June 8, 1926.

1,587,505

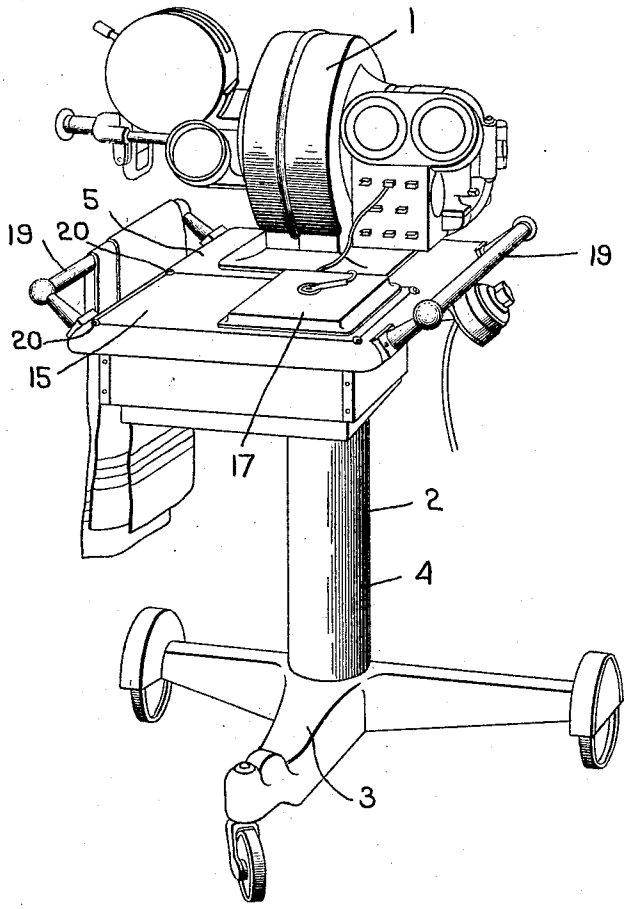
R. W. CHAPMAN

ELECTRIC THERAPEUTIC DEVICE

Filed March 29, 1924

2 Sheets-Sheet 1

Fig. 1.



Inventor.
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2 Sheets-Sheet 2

Fig. 2.

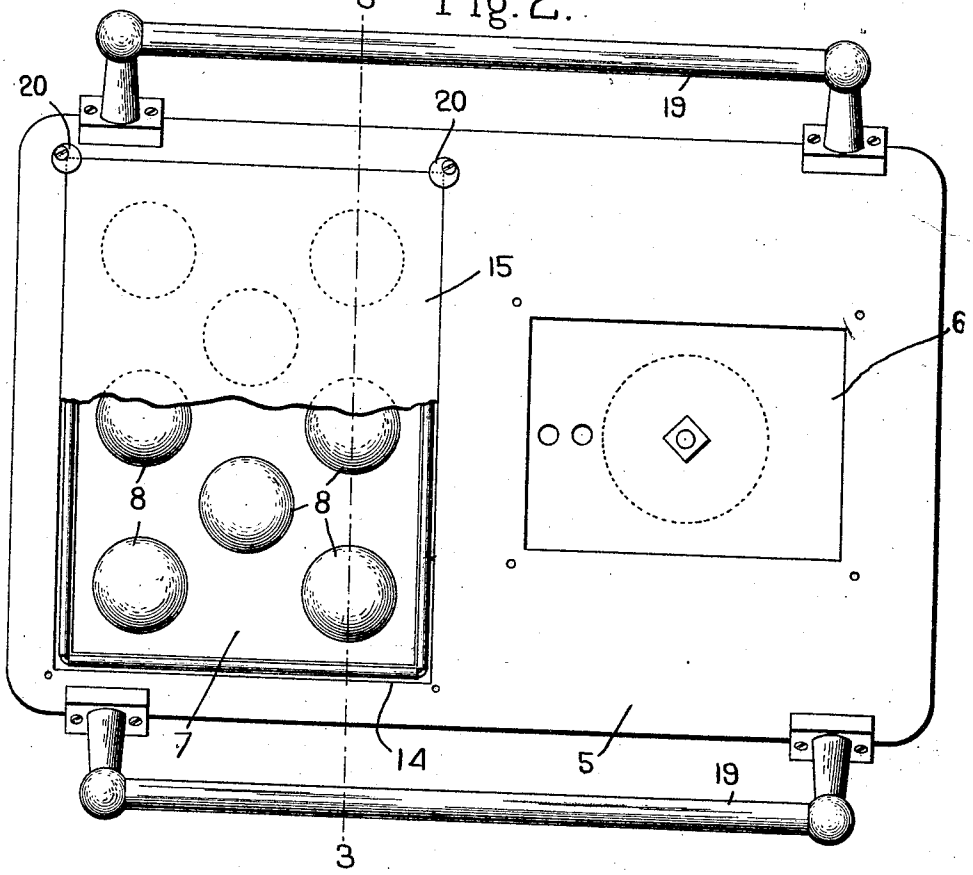
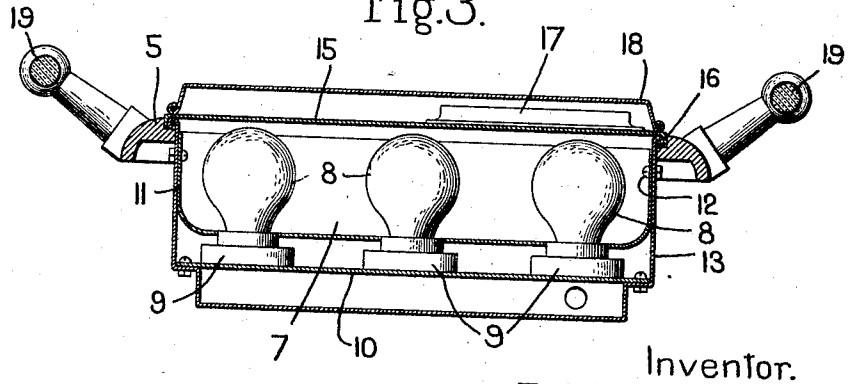


Fig. 3.



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Patented June 8, 1926. 1,587,505

UNITED STATES PATENT OFFICE.

RALPH W. CHAPMAN, OF OLD TOWN, MAINE, ASSIGNOR TO T. M. CHAPMAN'S SONS' CO., OF OLD TOWN, MAINE, A CORPORATION OF MAINE.

ELECTRIC THERAPEUTIC DEVICE.

Application filed March 29, 1924. Serial No. 702,822.

This invention relates to an electric therapeutic device and particularly to the stand on which the electric generating apparatus is supported.

In using an electric therapeutic apparatus of the type shown in my Patents Number 1,153,839, dated Sept. 14, 1915, and No. 1,268,545, dated June 4, 1918 it is customary to employ a moist pad or surface electrode which is placed on the body of the patient at the point where the treatment is to be applied and which is electrically connected to the generating apparatus. It is the usual practice to have the moist pad heated when it is applied to the patient, this commonly being done by immersing the pads in warm water which serves both for moistening them and heating them.

These pads after being thus immersed in the warm water are usually squeezed or wrung to express some of the surplus water and it frequently happens that more or less of a time interval will elapse between the heating of the pad and its application to the body of the patient. After the warm water has been squeezed from the pad the surface tends to cool very quickly and unless the pad is applied immediately to the patient after it has been heated it has a cold or clammy feeling which is unpleasant.

One of the purposes of the present invention is to provide a novel electric therapeutic apparatus of this type which has associated therewith means for not only heating the pads but for maintaining them hot until they are applied. In accordance with the present invention the stand or support for the electric generating apparatus is formed with a heating chamber within which are located heating units, preferably in the form of electric lamps, which chamber is covered by a metal plate that becomes rapidly heated while the heating units are in operation. This plate forms a support on which the moist pads may be laid and the heat from the plate serves to keep the pads or electrodes hot until they are applied to the patient. The heater is so arranged that the pads may be steam heated, if desired, and I have found from experiment that a pad heated by a steaming process is more soothing to the patient than one heated by simply dipping it in hot water.

A further object of my invention is to provide an improved construction for thus heating the pads by which they can be thoroughly sterilized so that my invention accomplishes both heating and sterilization of the pad.

In order to give an understanding of the invention I have illustrated in the drawings a selected embodiment thereof which will now be described after which the novel features will be pointed out in the appended claims.

Fig. 1 is a perspective view of an apparatus embodying my invention;

Fig. 2 is a top plan view of the stand showing the table portion thereof with the electric generator removed;

Fig. 3 is a section on the line 3—3, Fig. 2.

In the drawings 1 indicates generally a sinusoidal wave generator of the type illustrated in my Patents No. 1,153,839, dated September 14th, 1915 and No. 1,268,545, dated June 4th, 1918. This is supported on a stand indicated generally at 2 and which comprises a base or tripod 3, a column 4 rising therefrom and a top or table portion 5 on which the apparatus 1 is secured. The generating apparatus 1 is shown mounted on the back portion of the table or support at the point indicated at 6 in Fig. 2 and the portion of the table in front of the apparatus is formed with a chamber 7 adapted to receive some suitable heating units by which the pads may be heated or sterilized. This chamber 7 is herein shown as formed within a sheet metal casing 13 which is removably retained in an opening 14 formed in the table portion 5 which is preferably of cast metal.

While any suitable heating apparatus may be employed for this purpose I prefer some form of electric heater and have obtained excellent results by the use of electric lamps 8. These lamps are supported in suitable sockets 9 which are attached to a supporting plate 10 secured in the lower end of the chamber 7. The chamber is also provided with a reflecting member 11 which is preferably removably retained in place by means of screws or bolts 12 that extend through the sides of the casing 13 of the chamber 7. This reflecting member is provided with openings through which the lamps or bulbs 8 extend so that the bulbs are situated above the reflector.

The heating chamber 7 is closed at the top by means of a pad-supporting plate 15

which will preferably be of some non-corrodible metal, such for instance as the well known "Monel metal". This plate 15 is shown as having a peripheral lip or flange 16 which embraces the upper edge of the casing 13 and sets into a recess formed in the table 5. The plate 15 is preferably constructed so that it comes substantially flush with the surface of the table 5. When the lamps are lighted the heat therefrom heats the plate 15 sufficiently for use without danger of overheating it. The plate 15, which forms both a cover for the heating chamber and a hot plate on which the pads may be heated, is removably retained in position by means of buttons or retainers 20.

17 indicates a pad or moist electrode such as may be used in connection with this apparatus. In using the device the electrode would be wet or moistened and then placed on the hot plate 15, the heat from which will keep the pad hot and some of the moisture in the pad will be converted into steam which will penetrate the pad thus subjecting it to a steaming operation which thoroughly heats it.

The pad may be kept on the hot plate 15 while the patient is being prepared for the reception of the pad and when the patient is ready the pad may be quickly transferred from the hot plate to the patient and thus applied to the patient in a heated condition.

18 indicates a pan-shaped receptacle which is preferably of a size to cover the hot plate 15. This receptacle 18 is useful when the pads are to be sterilized, for by moistening the pads and then placing them on the hot plate 15 and covering the plate 15 with the receptacle in inverted position as shown in Fig. 3 the pad-receiving chamber is formed in which the pads are subjected to a thorough steaming operation and if they are left in this chamber for a sufficient length of time they become thoroughly sterilized.

This receptacle 18 may be also used for heating water in which to moisten the pads for by turning the receptacle 18 right side up and placing water therein and then placing the receptacle on the hot plate 15 the water will become rapidly heated and can be used for moistening the pads.

With this device, therefore, a physician does not need to have hot water in his office for heating the pads as the heat may be done through the receptacle 18.

The table top is shown as provided with towel racks 19 on which towels, napkins, etc., may be supported in convenient position for use.

I claim.

1. In a device of the class described, the combination with a stand having a table portion adapted to receive an electric therapeutic apparatus and provided with a heating chamber situated below the top of the table, of electric heating devices in said chamber and a non-corrodible plate forming a removable cover for the chamber and a hot plate on which pads to be heated may be placed.

2. In a device of the class described, the combination with a stand having a table portion adapted to receive an electric therapeutic apparatus, said table portion having an opening, electric heating devices in said chamber, of a casing forming a heating chamber situated in said opening, a removable cover for said casing which forms the top of the heating chamber and closes the opening, said cover being of non-corrodible metal and forming a hot plate on which pads to be heated may be placed.

3. In a device of the class described, the combination with a stand having a table portion adapted to receive an electric therapeutic apparatus, said table portion having an opening, of a casing forming a heating chamber situated in said opening, a removable cover for said casing which forms the top of the heating chamber and closes the opening, said cover being of non-corrodible metal and forming a hot plate on which pads to be heated may be placed, said table having towel racks on its sides.

4. In a device of the class described, the combination with a stand having a table portion adapted to receive an electric therapeutic apparatus, said table portion having an opening, of a casing forming a heating chamber situated in said opening, a removable cover for said casing which forms the top of the heating chamber and closes the opening, said cover being of non-corrodible metal and forming a hot plate on which pads to be heated may be placed, and a dished cover adapted to enclose the pads while being heated and forming with the hot plate a sterilizing chamber in which said pads may be sterilizied.

5. In a device of the class described, the combination with a stand having a table portion adapted to receive an electric therapeutic apparatus, said table portion having an opening, of a casing situated beneath said opening and forming a heating chamber, electric heating devices in said chamber, a removable cover for the casing which closes the opening and forms a heating plate on which pads may be heated, said cover being of non-corrodible metal and, when in place, being situated flush with the top surface of the table portion.

In testimony whereof, I have signed my name to this specification.

RALPH W. CHAPMAN.

Certificate of Correction.

It is hereby certified that in Letters Patent No. 1,587,505, granted June 8, 1926, upon the application of Ralph W. Chapman, of Old Town, Maine, for an improvement in "Electric Therapeutic Devices," an error appears in the printed specification requiring correction as follows: Page 2, lines 75 and 76, claim 2, strike out the words and comma "electric heating devices in said chamber," and insert the same to follow after the word "opening" in line 77, same claim; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 20th day of July, A. D. 1926.

[SEAL.]

M. J. MOORE,
Acting Commissioner of Patents.

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