April 15, 1930. J. M. NUNNALLY 1,754,763

THERAPEUTIC PAD

Filed Feb. 13, 1928

Fig. 1.

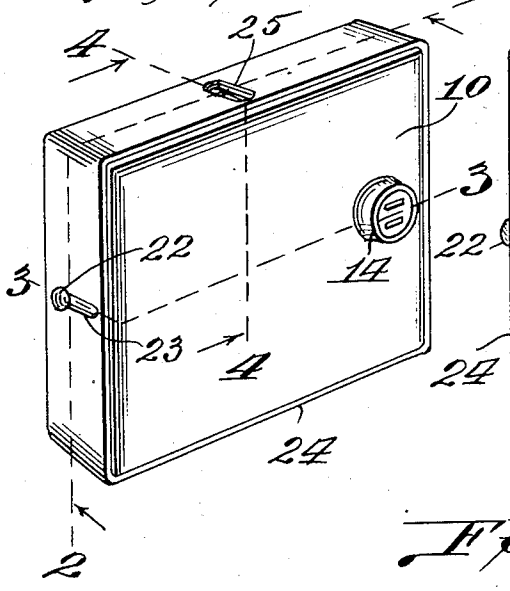


Fig. 2.

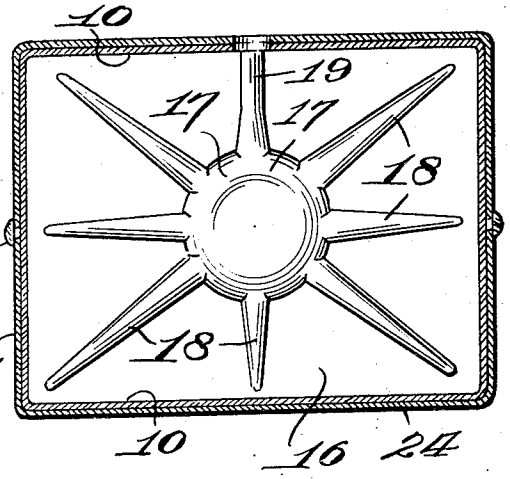


Fig. 3.

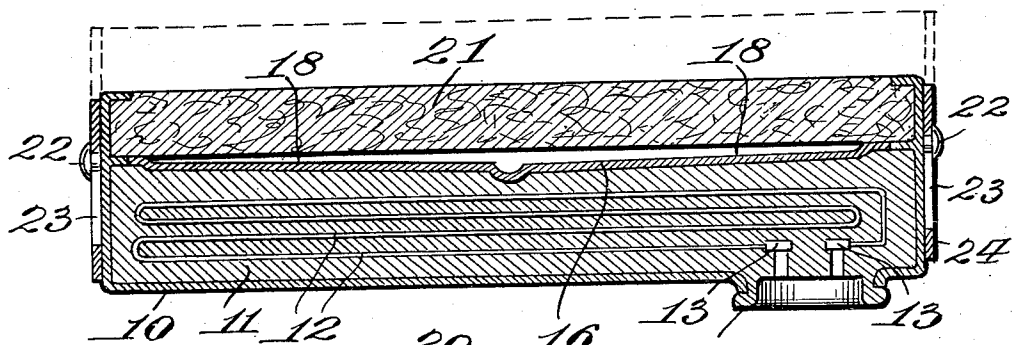
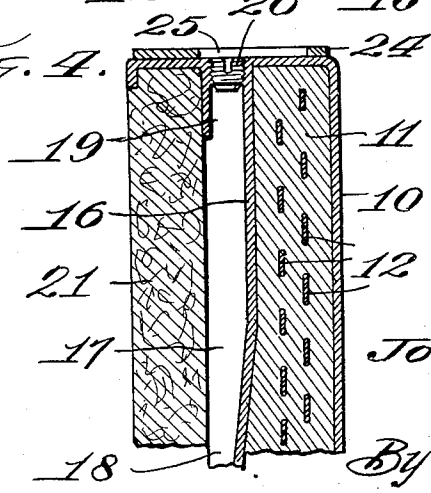
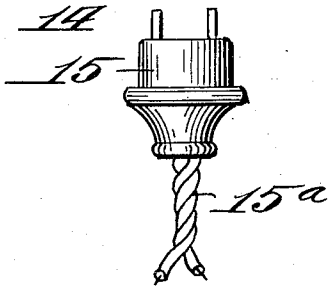


Fig. 4.





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UNITED STATES PATENT OFFICE

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THERAPEUTIC PAD

Application filed February 13, 1928. Serial No. 254,022.

My invention relates to a therapeutic pad or applicator and the principal object of my invention is to provide a relatively simple, practical and inexpensive pad that may be be advantageously employed for applying heat and vapor to the body for the treatment of various ailments, such as rheumatism, lumbago, muscular aches or pains, and the like, and said device being also highly effective in stimulating the circulation of blood in the human body, and particularly those parts to which the applicator is applied.

A further object of my invention is to provide a therapeutic pad or applicator that is electrically heated and said pad or applicator carrying an absorbent member that is adapted to receive a liquid, which, when vaporized, will produce an excess or a relatively large amount of oxygen, and which latter will readily enter the pores of the skin as said pores open as a result of the heat developed within the pad or applicator.

A further object of my invention is to provide a therapeutic pad of the character referred to that is relatively simple in construction, inexpensive of manufacture, and which will be very effective in performing the functions for which it is intended.

With the foregoing and other objects in view, my invention consists in certain novel features of construction and arrangement of parts that will hereinafter be more fully described and claimed and illustrated in the accompanying drawing, in which—

Fig. 1 is a perspective view of a therapeutic pad of my improved construction.

Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged horizontal section taken on the line 3—3 of Fig. 1.

Fig. 4 is an enlarged vertical section taken on the line 4—4 of Fig. 1.

Referring by numerals to the accompanying drawing, which illustrates a practical embodiment of my invention, 10 designates a box-like container preferably formed of light weight sheet metal, such as aluminum, said container comprising side walls, end walls, and a bottom or back, and the top or front being open.

Occupying the rear or lower portion of the space within the case or container 10, is a body 11 of suitable insulating material such as fire clay, asbestos or porcelain, and embedded therein is an electric heating coil 12 or a series of connecting heating elements. The terminals of this coil connect with contact members 13 that are arranged in a socket 14 and which socket is adapted to receive the contact members of a plug 15 that is carried by electric conductors 15ª, and which latter are connected to a suitable source of electric current supply.

Arranged on the front or upper face of the body 11 of insulating material, is a thin metal plate 16 in which is pressed a centrally arranged recess 17 and leading therefrom, is a series of radially disposed grooves or channels 18 that are pressed in the metal forming the plate or partition 16. The upper portion of the channel that extends from the upper portion of the recess 17 to the top of the plate or partition is made in the form of a short tube 19, the upper portion thereof being internally threaded so as to receive a screw plug 20 and which latter functions as a closure for the connected chambers within the recess 17 and radially disposed grooves or channels 18.

Positioned within the housing or container 10 and filling the space therein, in front of the plate or partition 16 is a porous absorptive body 21 which may be of any suitable material; for instance, porous earthen material, asbestos or the like.

The rear face of this porous body functions as the front wall for the pockets or chambers that are formed in plate 16 by the rearwardly pressed portions 17 and 18.

Mounted for sliding movement upon the side and end walls of the case or container 10 and retained thereon by headed studs 22 that pass thru slots 23, is a rectangular frame 24 comprising side and end walls and which frame, when moved forwardly to its limit of movement, as illustrated by dotted lines, Fig. 3, provides a pocket or chamber directly in front of the exposed face of the porous member 21 and which pocket or chamber is adapted to receive a fabric pad; for instance, a folded towel.

Formed in that portion of the sliding frame that overlies the screw plug 20 is an opening 25 which permits ready access to said screw plug.

In the use of my improved therapeutic pad, screw plug 20 is removed and a quantity of liquid is delivered to tube 19 and this liquid passing into the pocket or recess 17, and the grooves of channels 18 will be distributed over the rear or inner face of the porous member 21, and in a short time the latter will be entirely impregnated with the liquid.

Any suitable liquid may be used for impregnating the porous member 21, although I prefer to use a liquid, which, when heated, will throw off a much greater amount of oxygen than plain water, and in some instances, or for the treatment of said ailments, the liquid may contain certain curative or healing agents. After the porous member 21 has thus been charged with liquid, the plug 20 is seated in the upper portion of tubular member 19, and the plug 15 that is connected to conductors 16 is now inserted in the socket 14 so that electric current is supplied to the heating coil or elements 12.

In a short time, the heat developed by the coil 12 will heat the porous member 21 and the liquid contained therein and the exposed face of the porous member is applied to that portion of the body that is to be treated, with the result that the heat will open the pores of the skin and the oxygen released by the heating of the liquid carried by the porous member 21 will enter the open pores, thereby producing the desired results.

In the event that the treated portion of the body cannot comfortably bear the heat of the applied pad or applicator, the frame 24 that surrounds the applicator may be moved forward to the position shown by dotted lines in Fig. 3, and a fabric pad, preferably, a folded towel may be placed within the pocket formed by the projected frame and thus the heat will be modified and the released oxygen will pass thru the pad to the open pores of the skin and from thence to the capillaries that lead to the veins and arteries.

If desired, a rheostat may be associated with the source of electrical supply that is associated with the pad or applicator and where this is done, the degree of heat developed within the pad may be very accurately regulated.

In some instances, it may be found desirable to place in the chamber between the partition 16 and the porous body 21, a compound either semi-liquid or in powder form, and which compound is capable of giving off a relatively high degree of oxygen when heated and further, it may be found desirable in some instances, to saturate the porous body 21 with a liquid compound by pouring the latter onto the exposed face of said porous member.

I have described the porous absorbent member as being formed of earthen material, but in some instances it may be found desirable to form this porous member from flexible material such as rubber or composition that will withstand a certain degree of heat or that degree that is required to release the oxygen from the compound that is carried by said porous member. By making the porous member flexible, it may be readily applied to rounded or curved portions of the body.

While I have shown the porous member as being permanently secured or associated with the heating element, it may be found desirable in some instances, to associate said heating element and porous member so that it may be readily disconnected when desired.

Thus it will be seen that I have provided a therapeutic pad or applicator that is relatively simple in construction and which may be advantageously employed in the application of heat, vapor and oxygen to the human body for the treatment of various ailments and for materially increasing the circulation of blood throughout the treated portion of the body.

It will be understood that minor changes in the size, form and construction of the various parts of my improved therapeutic pad may be made and substituted for those herein shown and described without departing from the spirit of my invention, the scope of which is set forth in the appended claims.

I claim as my invention:

1. In a therapeutic pad, a frame, a porous member arranged in said frame and having an exposed face, a heating element within the holder behind said porous member and a frame carried by said holder and adapted to be moved forwardly therefrom beyond the exposed face of said porous member.

2. In a therapeutic pad, a frame, a porous member arranged in said frame, a heating element arranged in the frame behind said porous member, there being a chamber formed between the porous member and heating element, and a frame mounted for sliding movement upon the first mentioned frame and adapted to be shifted forwardly from the side on which the porous member is arranged.

3. In a therapeutic pad, a frame, a partition arranged therein, a porous member arranged in the frame behind said partition, there being a chamber formed between said partition and porous member, said partition having an inlet opening, a removable plug closing said inlet opening, and a heating element arranged in the frame behind said partition.

4. In a therapeutic pad, a frame, a partition arranged therein, a porous member arranged in the frame behind said partition, there being a chamber formed between said partition and porous member, said partition having an inlet opening, a removable plug

closing said inlet opening, a heating element arranged in the frame behind said partition, and a frame surrounding the first mentioned frame and mounting for sliding movement thereupon so as to be shifted forwardly from the side of the pad on which the porous member is arranged.

In testimony whereof I affix my signature.

JOSEPH MARCUS NUNNALLY.