W. MEYER.

THERAPEUTIC APPARATUS.

APPLICATION FILED JAN. 17, 1916.

1,241,136.

Patented Sept. 25, 1917.

2 SHEETS—SHEET 1.

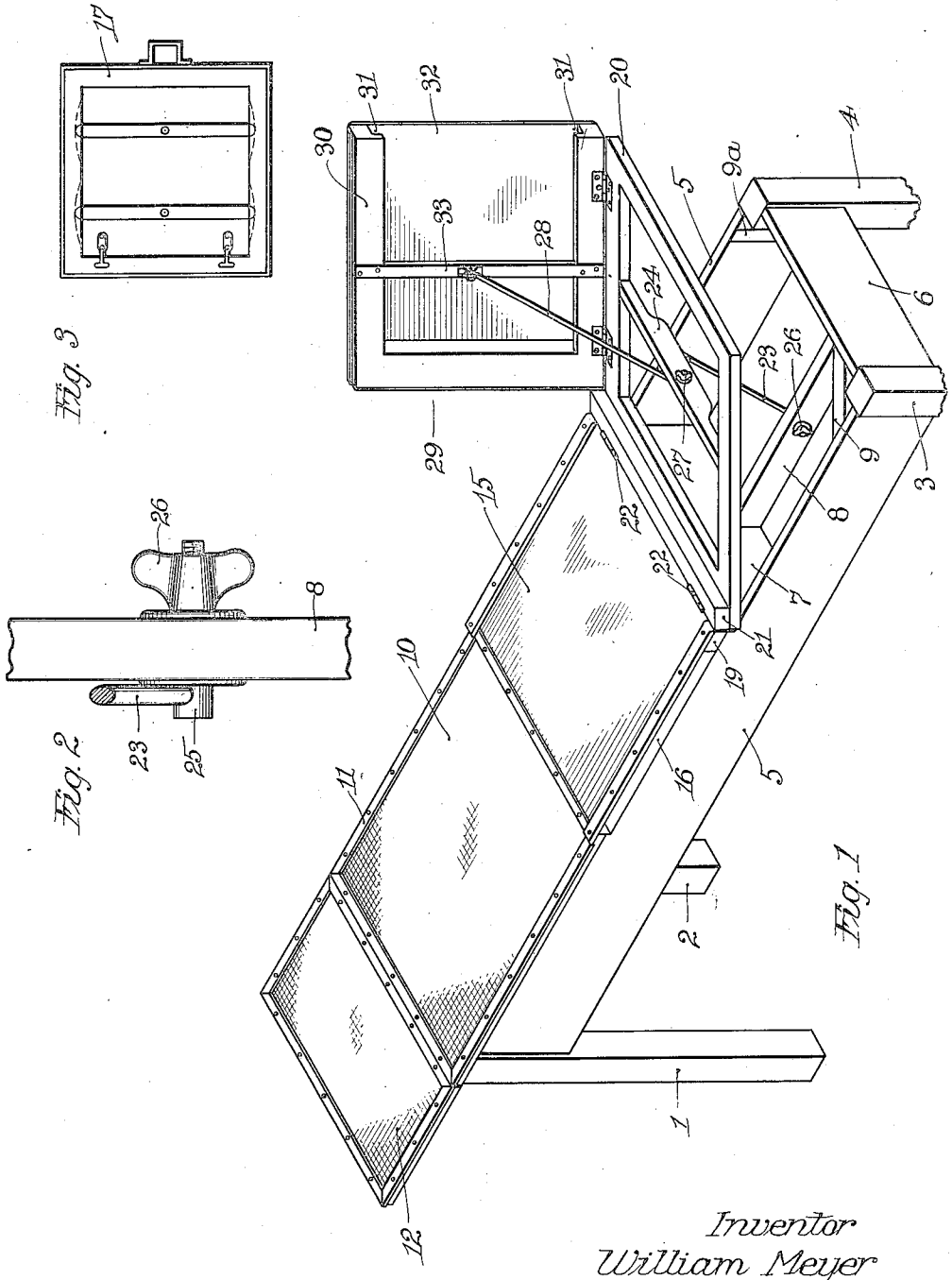


Fig. 3

Fig. 2

Fig. 1

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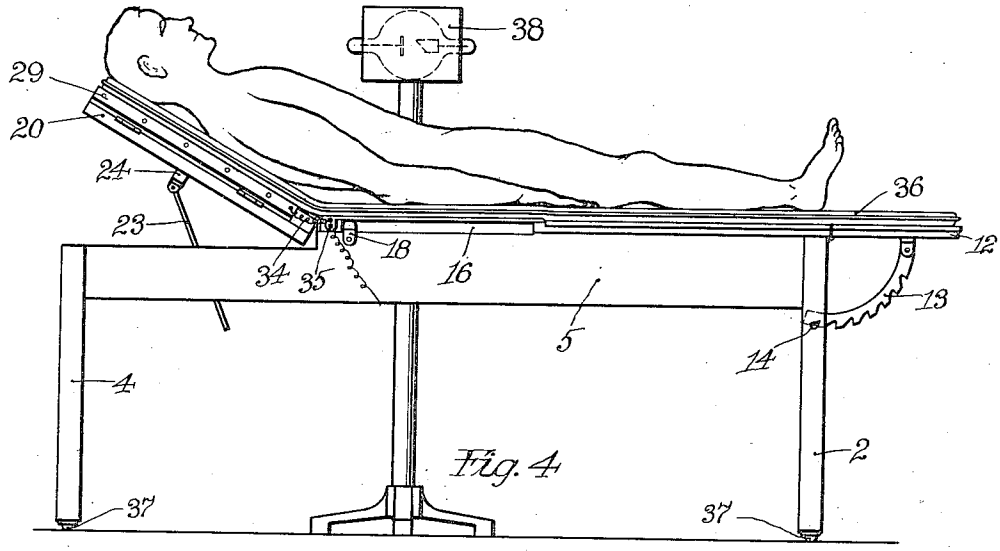


Fig. 4

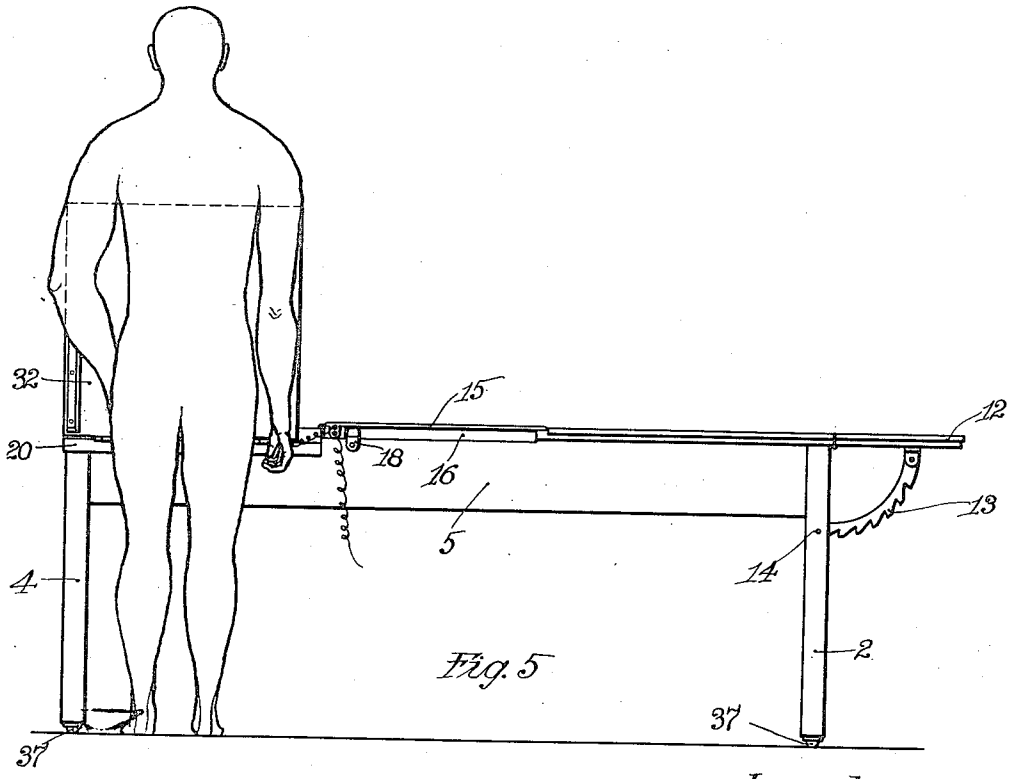


Fig. 5

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UNITED STATES PATENT OFFICE.

WILLIAM MEYER, OF CHICAGO, ILLINOIS.

THERAPEUTIC APPARATUS.

1,241,136. Specification of Letters Patent. Patented Sept. 25, 1917.

Application filed January 17, 1916. Serial No. 72,381.

To all whom it may concern:

Be it known that I, WILLIAM MEYER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Therapeutic Apparatus, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to therapeutic apparatus and more particularly to a table for taking X-ray photographs of the body and for administering electrical treatment.

In taking X-ray photographs or shadowgraphs, as they are often termed, it is necessary to hold the sensitized plate in a fixed position so that the proper degree of exposure will be obtained. Where the plate is attached to the patient, movement of the patient will take the plate out of the proper position and will prevent proper degree of exposure and proper location of the exposure. I have found that the only dependable method of making exposures is to have the patient rest upon a support which also supports the photographic plate. Thus, if the patient moves slightly, the adjustment of the plate with respect to the X-ray tube is not destroyed, and the chances of movement are much lessened.

The object of the present invention is to provide a suitable support for holding a photographic or other sensitized plate in suitable position for making any desired exposure through a part of the anatomy. According to my invention, I provide a support in the form of a table which is provided with an adjustable portion for holding a plate in a number of positions to provide the maximum utility for X-ray purposes.

As the operator is frequently called upon to give the patient electrical treatment known in the art as "auto-condensation," I provide means whereby such treatment may be afforded while the patient is resting upon the table.

In the accompanying drawings which form a part of the present specification, I have illustrated one embodiment of my invention and the manner of use thereof.

Figure 1 is a perspective view with parts broken away of a table embodying my invention;

Fig. 2 is an enlarged detail view;

Fig. 3 is a rear view of the plate holder;

Fig. 4 is an elevation of the table showing the insulating pad which is employed for certain treatments; and

Fig. 5 illustrates the manner of adjusting the table.

The device shown in the drawings comprises the four corner posts or legs, 1, 2, 3 and 4. These posts are secured together by suitable side pieces 5 and suitable end pieces 6, to form a rectangular frame. The side pieces 5 have a brace 7 between them, extending the full width of the side pieces. A brace 8 is secured to the bottom of the brace 7, and to the left end piece 6. The brace 8 is employed in connection with the adjustment of the plate holding mechanism, as will be described later. The side 5 and the end 6 may be further braced in any preferred manner, such as by the corner braces 9 and 9ª, shown in Fig. 1.

A suitable top 10 extends over the lower part of the frame and in the form shown in the drawings, the same is covered with fabric, bound by the metal strap 11 to present a neat and finished appearance. It is to be understood that this may be finished in natural wood as is the rest of the table. A foot board 12 is hinged to the top portion 10 and is finished in a similar manner. This hinged portion 12 may be dropped down into any convenient position by means of the quadrant 13, which is arranged to engage a pin 14 projecting from the leg 2.

Adjacent the top portion 10, I provide a thin top portion 15 which is covered with a sheet of metal, preferably aluminum or a similar conducting substance, which will not materially retard the passage of the X-rays. A slot or opening 16 beneath the portion 15 is provided to receive the plate holder 17. Suitable guides, not shown, are provided beneath the slot 16 for supporting the plate holder when it is inserted in the slot 16. A stop 18 which may be secured to either side of the table prevents the plate holder 17 from being pushed too far through the slot 16. A crossbar 19 which supports the top portion 15 is secured above the brace 7 to the sides 5, 5. An open frame member 20 which is secured to a similar crossbar 21 is connected by means of the hinges 22 to the crossbar 19. A rod 23 is pivoted upon a crossbar 24. The lower end of the rod 23 passes through a bolt 25, which is provided with a thumb nut 26 for gripping the rod 23 in any desired position. The crossbar 24

extends across the open frame 20 and carries a similar adjusting bolt 27 for gripping a rod 28 pivoted at its other end to the hinged top portion 29. The top 29 is hinged to the frame 20 at one side so that the same may be raised as shown in Figs. 1 and 5. The top portion 29 comprises a frame 30 which is slotted, as shown at 31, for receiving plate holder 17, and a top portion 32 which is formed of a light metal such as aluminum or other conducting material which will not interfere materially with the passage of X-ray therethrough. A cross bar 33 bears the upper end of the rod 28 and provides for holding the top portion 29 in the raised position. The metallic top portion 15 and the metallic portion 32 are connected together by a flexible cable 34, as shown in Figs. 4 and 5, so that although they are mechanically adjustable, with respect to each other, they are at all times in electrical connection. A suitable terminal 35 is provided for the attachment of a conductor when it is desired to treat the patient with high frequency current. When such treatment is to be administered, a soft insulating pad 36 is laid over the table top.

In use, the frame 20 and the top portion 29 are adjustable into any convenient position for receiving the patient and taking proper X-ray exposure. I have found that a flat table top is very uncomfortable for most patients, and I prefer to raise the adjustable portion slightly so as to remove the inconvenience. When shadowgraphs of the head or shoulders and the thorax are to be made, the patient is placed upon the table in the general position shown in Fig. 4, being moved up or down in order to secure the proper exposure. The plate holder 17 is then inserted in the top portion 32 and the entire table which is provided with the antifriction rollers 37 is then pushed under the X-ray tube and the exposure made. If it is desired to make a shadowgraph of the groin or of the lower extremities, the plate holder 17 is inserted in the slot 16.

The X-ray tube 38 may be adjusted to the proper height before the patient is placed upon the table. This facilitates the work and makes the same less burdensome to the operator and to the patient.

Where a shadowgraph of the abdomen is to be taken the top portion 29 is raised, as shown in Fig. 5, and the patient rests the abdomen against the top thereof. The plate holder 17 is inserted in the ways 31 so as to be held in the proper position. The X-ray tube 38 is then placed back of the patient and the rays directed through the body as may be required.

Where the patient is to be given treatment with high frequency current, the insulating pad 36 which is preferably made up of a number of layers of insulating material or of a soft pad of considerable thickness, is placed over the table and the patient is placed upon the pad. The patient and the metallic plate with the insulation interposed, thus form a condenser. The patient grasps one electrode which is preferably in the shape of a large conducting bar or rod to increase the surface of contact, and the patient is then subjected to a high tension high-frequency discharge.

While I have described my invention with reference to the details of a particular embodiment, it is to be understood that I do not intend thereby to limit my invention to the proportions or dimensions or precise construction shown and described, but intend that all such modifications as will suggest themselves to one skilled in the art, be considered as coming within the spirit and scope of my invention.

What I claim is:

1. In a treatment table, the combination of a supporting frame, a plurality of hinged top portions, one of said top portions being hinged at its end to said frame, another of said portions being hinged to a lateral edge of said one top portion and being adapted to fold over said one portion and means for holding said portion in adjusted position.

2. In a treatment table, a frame portion, a stationary top portion secured thereto, supporting means for a plate holder under said stationary top portion, a hinged top portion immediately adjacent said stationary top portion, means for supporting a plate holder in said hinged top portion, and supporting means for holding said hinged top portion in adjusted position, said top portions having plate holding means immediately adjacent each other so that adjacent parts of the patient's anatomy may be photographed, without changing the position of the patient.

3. In combination, a table frame, a stationary top portion secured thereto, a plurality of top portions hinged together, said portions being arranged to swing in different planes, and supporting means for holding said swinging portions in adjusted position with respect to each other and to said stationary top portion.

4. In combination, a table frame, a hinged frame secured thereto, means for holding said hinged frame in position, a hinged top portion hinged to said hinged frame portion, and supporting means for supporting said hinged top portion with respect to said hinged frame.

5. In combination, a table frame, a stationary top portion having a light metallic surface thereupon, a hinged top portion having a light metallic surface thereupon, and a conductor joining said metallic surfaces.

6. In combination a table frame, a stationary top portion having a light metallic sur-

face thereupon, said surface being substantially transparent to X-rays, a hinged top portion having a light metallic surface thereupon, said surface being substantially transparent to X-ray, a conductor joining said metallic surfaces and means for supporting plate holders under each of said surfaces.

7. In a treatment table, a supporting frame, a top portion rigidly secured to said frame, a second top portion hinged to said frame, and a third top portion hinged to a lateral free edge of said second top portion, said second and third top portions being substantially coextensive and being adapted to be superposed.

8. In a treatment table, a supporting frame, a top portion rigidly secured to said frame, a second top portion hinged to said frame, and a third top portion adapted to be superposed upon said second top portion, said third top portion being secured by hinges and being adapted when closed down to lie flush with said first top portion.

9. In a treatment table, a rectangular table frame, a stationary top portion secured upon said frame, a supporting frame hinged to said table frame along a line at right angles to the axis of said table frame, and a hinged top portion hinged to said frame along one edge thereof and parallel to the axis of the table frame.

In witness whereof, I hereunto subscribe my name this 5th day of January A. D. 1916.

WILLIAM MEYER.