Sept. 15, 1936. A. E. LOWER ET AL 2,054,332

ELECTRIC THERAPEUTIC LAMP

Filed Nov. 3, 1933

Fig. 1

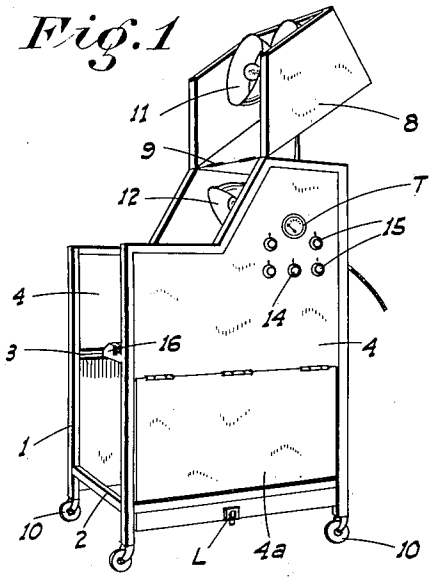


Fig. 2

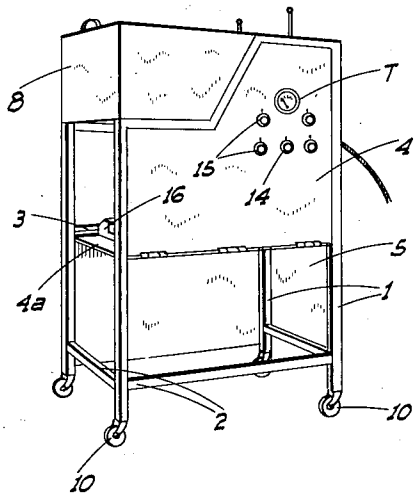


Fig. 3

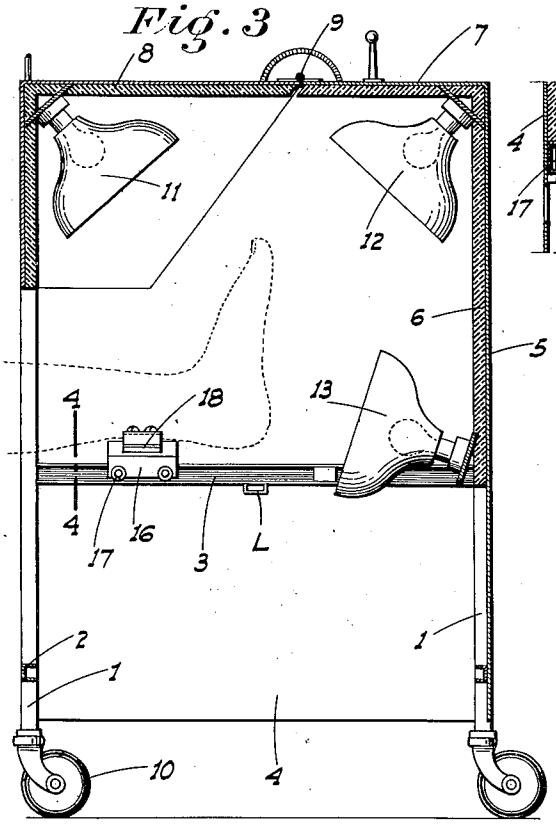


Fig. 4

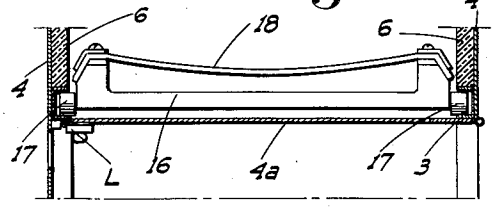
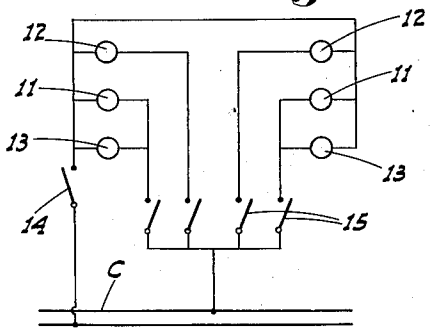


Fig. 5



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ELECTRIC THERAPEUTIC LAMP

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3 Claims. (Cl. 128—375)

The invention relates to therapeutic lamps and particularly to one of a type designed for treating the feet and the lower portions of the legs of a patient.

The principal objects of our invention are to provide an electric apparatus of this character so constructed and arranged that a great concentration of heat or light rays on the members being treated may be had with a relatively low consumption of electric current; one in which such heat or rays may be selectively directed against the feet from different directions and with different intensities without moving the feet and without the use of any complicated electrical apparatus; and one in which a comfortable support for the feet is provided, which may be manipulated by the patient to alter the position of the feet in the zone of heat as may be desired and arranged so that the entire area of the feet is exposed to the heat and light rays.

In attaining the above objects we make use of a heat insulating cabinet in which the lamps are enclosed, so that not only are the lamps protected but the heat therefrom is not dissipated. A further object of our invention is to arrange this cabinet so that the lamps may be easily changed when desired. This is a great convenience since at times it is necessary or desirable to use ultra-violet, infra-red or other special types of lamp in giving therapeutic treatments.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects we accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawing similar characters of reference indicate corresponding parts in the several views:

Fig. 1 is a perspective view of the apparatus showing the lid raised.

Fig. 2 is a similar view showing the lid closed.

Fig. 3 is a sectional elevation of the apparatus taken on a plan just inside the near wall.

Fig. 4 is a fragmentary transverse section on the line 4—4 of Fig. 3.

Fig. 5 is a diagram of the preferred lamp circuit arrangement.

Referring now more particularly to the characters of reference on the drawing, the cabinet of the apparatus is of rectangular cross section and comprises corner legs 1, the back ones of which are higher than the front ones. All the legs are connected near the bottom by suitable horizontal bars 2 and the corresponding front and rear legs are connected intermediate their ends by inwardly facing horizontal channel rails 3. The area outlined by the legs is enclosed from the cross bars to the top, except down the front, by side and back walls 4 and 5 respectively, which are alined above the rails 3 with suitable heat insulating material 6. The portion 4a of one side wall below the corresponding rail 3 is hinged onto the adjacent wall 4 for upward and inward swinging or raising movement. The depth of such portion is substantially that of the width of the cabinet so that it may be raised to form a bottom closure for the cabinet immediately below said rails, as shown in Figs. 2 and 4. Suitable cooperating latch elements L are provided to hold said member 4a in its raised position.

The side walls of the cabinet extend horizontally toward each other for a certain distance from the top of the legs (which are on different levels), the adjacent ends of such horizontal portions being connected by a diagonally cut edge. The top of the cabinet is covered along the back horizontal portion of the side walls by an insulated roof 7. The cut down portion of the top of the cabinet in front of the roof is covered by a lid 8 having depending side and front walls to follow the contour of the top edges of the side walls, said lid being hinged as at 9 along the front edge of the roof. With this arrangement the cabinet has a complete rectangular form when the lid is down and the front of the cabinet is freely open from the bottom of the lid down to the front cross bar 2. The legs are mounted on casters 10 so that the apparatus may be readily moved about the room.

A transversely spaced pair of lamp and reflecting units 11 is mounted inside the lid at the top corner of the same and face (when the lid is closed) at a downward and rearward angle. A similarly disposed pair of lamp units 12 is mounted in the top back corner of the cabinet, said units facing at a downward and forward angle. A third pair of lamp units is mounted in the back of the cabinet about on a level with the rails 3 and are disposed in forwardly facing relation with a slight upward slant. As a result of this arrangement the rays and heat from the lamps are concentrated in the cabinet area above the rails and substantially centrally of the depth thereof.

The lamps are connected to a main circuit A in which a time switch 14 is interposed. The various lamps themselves are wired together in various combinations in the circuit with indi-

vidual switches 15, so that all or only a certain number of said lamps need be energized at any one time. In the preferred arrangement as shown there are separate switches 15 for the two top lamps 12, another switch 15 for one of the lamps 11 and 13 together, and another switch 15 for the other two lamps 11 and 13. In this manner any number of lights from one to all six may be operated depending on the treatment and the amount and direction of the heat desired, without removing any of the lamps or inserting others of different wattage. The various switches as well as a thermometer T are mounted on one side of the cabinet on the outside so as to be convenient to the operator.

A carriage 16 extends between the rails 3, being mounted on rollers 17 which engage the rails so that the carriage is freely movable along the same. A flexible saddle such as a strap of leather 18 extends across the carriage in suspended relation between its ends, to support the legs of a patient adjacent the ankles, as indicated in Fig. 3. The height of the strap 18 to the bottom of the lid is less than the length of an upstanding or vertically disposed foot, as shown, so that the permanently open area through which the heat can escape is reduced to a minimum. At the same time the foot may be easily inserted and rested on the carriage strap when the lid is raised, and after the lid is again lowered there is ample space for the horizontal movement of the foot within the confines of the cabinet and without touching any of the parts thereof.

When the wall 4*a* is swung up to form a bottom closure for the cabinet adjacent the carriage supporting rails, the heat obviously will be all confined within the cabinet in the zone where it is most needed for treatment of the feet. At the same time, since the front opening in the cabinet is unobstructed substantially from top to bottom, a patient may insert the lower part of his legs therein from the knees down for treatment of various ailments. When thus used the carriage is moved back in the cabinet out of the way, while the swinging wall 4*a* is of course lowered, since it is then desired that the heat shall extend down and be confined almost to the floor.

From the foregoing description it will be readily seen that we have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described our invention what we claim as new and useful and desire to secure by Letters Patent is:

1. A therapeutic lamp comprising a cabinet having an opening for the insertion of the member to be treated, means in the cabinet to support a foot in an upstanding position from the heel, said means being above the bottom of the cabinet, heat generating means in the cabinet above said supporting means, side walls on the cabinet extending below said supporting means, and means hinging one such wall along its top edge adjacent the supporting means to the adjacent side of the cabinet for upward and inward raising movement, the height of said hinged wall being substantially the same as the width of the cabinet whereby when said wall is swung up it will form a bottom closure for the cabinet immediately below the supporting means.

2. A therapeutic apparatus for foot and leg treatment comprising a cabinet having a front opening for the insertion of the lower portion of the legs when said portions are horizontal or vertical selectively and a carriage slidably mounted in the cabinet for movement from the front toward the back of the same and adapted to support the legs when the latter are horizontally disposed, said carriage being relatively short relative to the depth of the cabinet whereby said carriage when moved back into the cabinet will be out of the way for the insertion of the legs in a vertical position.

3. A therapeutic lamp comprising a cabinet to be supported on and extending to adjacent a floor, and having an opening for the insertion of the member to be treated, means in the cabinet to support a foot in an upstanding position from the heel and disposed above the floor a distance substantially equal to the average length of the lower portion of a leg, heat generating means in the cabinet above the supporting means, the interior of the cabinet being normally open to the floor below the foot supporting means and means to selectively form a bottom closure for the cabinet below and adjacent the supporting means.

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