Nov. 11, 1952 R. J. NEIDNIG 2,617,916

HEATING PAD IN A SLEEVE FORM

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Fig. 1.

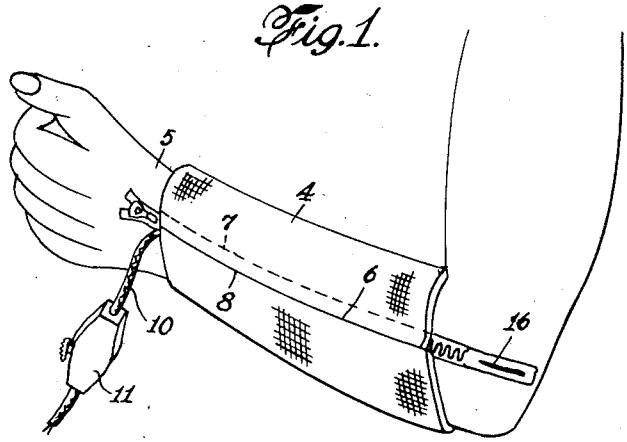


Fig. 2.

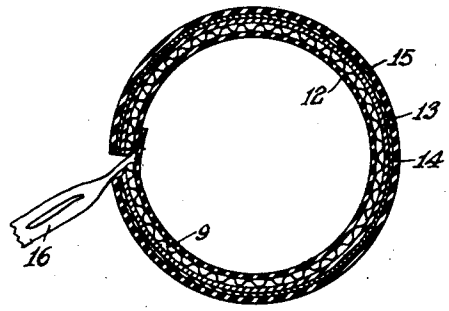
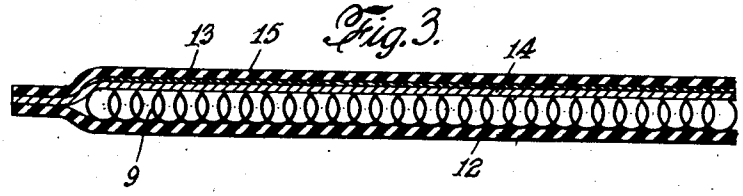


Fig. 3.



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HEATING PAD IN A SLEEVE FORM

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1 Claim. (Cl. 219—46)

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This invention relates to heating pads. More particularly the invention pertains to a combined heating pad and sleeve. Further the invention relates to an improved electrically heated pad.

Heating pads are used in hospitals and in homes for thermally treating ailing portions of a body, a purpose being to stimulate blood circulation in local areas of the body as a means for easing or alleviating pain and discomfort. Devices for applying heat to the body consist generally of a sheet or pad composed of layers of fabric between which are positioned a suitable electric heating element, the combination being stitched or otherwise held together to form a flat, flexible pad or blanket. While quite generally useful, this type of pad presents certain serious limitations which it is an object of this invention to meet and overcome.

Accordingly, it is an object of the invention to provide an improved heating pad which may be used as a pad or blanket in the usual manner to treat a relatively flat area, the said pad being so constructed and equipped that the same may be wrapped about an arm, leg or other body part and retained in position thereon conveniently and comfortably during the period of treating. It is an object also to provide a pad of the kind described the retaining means of which is adjustable so as to firmly hold the pad in position on limb or other body portions of varying sizes. Another object is to provide a heating pad which may be affixed to an affected body area in such manner that same will not be displaced by the normal or abnormal activity of the body. It will be understood that with the usual type of heating pad serious consequences may follow the dislodgement of the pad from its intended area as by coming in contact with other body portions, for example during sleep. Also, under such conditions, by the loss of the thermal effect. An important objective is to provide a heating pad that is inexpensive to make, efficient in operation and economical in use.

Further objects, advantages and special features of the invention will be brought out in the following specification read in conjunction with the drawings forming a part thereof and in which:

Figure 1 is a perspective view of a preferred form of my heating pad applied to the arm of a person.

Figure 2 is an end view, in section, of my heating pad.

Figure 3 is a longitudinal cross-section of a portion of my heating pad.

In Fig. 1, 4 is the heating pad wrapped around

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the forearm 5 of a person (not shown) and retained in place and in surface contact with the limb by suitable means 6 which may be a zipper-fastener, the cooperating parts of which are carried by the abutting edges 7 and 8 of the pad. Electric current is conveyed to the heating element 9 of the pad by the cable 10 provided with the electric switch 11. It will be understood that suitable, well known, thermostatic means may be employed for governing the current supplied to the pad by cable 10, such means being adapted to regulate the degree of heating and/or to automatically discontinue the supply of current when a predetermined temperature is reached. In Fig. 2, the pad is shown in section, seen from one end. The base fabric 12 of suitable insulating material forms the inner layer upon which is positioned a heating coil 9 of any suitable type, such as a coil of insulated resistance wire and, upon this heating element is placed another layer 13 of a suitable flexible fabric, the three layers then being stitched or otherwise held close together to form a flat composite sheet or pad. It is important that the fabric layers 12 and 13 be of such dimensions that a margin, beyond the edge of the heating element be provided at all four edges to permit the necessary stitching or other means employed to provide a strong and secure sealing edge that completely encloses the heating element. Within the outer fabric layer 13, a sheet of aluminum foil or other suitable radiant heat reflector may be placed next to the heating element, as shown at 14, and the outer layer of fabric 13 may be a material that is a heat insulator or an extra layer 15 of a suitable heat insulating material may be employed as the outer layer. Either or both of these means may be employed in the construction of my device depending upon the purpose and use for which same is devised. It will be understood that the insulating layer will serve to prevent external heat loss, thus directing more heat to the body portion during treatment. Also, it will be understood that by employing the metallic layer, radiant heat may be directed to the area under treatment. This is an important feature of my heating pad adapting it to produce a new and novel effect not obtained by electrical heating pads as usually constructed. I have shown and described the use of a zipper-fastener as a convenient means for securing my pad in the tubular form the elements of the zipper being secured to the abutting edges of the pad but I desire it to be understood that I may use any means for the purpose that is easy and convenient to operate and further that, where it is desired to

provide for different body portion sizes I may place cooperating portions of the zipper or retaining means at intervals, spaced apart from the edge to accommodate different tubular sizes or otherwise so arrange the locking or connecting means to accomplish the desired end.

From the above it will be seen that I provide an improved heating pad which while adapted to be used in the usual manner is also capable of use in a new and novel manner and adapted to produce new and important improved results in thermal treatments. While I have shown and described a preferred embodiment of my invention it is to be understood that changes and modifications may be resorted to in constructing the device which do not depart from the spirit of the invention as set forth in the claims. It is also to be understood that while fabric has been mentioned as the composition of the layers composing the pad, I may employ any material deemed suitable for the purpose such as cloth, sheet rubber, flexible sheet plastics and the like. Also, while the device has been indicated as wrapped about an arm or leg portion it is to be understood that this is not to be construed as a limitation it being obvious that my device may be constructed for such treatment of any portion of the body as may be required or desired. When not in use, the device may be hung by a suitable loop element 16 attached to the encasing envelope.

I claim as my invention:

A flexible electric heating pad of generally uniform thickness and substantially rectangular areal form, said heating pad being adapted to be wrapped about an arm or the like and including the combination of a fabric envelope of heat insulating material; a generally flatly arranged flexible heating element mounted within the envelope, the envelope having two opposite longitudinal edges mutually abutting when said envelope is folded about the arm or the like; a sheet of radiant heat reflecting material disposed between the outer fabric wall of said envelope and the heating element and substantially coextensive with said heating element; electric conductor means connected to said heating element and extending therefrom to the outside of said envelope for conducting electric energy to said heating element; and mutually mating portions of hookless fastener means mounted upon the opposite abutting longitudinal edges of said envelope for releasably securing said edges together at will and drawing the heating pad into close surface contact with said arm or the like.

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