustability of neck section 15 not only provides the possibility of using the device for different neck sizes, but also facilitates the distancing of neck band 16 and of ear flaps 17 and 18 in respect to the neck and ears, thereby regulating, in addition to the control by switch 32, the intensity of heat applied to these body areas.

While the drawings show a specific construction of the present heating device as well as a specific electric diagram indicating the arrangement and location of the different resistance elements, it is quite obvious that changes both in the physical structure of the device as well as in its electrical connection and control may be required, for instance, the two ear flaps 17 and 18 may be connected by a continuous unheated web to provide a more substantial support for them, although the flaps can be sufficiently reinforced to render them self-supporting. For the reasons given above, modifications and changes are deemed to reside within the scope of the present invention as defined in the annexed claims.

What is claimed as new is:

1. In a combination electric heating device for application to certain specific body areas only, that is the ear, throat, chest and shoulder regions, a one-piece structure composed of a major section adapted for placement over the shoulders and the upper frontal chest portion, a bronchial section, depending from and forming an integral part of the major section covering the upper frontal chest portion, a neck section fixedly associated for a limited distance with a portion of the major section but being adjustable about the neck of the wearer, and a pair of ear sections extending from said neck section, and wherein the major and neck sections are provided with a continuous resistance element, the bronchial and ear sections having independent resistance elements and independent control means for their respective elements, said independent control means forming integral parts of the bronchial and ear sections, and a main control for the resistance elements of all sections, and wherein the independent control means for the respective independent resistance elements comprise manually operable independent switches governing the supply of electric energy to these elements, said switches forming integral parts of said frontal and ear sections, and wherein said main control comprises an automatically operable, thermostatically controlled but manually settable switch for simultaneously governing the supply and the intensity of supply of energy to the resistance elements of all sections.

2. In a combination heating device adapted for supply-

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ing warmth to a plurality of certain body portions either individually or simultaneously or independently in any desired order or sequence, a heating pad structure composed of two co-related physically and electrically connected sections, that is a main section and a neck section, said main section forming a pad extending over the upper shoulder areas, the upper frontal chest area and the bronchial area, said neck section comprising a relatively wide adjustable neck-enclosing band and a pair of ear-covering flaps, the lower edge of one end of the band being permanently attached to the main section for a relatively short distance between one of the shoulder areas and approximately the center of the upper frontal chest area and forming the fixed end of the band, the rest of the band being free and terminating in an adjustable end adapted for cooperation with the fixed end, and means provided with the adjustable band end and the other shoulder area of the main section for detachably holding said adjustable band end in position after adjustment, and wherein a continuous resistance element is provided in that portion of the main section which extends over the upper shoulder areas and the upper chest area and in the neck-enclosing band, and wherein independent resistance elements are provided for each of the ear-covering flaps and for the bronchial area of the main section, and wherein each of the independent resistance elements have individual, manually operable switches, and wherein a thermostatic control is provided for simultaneously governing the supply of energy to all of the resistance elements.

3. In a combination heating device adapted for supplying warmth to a plurality of certain body portions either individually or simultaneously or independently in any desired order or sequence, a heating pad structure composed of two co-related physically and electrically connected sections, that is a main section and a neck section, said main section forming a pad extending over the upper shoulder areas, the upper frontal chest area and the bronchial area, said neck section comprising a relatively wide adjustable neck-enclosing band and a pair of ear-covering flaps, the lower edge of one end of the band being permanently attached to the main section for a relatively short distance between one of the shoulder areas and approximately the center of the upper frontal chest area and forming the fixed end of the band, the rest of the band being free and terminating in an adjustable end adapted for cooperation with the fixed end, and means provided with the adjustable band end and the other shoulder area of the main section for detachably holding said adjustable band end in position after adjustment, and wherein a continuous resistance element is provided in that portion of the main section which extends over the upper shoulder areas and the upper chest area and in the neck-enclosing band, and wherein independent resistance elements are provided for each of the ear-covering flaps and for the bronchial area of the main section, and wherein each of the independent resistance elements have individual, manually operable switches, and wherein a thermostatic control is provided for simultaneously governing the supply of energy to all of the resistance elements, and wherein said continuous resistance element and said independent elements are connected in parallel.

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