S. TASCARELLA.

ORTHOPEDIC TABLE.

APPLICATION FILED MAY 10, 1918.

1,287,513.

Patented Dec. 10, 1918.

4 SHEETS—SHEET 1.

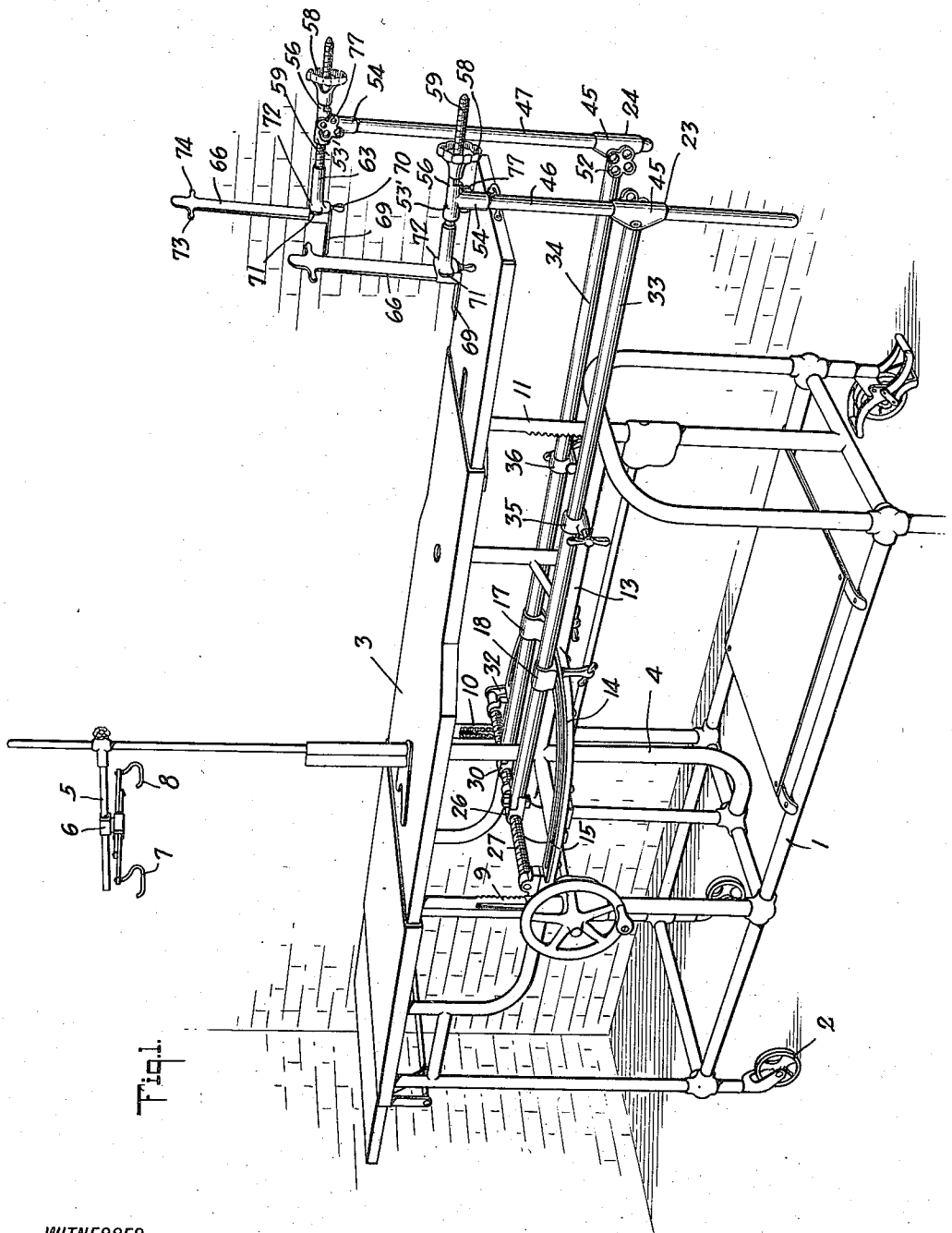


Fig. 1.

WITNESSES

Frederick Diehr.

A. L. Kitchin

INVENTOR

Salvador Tascarella

BY Munn & Co

ATTORNEYS

S. TASCARELLA.

ORTHOPEDIC TABLE.

APPLICATION FILED MAY 10, 1918.

1,287,513.

Patented Dec. 10, 1918.

4 SHEETS—SHEET 2.

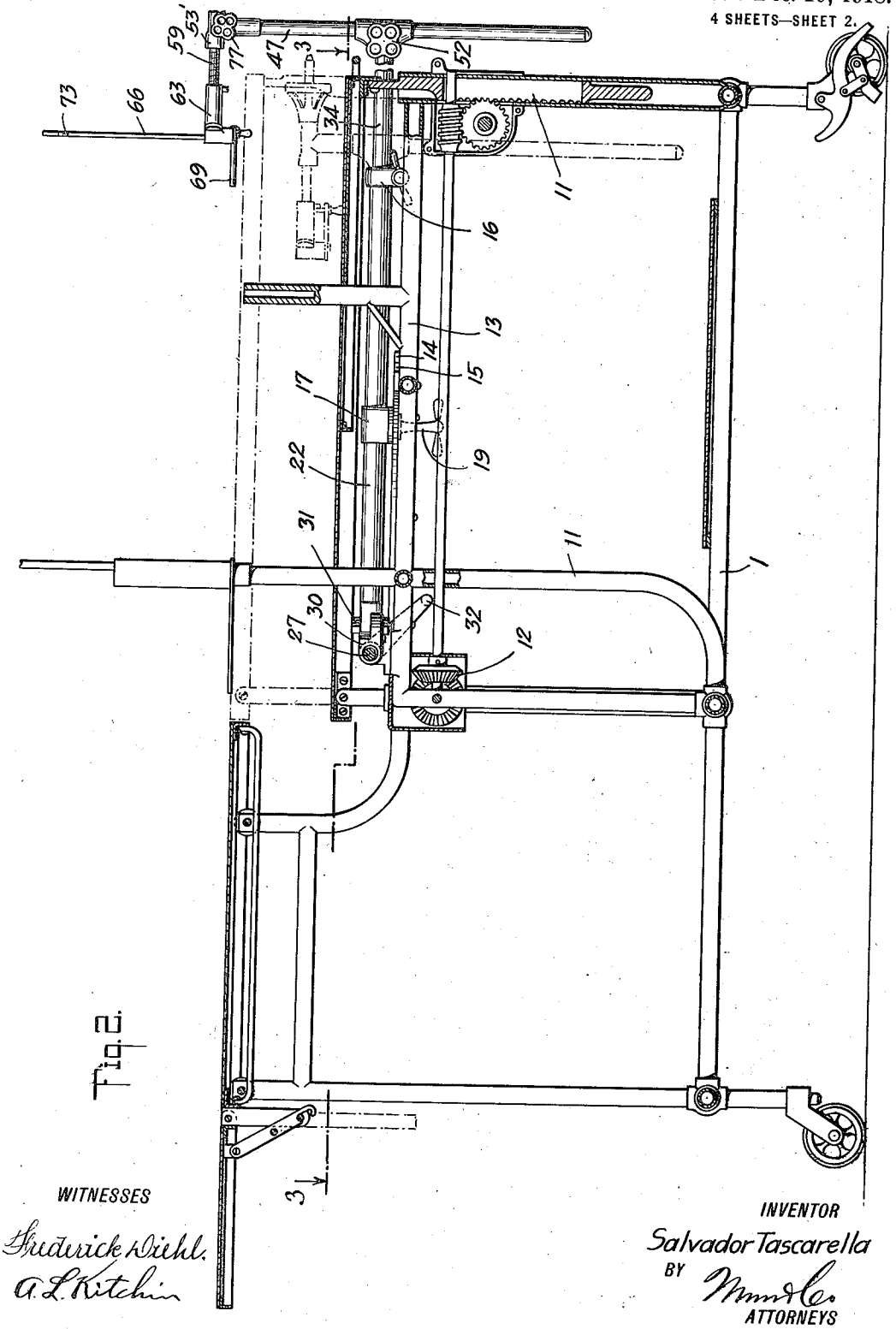


Fig. 2.

WITNESSES

Frederick Diehl.

A. L. Kitchin

INVENTOR

Salvador Tascarella

BY Munn & Co.

ATTORNEYS

S. TASCARELLA.

ORTHOPEDIC TABLE.

APPLICATION FILED MAY 10, 1918.

1,287,513.

Patented Dec. 10, 1918

4 SHEETS—SHEET 3.

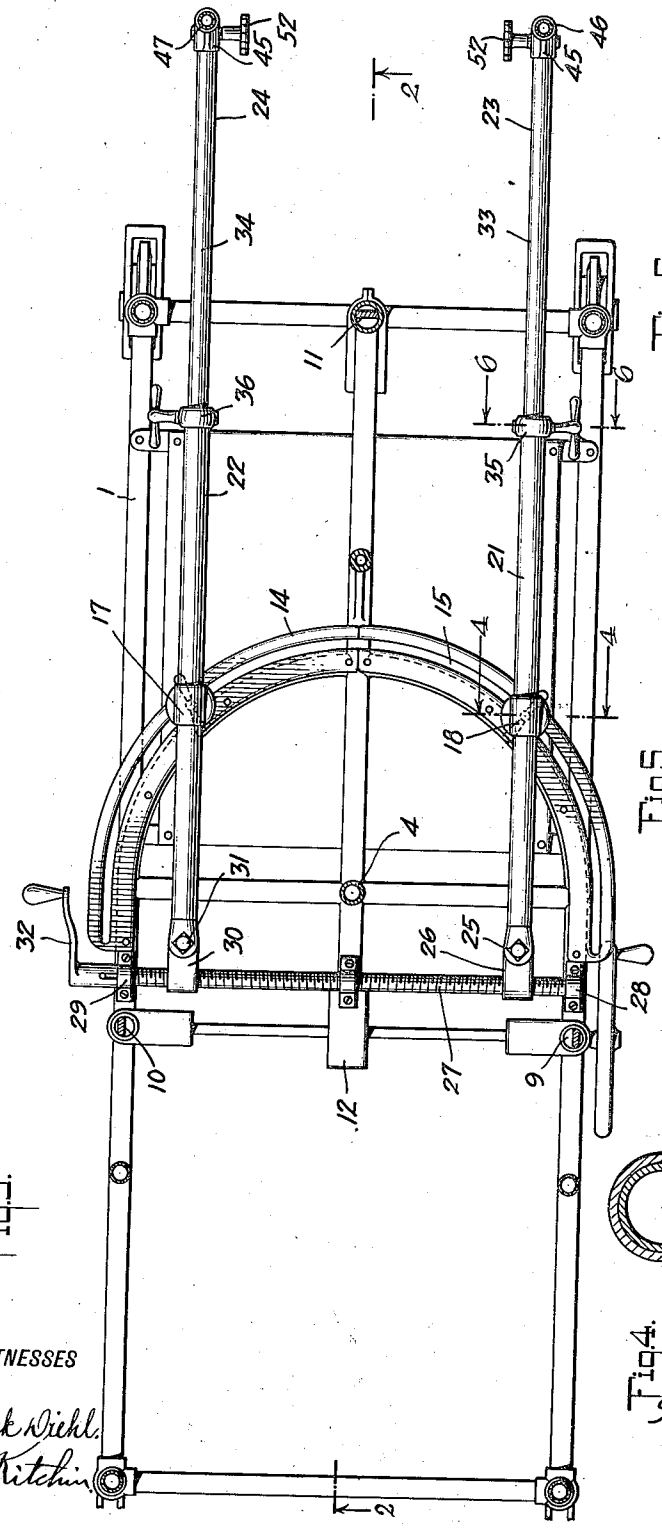


Fig. 3.

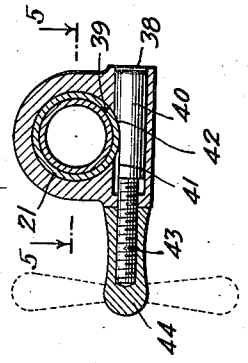


Fig. 6.

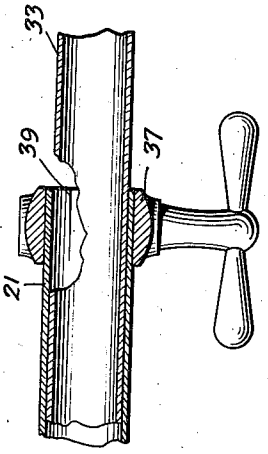


Fig. 5.

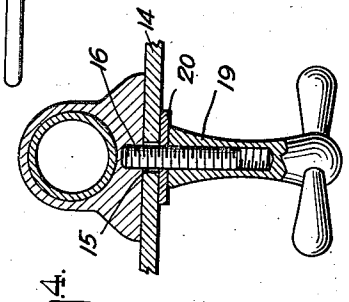


Fig. 4.

WITNESSES

Frederick Diehl.

A. L. Kitchin

INVENTOR

Salvador Tascarella

BY Munn & Co.

ATTORNEYS

S. TASCARELLA.

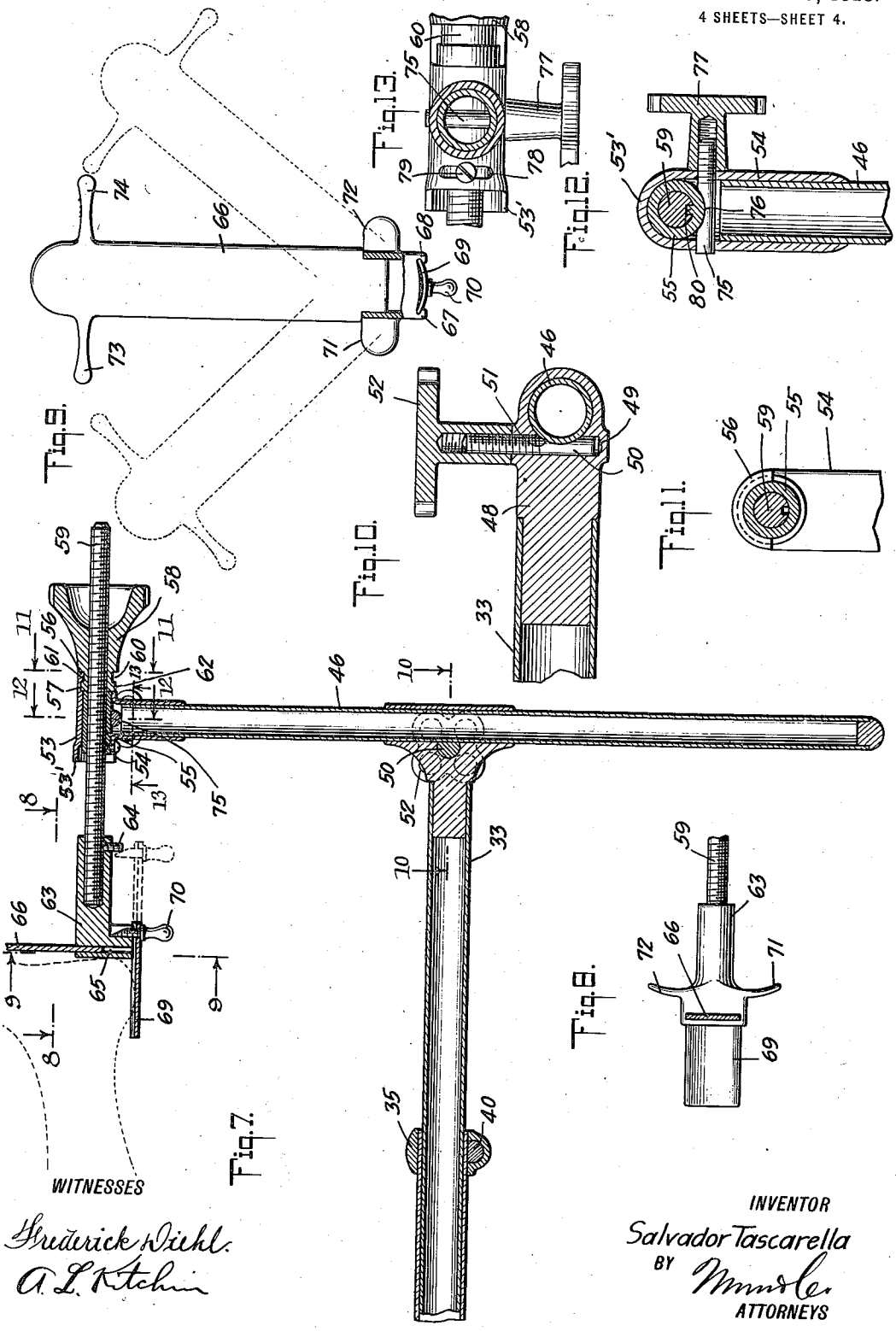
ORTHOPEDIC TABLE.

APPLICATION FILED MAY 10, 1918.

1,287,513.

Patented Dec. 10, 1918.

4 SHEETS—SHEET 4.



WITNESSES

Frederick Diehl.

A. L. Ritchie

INVENTOR

Salvador Tascarella

BY Munn & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

SALVADOR TASCARELLA, OF BROOKLYN, NEW YORK.

ORTHOPEDIC TABLE.

1,287,513. Specification of Letters Patent. Patented Dec. 10, 1918.

Application filed May 10, 1918. Serial No. 233,673.

To all whom it may concern:

Be it known that I, SALVADOR TASCARELLA, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Orthopedic Table, of which the following is a full, clear, and exact description.

This invention relates to orthopedic tables and has for an object the provision of an improved construction and arrangement of parts over my former Patent Number 1,257,764 issued February 26, 1918.

A further object of the invention is to provide a table wherein the feet and leg stretching supporting bars may be not only swung in a horizontal plane, but may be adjusted toward and from each other in the same plane.

A further object of the invention is to provide an improved tightening construction for positively locking the various parts in any desired adjusted position.

A still further object of the invention is to provide a temporary heel support on the stretching bar which may be quickly and easily moved out of the way after having served its purpose.

In the accompanying drawings:

Figure 1 is a perspective view of a table disclosing an embodiment of the invention.

Fig. 2 is a longitudinal vertical section through the table shown in Fig. 1, the same being on a slightly enlarged scale.

Fig. 3 is a horizontal sectional view through Fig. 2 on line 3—3.

Fig. 4 is an enlarged fragmentary sectional view through Fig. 3 on line 4—4.

Fig. 5 is a fragmentary sectional view through Fig. 6 on line 5—5.

Fig. 6 is a fragmentary transverse sectional view through Fig. 3 on line 6—6.

Fig. 7 is a fragmentary longitudinal vertical section through one of the leg supporting and stretching members.

Fig. 8 is a fragmentary sectional view through Fig. 7 on line 8—8.

Fig. 9 is a fragmentary sectional view through Fig. 7 on line 9—9.

Fig. 10 is a fragmentary sectional view through Fig. 7 on line 10—10.

Fig. 11 is a sectional view through Fig. 7 on line 11—11.

Fig. 12 is a sectional view through Fig. 7 on line 12—12.

Fig. 13 is a sectional view through Fig. 7 on line 13—13.

Referring to the accompanying drawings by numerals, 1 indicates a frame formed with tubing or any desired material which is supported by suitable traction members 2 which in turn supports the platform 3, which platform is provided with different sections which move in respect to each other to properly act for properly supporting a patient while permitting access to any part. Frame 1 is provided with an upright member 4 which extends through the platform 3 which carries at the upper end an adjustable bracket 5 carrying an adjustable fitting 6 in which adjustable hook members 7 and 8 are mounted, whereby the slings may be properly supported. The platform 3 and associate parts may be raised and lowered by the rack bars 9, 10 and 11 operated by gearing 12 as shown more particularly in Figs. 1 and 2. The details of this gearing form no part of the present invention as it is shown and described in my prior patent above mentioned. Arranged adjacent the gear 12 is a bar 13 which supports an arc-shaped plate 14 shown more in detail in Fig. 3. This plate is provided with a slot 15 for accommodating the pins 16 which are rigidly secured to the brackets 17 and 18 which brackets are constructed as shown in Figs. 3 and 4. A nut 19 is provided for each bracket, which nut acts on the washers 20 for clamping the plate and the respective brackets together. The brackets 17 and 18 are provided with bores whereby the tubular bars 21 and 22 may slide therein. These tubular bars form part of the leg supporting and stretching devices 23 and 24. Bar 21 is pivotally connected at 25 to a traveling member 26, said traveling member having a threaded aperture in which is fitted the threaded shaft 27, said threaded shaft being in turn supported by suitable bearings 28 and 29 mounted on the upper frame 13. A traveling threaded member 30 is also mounted on the shaft 27 and is pivotally connected at 31 to the bar 22, whereby whenever crank 32 is rotated the traveling members 30 and 26 will be moved toward and from each other so that the bars 21 and 22 may be positioned parallel as shown in Fig. 3 or at any desired angle by reason of the sliding thereof in the brackets 17 and 18 and the pivotal connection at 25 and 31. It will thus be seen that each bar is independently pivotally mounted and they also have pivoted end adjustment toward and from each other. The bars 21 and 22 are hollow and accommodate the extension bars

33 and 34 which slidingly fit therein, and clamps 35 and 36 clamp the extension in any desired position after having been moved to said position. Each of these clamps is formed as shown in Figs. 5 and 6, namely with an encircling portion 37 having an enlargement on one side in which a bore 38 is formed. The end of the tubular bar 21 is slit at 39 so that it may be contracted, while bar 33 is not slit. A block or wedge member 40 is mounted in bore 38, said wedge being provided with cutaway portion 41 merging into an inclined portion or cam 42, and also with a threaded extension 43 for receiving a nut 44. When the nut 44 is turned in one direction the cam 42 will act on the part of the bar 21 near slit 36 for pressing the same against the bar 33 whereby the parts are firmly clamped together.

At the outer end of each of the bars 33 and 34 is positioned a fitting 45 for receiving the respective uprights 46 and 47. Each of the fittings 45 is constructed as shown in Fig. 10, namely with a solid section 48 and a reduced portion fitting into the tube 33, so that the fitting is connected with said tube. A bore is formed in solid section 48 extending at right angles to the bore 33, said tube accommodating the upright 46. A comparatively small bore 49 is provided in the solid section 48 as shown in Fig. 10, said small bore accommodating a threaded rod 50 which is provided with a cutaway portion 51, which ordinarily loosely fits the upright bar 46 so that said upright bar may freely slide. A nut 52, however, is connected to the rod 50, said nut having a hand operated member 52 preferably formed integral therewith whereby when the nut is rotated in one direction the cutaway portion 41 will act as a cam for clamping the rod 46 against movement.

On the upper end of each of the upright bars 46 and 47 there is positioned an adjusting structure 53 which is formed with a fitting 54 in which a sleeve 55 is mounted, said sleeve being rotatably mounted but normally locked against movement. Member 53 is provided with an overhanging extension 56 having a groove 57, said extension being semi-circular as shown in Fig. 11, whereby the end of the hand adjusting member 58 may be placed in position by a forward movement when the threaded bar 59 is removed. The hand adjusting member 58 is provided with an annular groove 60 for accommodating the bead structure 61 on extension 56, while the bead structure 62 fits into the groove 57. By reason of the fact that the extension 56 is semi-circular, these parts may be moved into position or out of position from below when the threaded shaft 59 is not in position. In assembling the parts the member 56 is placed in position and then the threaded shaft slid through the sleeve 55 until it engages member 58 and then the member is rotated until the shaft has been moved to the desired position. In this way the member 58 is held in position by the shaft and the shaft in turn is held in position by member 58. Bracket 63 is connected with the end of the shaft 59, said bracket also carrying set-screw 64, for limiting the movement of the plate 69. Bracket 63 is provided with a vertical groove 65 for receiving the upright plate 66, and with horizontal grooves (Fig. 9) 67 and 68 for receiving the heel supporting plate 69. This plate is provided with an operating member 70 extending therethrough as shown in Fig. 7 whereby whenever desired the heel supporting member may be moved out of the way, as for instance to the dotted position shown in Fig. 7. Bracket 63 is provided with ears 71 and 72 for receiving tying bands while above the same pins 73 and 74 are provided on plate 66. After the foot has been properly bound or tied in position the support 69 may be removed therefrom if desired, then a proper tension brought upon the foot by rotating the hand operated nut or member 58. If desired the bracket 54 could be rotatably mounted on the upright bar 46 or could be rigidly secured thereto. In any event the parts are formed so that they may be adjusted to cause a strain in the right direction on the foot or other limb of the patient whereby the exact movement desired is secured.

Preferably the sleeve 55 is rotatably mounted in the fitting 53′, but designed to be locked at any time against rotation by the locking pin 75 which is provided with an arc-shaped cutout section 76 normally loosely fitting against the sleeve, but arranged so that the pin 75 at one end of the cut-away portion may press against the sleeve and wedge the same tightly in place whenever the nut 77 is tightened as shown in Fig. 12. A slot 78 (Fig. 13) is provided in the bottom of fitting 53′, said slot accommodating a pin 79 which is threaded into the sleeve 55 whereby the rotary movement of the sleeve is limited while longitudinal movement is prevented. It will be noted that the sleeve 55 is provided with a key 80 fitting into a key-slot in the threaded rod 59 so that when the handle 58 is turned rod 59 may move longitudinally in either direction according to the rotation of member 58. This construction and arrangement of locking means 78 and associate parts, including sleeve 55 permits the plate 66 to be rotated to any desired extent as shown in dotted lines in Fig. 9, in order to put the foot of a patient at an angle or to twist the limb if desired.

What I claim is:

1. A table of the character described comprising a frame, a vertically movable platform, a plate and bracket acting as leg sup-

porting means, and an adjustable support connected with said bracket, said bracket being rotatable in a vertical plane and said adjustable support being rotatable and movable vertically.

2. A table of the character described comprising a supporting frame, a platform carried by the frame, means for vertically moving said platform, a pair of swinging members, means for moving the pivotally mounted end of said members toward and from each other, and means for securing the limb of a patient to said swinging members.

3. In a table of the character described a frame, a vertically moved platform arranged on said frame, a pair of leg supporting structures, each of said structures being formed with a vertical section and a horizontal section, an adjustable member engaging one end of said horizontal section for moving the same in a horizontal direction toward and from each other, and means for swinging in a horizontal direction said horizontal sections independently of the adjustment thereof.

4. An orthopedic table of the character described comprising a frame, a platform, a pair of leg supporting members, each of said leg supporting members having a horizontal section, a threaded shaft extending transversely of the frame, a pair of traveling members threaded on to said threaded shaft, means for pivotally mounting one of said horizontal sections on each of said traveling members, and means for locking said horizontal sections in any adjusted position.

5. An orthopedic table of the character described comprising a frame, means arranged on the frame for supporting a patient, a transversely arranged threaded shaft, means for rotating said shaft, a pair of threaded members arranged on said shaft, said shaft being provided with right and left threads, whereby when the shaft is moved the threaded members will be moved toward and from each other, a tubular member pivotally mounted on each of said threaded members, an arc-shaped plate extending beneath said tubular members, said plate having an arc-shaped slot, means passing through said slot for clamping the bars to said plate at any desired point, an extension telescopingly fitting into each of said tubular bars, a clamp for each of said tubular bars for clamping said extensions in an adjusted position, a vertically positioned adjustable bar for each of said extensions, means for clamping said vertically positioned bars in any adjusted position, and means positioned on the outer end of said vertically positioned bars for supporting and acting on the feet and legs of a patient.

6. An orthopedic table of the character described comprising a frame, a rotatable threaded shaft, a pair of traveling threaded members mounted on said shaft, a pair of tubular bars pivotally supported on said threaded members, an arc-shaped member extending beneath said bars, said arc-shaped member having an arc-shaped slot positioned therein, a clamp for each of said bars, each of said clamps having a section for slidingly accommodating said bars, a threaded rod extending through said slot, and a clamping nut engaging said threaded rod, and means adjustingly fitting into each of said tubular bars for supporting and acting on the feet and legs of a patient.

7. An orthopedic table comprising a frame, means for supporting a patient on the frame, a plurality of movable bars carried by the frame and a vertically arranged rod carried by each of said bars, a fitting arranged at the upper end of each of said vertical rods, said fitting having a semi-circular extension on one end, said extension being formed with a groove, a bead parallel with the groove, a threaded bar extending through said fitting, a nut having a hand gripping portion fitted on said bar, said nut having a bead, and a groove interlocking with the bead and groove on the fitting, and means carried by the threaded bar for supporting the foot of a patient on said support.

8. An orthopedic table comprising a frame, a support carried by the frame, a pair of leg supporting members, each of said leg supporting members being formed with a bracket at the upper part provided with a pair of horizontal grooves, and a vertical groove, a plate fitting in the vertical groove, a heel supporting plate fitting in the horizontal grooves, and means connected with said heel plate for slidingly moving the same to a position out of the way.

9. An orthopedic table comprising a frame, a pair of leg supporting members, each of said members comprising a vertically adjustable bar, a transverse hollow fitting arranged at the top of said bar, said fitting having a slot therein, a sleeve having an inwardly extending tongue arranged in said fitting, a pin extending through said slot and into said sleeve, a threaded bar having a tongue groove, said bar extending through said sleeve with the tongue of the sleeve fitting into said groove, a transverse locking means for locking said sleeve in any adjusted position, a foot receiving member connected with said threaded rod, said foot supporting member being rotated when said sleeve is rotated, and means acting on said rod moving said rod longitudinally independent of said sleeve.

SALVADOR TASCARELLA.