April 13, 1954 E. TERRY ET AL 2,675,285

VERTICALLY ADJUSTABLE THERAPY TREATMENT TABLE HAVING HINGED END SECTIONS

Filed Oct. 14, 1952

3 Sheets-Sheet 1

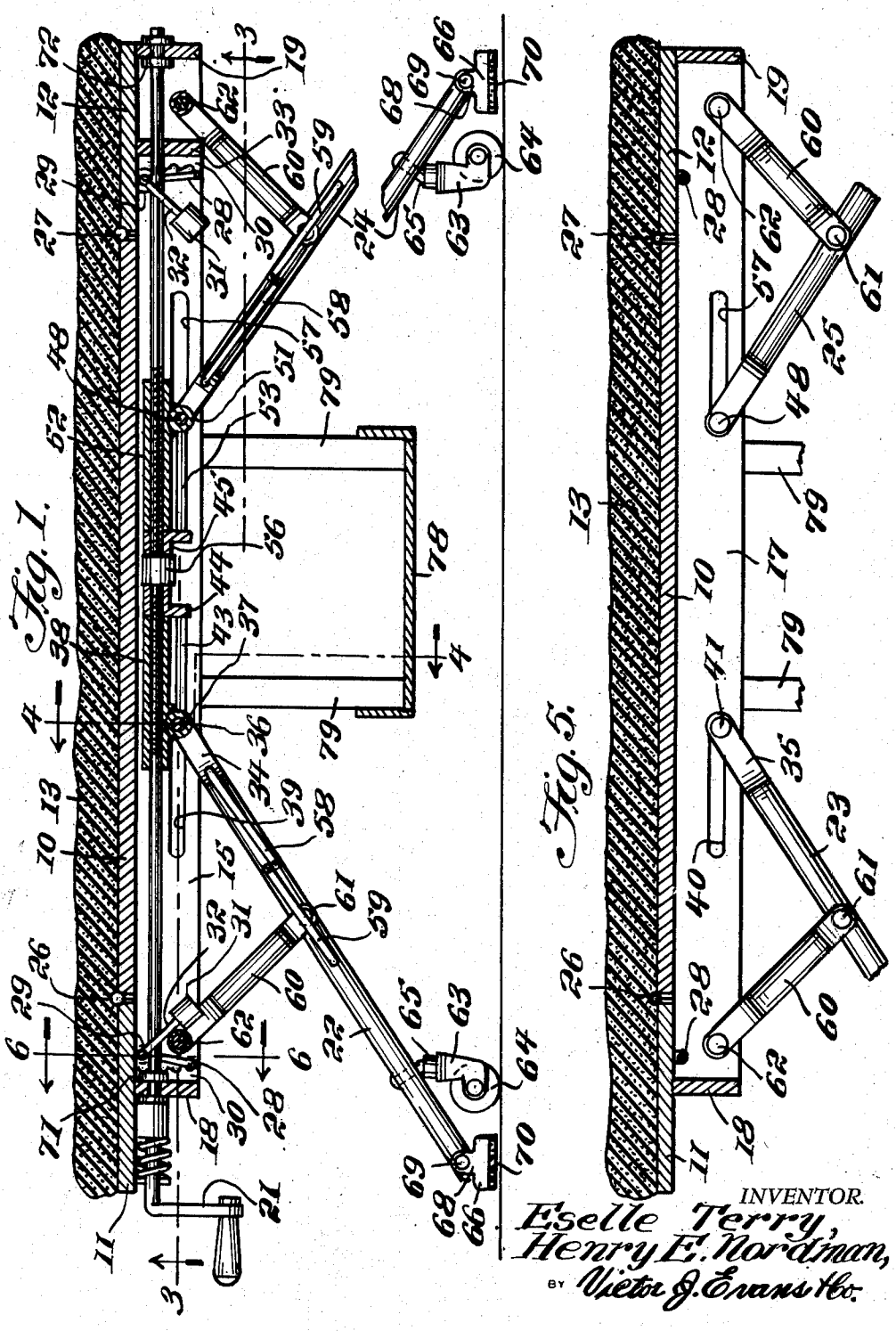


Fig. 1.

Fig. 5.

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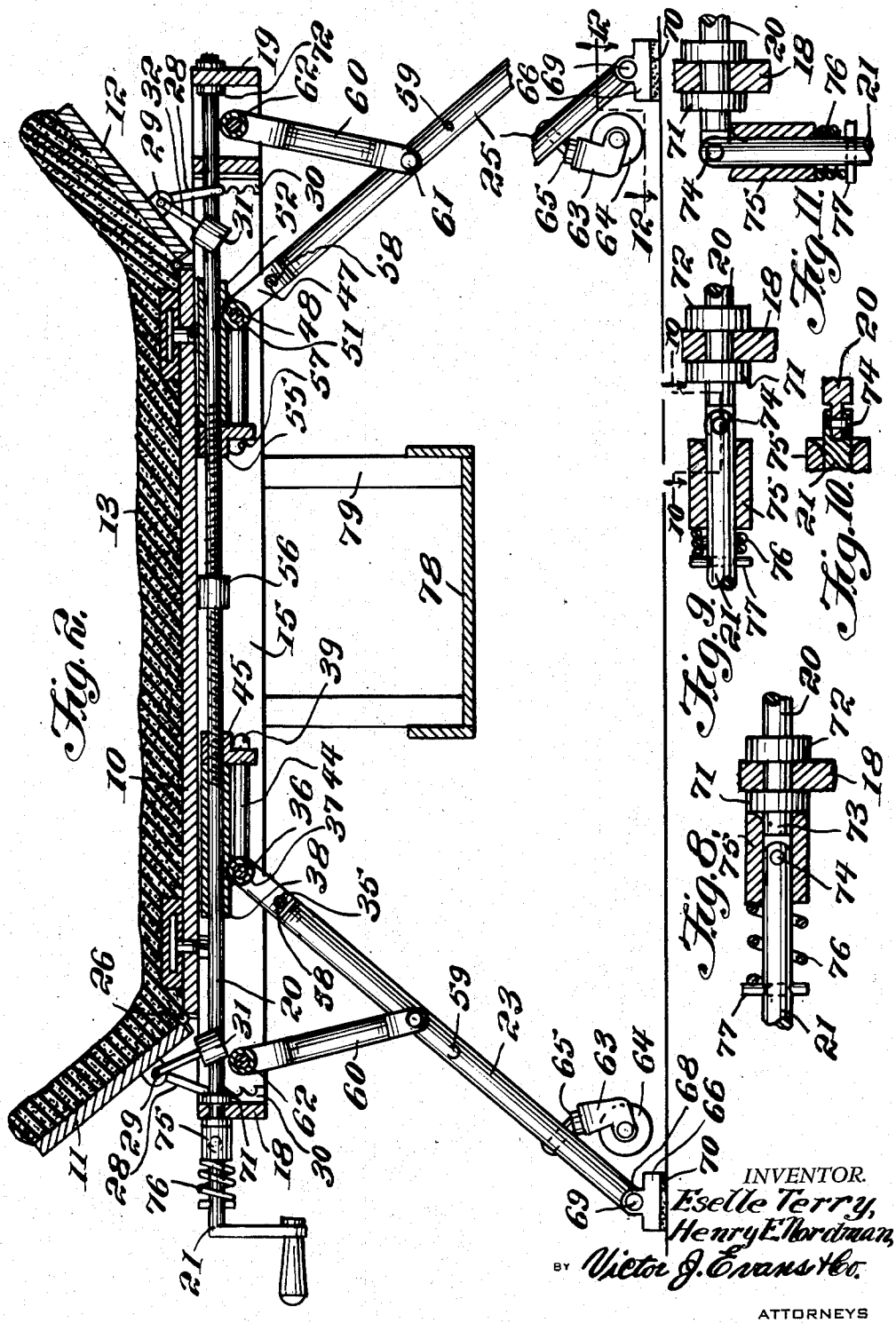


Fig. 2.

Fig. 11.

Fig. 10.

Fig. 9.

Fig. 8.

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Filed Oct. 14, 1952 3 Sheets-Sheet 3

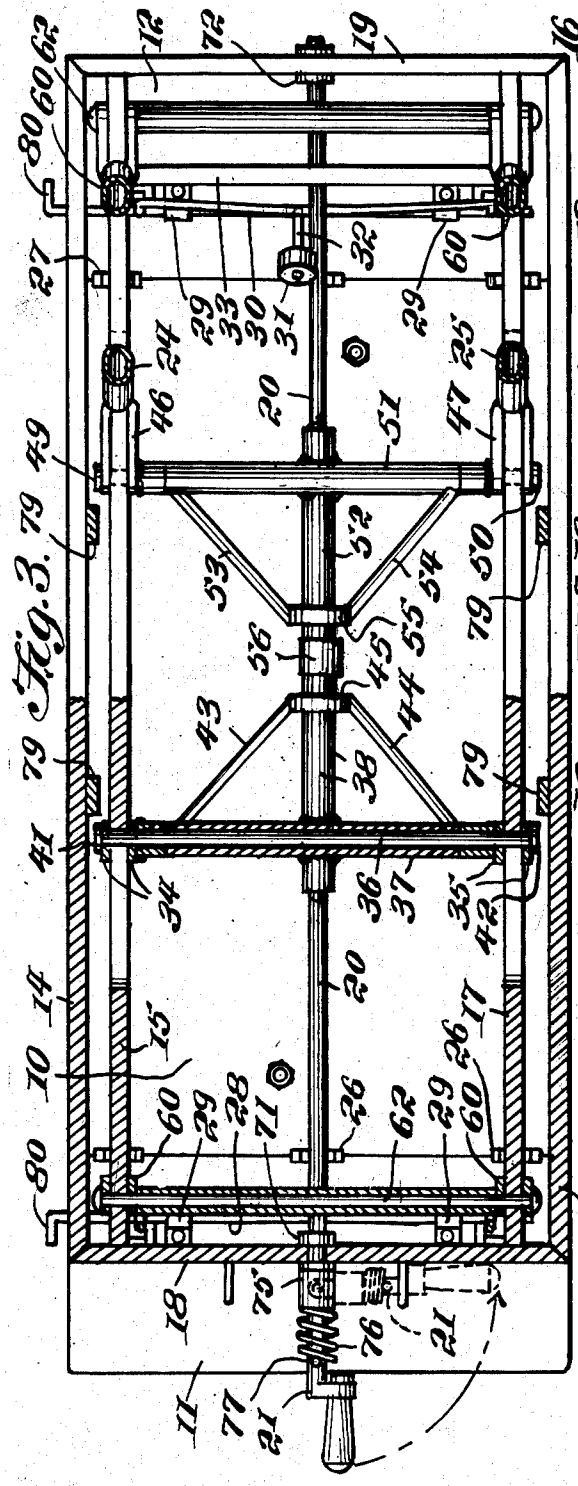


Fig. 3.

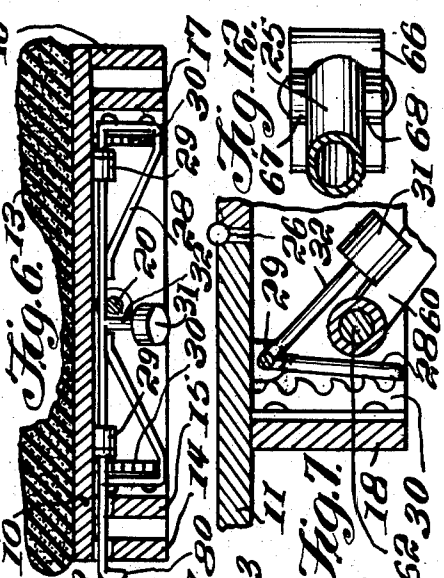


Fig. 1.

Fig. 2.

Fig. 4.

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UNITED STATES PATENT OFFICE

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VERTICALLY ADJUSTABLE THERAPY TREATMENT TABLE HAVING HINGED END SECTIONS

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Application October 14, 1952, Serial No. 314,692

1 Claim. (Cl. 311—7)

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This invention relates to collapsible tables or tables having adjustable or folding legs, and in particular an operating table having hinged sections at the ends and folding legs with the legs connected to and actuated by sleeves slidably mounted on a threaded rod extended longitudinally through a supporting frame of the table top and rotated by a crank on one end thereof.

The purpose of this invention is to provide means for readily adjusting the elevation of a table from one end thereof.

Various methods have been used for adjustably connecting table legs to table tops and other means have been provided for actuating the legs for changing or adjusting the elevation of the table top, however, with the conventional type of table it is necessary to adjust the parts from several points and for certain operations or treatments it is desirable to actuate the adjusting means of a table from one end. With this thought in mind this invention contemplates a table top mounted on a frame with legs of the table arranged in transversely disposed frames and with the frames of the legs pivotally connected to the frame of the table top with braces and adjustably connected to the table top with sleeves on a threaded shaft with nuts at the ends of the sleeves and with the shaft rotated by a crank on one end.

The object of this invention is, therefore, to provide means for mounting legs on a table top whereby the legs are adapted to be spread to raise the table top and drawn together to lower the table top.

Another object of the invention is to provide a table top having legs adjustably connected thereto and also having hinge sections at the ends with ratchets for retaining the hinge sections in upwardly extended positions.

With these and other objects and advantages in view the invention embodies a horizontally disposed rectangular shaped frame supported by legs connected with cross bracing with the legs connected by braces to points spaced from the ends of the frame, with the upper ends of the legs slidably mounted in longitudinally positioned slots in the frame and connected to sleeves on a threaded shaft with the sleeves adjusted by nuts and with the shaft rotated by a crank at one end whereby a table top having padding thereon positioned on the frame is readily elevated or lowered.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings, wherein:

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Figure 1 is a longitudinal section through the adjustable treatment table with parts broken away and with the legs of the table supported on casters spaced from the lower ends thereof.

Figure 2 is a longitudinally disposed section similar to that shown in Fig. 1 showing hinged ends of the table top extended upwardly and showing the table top elevated in relation to the table shown in Fig. 1, wherein the casters are elevated above the ground and the ends of the table legs are supported by shoes providing frictional engagement with a floor or the like.

Figure 3 is a longitudinal section through the supporting frame taken on line 3—3 of Fig. 1, looking upwardly and with some of the parts shown in section and some in elevation.

Figure 4 is a cross section through the table taken on line 4—4 of Fig. 1 and with the lower parts of the legs broken away.

Figure 5 is a longitudinal section taken on line 5—5 of Fig. 4 illustrating the connections of the upper ends of the legs and braces thereof to the frame of the table top and with other parts omitted, the parts being shown on an enlarged scale.

Figure 6 is a cross section through the table top taken on line 6—6 of Fig. 1.

Figure 7 is a detail showing a section through one end of the table top illustrating one of the ratchets for retaining the hinged end sections of the table top in upwardly extended positions.

Figure 8 is a detail showing a section through a collar slidably mounted on the end of the shaft and positioned to retain the crank for rotating the shaft in outwardly extended position.

Figure 9 is a section similar to that shown in Fig. 8 showing the collar drawn outwardly to permit the crank to drop.

Figure 10 is a section taken on line 10—10 of Fig. 9 showing the hinge connection of the crank to the shaft.

Figure 11 is a detail, similar to that shown in Fig. 8 showing the crank in a downwardly disposed position.

Figure 12 is a detail taken on line 12—12 of Fig. 2 illustrating one of the shoes at the lower ends of the legs.

Referring now to the drawings wherein like reference characters denote corresponding parts the improved adjustable treatment table of this invention includes a panel 10 providing a table top with hinged end sections 11 and 12 and with a pad 13 on the upper surface, a mounting frame having spaced side rails 14 and 15 at one side and 16 and 17 at the opposite side and end rails

18 and 19, a centrally positioned longitudinally disposed shaft 20 having a crank 21 on one end and supporting legs 22 and 23 at one end and 24 and 25 at the opposite end.

The end sections 11 and 12 are secured to ends of the panel 10 with hinges 26 and 27 and, as illustrated in Fig. 7, the end sections are provided with loops 28 pivotally mounted by bearings 29 on the under surfaces of the end sections and positioned to engage teeth of ratchet bars 30. The loops 28 are provided with counter weights 31 which are supported on the ends of arms 32 whereby the lower sections of the loops are urged into engagement with the teeth of the ratchet bars.

As illustrated in Fig. 1 the ratchet bars at one end of the table are mounted on the end rail 18 and at the opposite end of the table the ratchet bars are mounted on a cross rail 33 which is spaced from the end rail 19. As illustrated in Fig. 3, the upper ends 34 and 35 of the legs 22 and 23 are pivotally mounted on a rod 36, positioned in a sleeve 37 that is secured to a sleeve 38 which is slidably mounted on the shaft 20. The ends of the rod 36 extend through slots 39 and 40 in the intermediate side rails 15 and 17, respectively of the table frame. The ends of the rod 36 are provided with heads 41 and 42 for retaining the rod in position. The sleeve 37 is also provided with braces 43 and 44 by which the sleeve 37 is supported from a nut 45 threaded on the shaft 20.

The upper ends 46 and 47 of the legs 24 and 25 are mounted on a rod 48 having heads 49 and 50 on the ends and the rod is positioned in a sleeve 51 that is secured to a sleeve 52 positioned on the shaft 20. The sleeve 51 is provided with braces 53 and 54 that support the sleeve from a nut 55 threaded on the shaft 20. The shaft is provided with a center bearing or collar 56 which is positioned between the nuts 45 and 55.

The ends of the rod 48 are positioned in slots 57. The legs are provided with diagonal cross braces 58 and 59 and each leg is provided with a brace, such as the brace 60, pivotally attached to the leg with a pin 61 and pivotally attached, at the upper end to one of the side rails of the table frame with a pin 62.

Each leg is also provided with a caster 63 having a roller 64 therein and mounted on the leg with a clamp 65.

Each leg is also provided with a shoe 66 having upwardly extended ears 67 and 68 with which the shoe is pivotally connected to the lower end of the leg with a pin 69. The shoes are provided with a frictional gripping pad 70 whereby with the table elevated, as illustrated in Fig. 2 the table is frictionally secured to a floor or the like.

The shaft 20 is journaled in the end rails 18 and 19 of the frame of the table with collars 71 and 72 on opposite sides of the rails and extended ends 73 of the shaft are pivotally connected by a pin 74. The crank 21 is held in an outwardly extended position by a sleeve 75 which is slidably mounted over the shank of the crank and which is resiliently held in the position of holding the crank extended, as shown in Fig. 8 by a spring 76 positioned between a pin 77 and the end of the sleeve. With the crank mounted in this manner the sleeve is readily drawn outwardly, as illustrated in Fig. 9 whereby the crank is free to drop downwardly to the position shown in Fig. 11.

A utility shelf, as indicated by the numeral 78 may be suspended by struts 79 from the frame. The frame is provided with keys 80 for holding the loops 28 spaced from the ratchets 30 when it is desired to drop the end section of the table top.

With the parts arranged in this manner the shaft 20 is rotated by the crank 21 to move the sleeves 38 and 52 toward the center for lowering the table or toward the ends of the frame for elevating the table. With the upper ends of the legs drawn toward the center of the table, as illustrated in Fig. 1, the legs are supported on the rollers of the casters whereby the table may readily be moved from one position to another and when the table is in use the upper ends of the legs are moved outwardly to positions, such as illustrated in Fig. 2, wherein the table is supported on the shoes at the lower ends of the legs.

It will be understood that modifications, within the scope of the appended claims, may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

In a vertically adjustable table, the combination which comprises a table top having hinged vertically adjustable end sections, a mounting frame, rectangular-shaped in plan upon which the table top is positioned, said mounting frame having side rails with longitudinally disposed slots therein and end rails connecting the ends of the side rails, transversely disposed rods having spacing sleeves thereon in said frame and positioned with ends thereof extended into the slots of the side rails of the frame, legs pivotally mounted on said rods and extended diagonally from said table top, shoes having frictional gripping pads on lower surfaces thereof pivotally mounted on the lower ends of the legs, braces positioned with upper ends pivotally connected to the mounting frame at points spaced from the ends of the frame and with lower ends thereof pivotally connected to the legs at points intermediate of the ends of the legs, a longitudinally disposed rod rotatably mounted in the frame and having right and left hand threaded sections in the intermediate part thereof, sleeves threaded on the longitudinally disposed rod and integrally connected to the sleeves on the transversely disposed rods, a hand crank mounted on one end of the longitudinally disposed rod, and casters mounted by swivel elements on the legs and spaced from the frictional gripping shoes, said casters being positioned whereby upon lowering the table top the casters contact a surface upon which the table is positioned and elevate the shoes so that the table is adapted to be transported on said casters.

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