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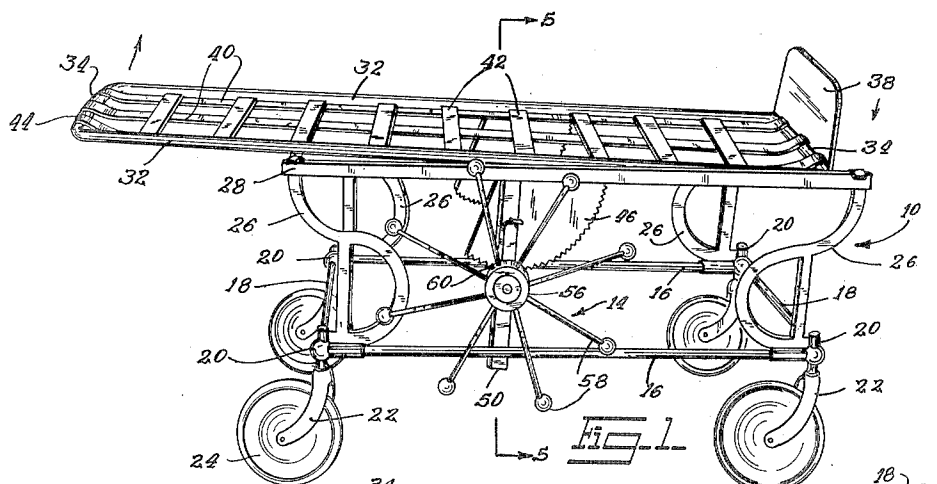
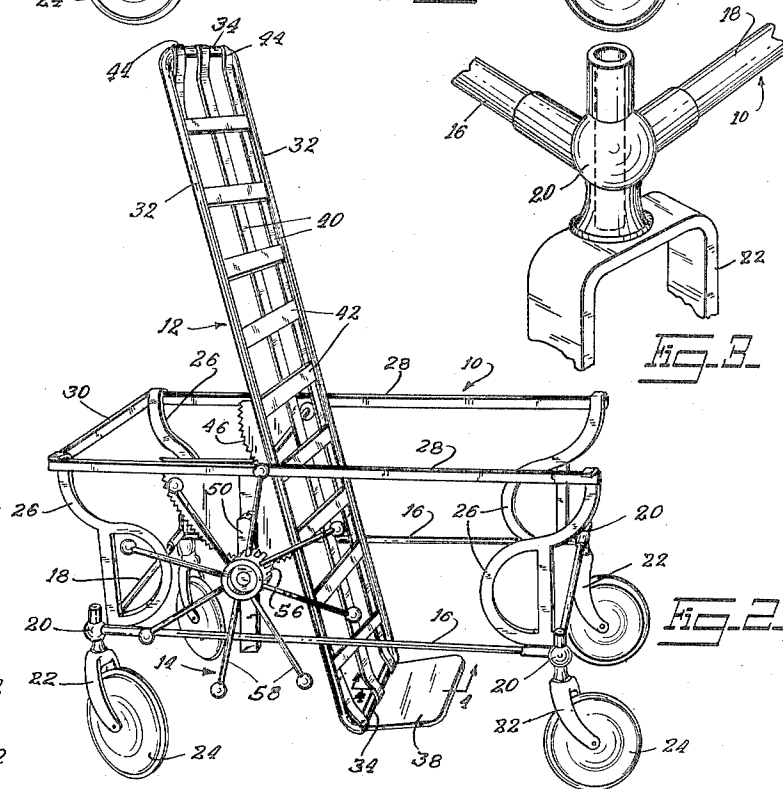
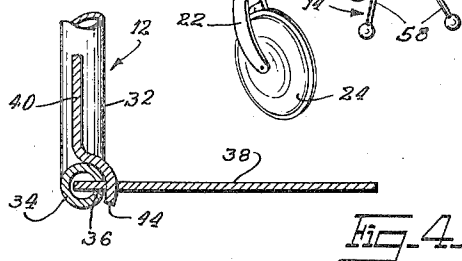
S. CLIMO

2,763,520

ROLLABLE AND TILTABLE HOSPITAL TABLE

Filed May 25, 1954

2 Sheets-Sheet 1



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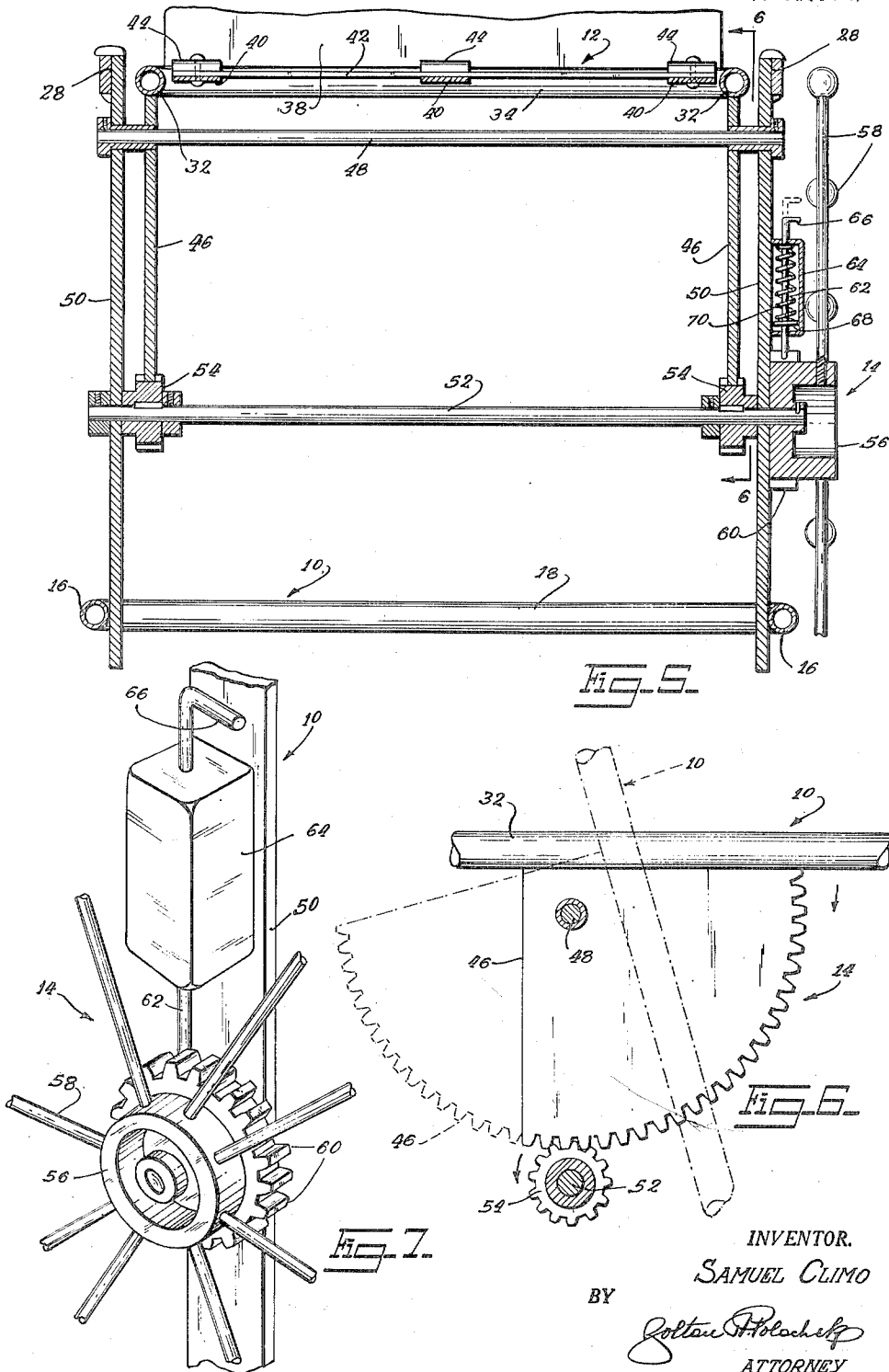
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ROLLABLE AND TILTABLE HOSPITAL TABLE

Samuel Climo, New Haven, Conn.

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2 Claims. (Cl. 311—6)

This invention relates to a table having a tiltable portion on which a hospital patient or convalescent may be supported, the table constituting the present invention being so designed as to facilitate adjustment of the tiltable portion thereof between substantially horizontal and substantially vertical positions.

An important object of the present invention is to provide a generally improved table of the type referred to, which will be particularly adapted to aid in the rehabilitation of paraplegic, arthritic and other patients having a crippling affliction.

Another object of importance is to provide a table of the nature referred to which will include an operating mechanism used to effect adjustments of the table between the selected positions thereof, said mechanism being so designed as to facilitate its use by the patient, in any position to which the patient shifts with the tiltable portion of the table.

Yet another object of importance is to provide a table of the type referred to wherein the operating mechanism used for adjustment of the tiltable portion can be swiftly and easily locked in each position to which said portion is adjusted.

Another object of the invention is to produce a table of this character which is simple and durable in construction and which can be manufactured and sold at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a perspective view of a table formed in accordance with the present invention, the patient-supporting frame being shown in a horizontal position.

Fig. 2 is a view similar to Fig. 1 in which the frame has been adjusted to a substantially upright position.

Fig. 3 is an enlarged, fragmentary, perspective view of one of the swivel connections between the wheels and main frame.

Fig. 4 is a fragmentary, longitudinal sectional view taken substantially on line 4—4 of Fig. 2.

Fig. 5 is an enlarged, transverse sectional view taken substantially on line 5—5 of Fig. 1.

Fig. 6 is an enlarged sectional view on line 6—6 of Fig. 5, showing the gear means for operating the pivoted patient-supporting frame to selected positions.

Fig. 7 is an enlarged, fragmentary perspective view of the gear operating assembly, and of a releasable detent associated with said assembly.

The reference numeral 10 has been generally applied to a rollable main frame, on which is swingably mounted the patient support frame 12, the frame 12 being adjusted to selected positions by means of an operating mechanism 14. Each of these main components of the invention will be described in detail, hereinafter, in turn.

Considering first the construction of the rollable main frame 10, this includes a horizontally disposed, rectangular lower framework including tubular, parallel, transversely spaced, longitudinal lower frame members 16 connected fixedly at their ends to transversely extending, tubular end frame members 18. The fixed connection of the members 16, 18 to one another is afforded by four-way fittings 20 (Fig. 3). The members 16, 18 are threaded into perpendicularly disposed portions of said fittings, at the several corners of the lower framework, or may be otherwise fixedly connected to said fittings 20. The fittings 20 have depending tubular portions receiving upstanding studs rigid with the bight portions of yokes 22 of inverted U-shape, wheels 24 being journaled between the depending ends of the yoke arms. In this way, swiveled castor means is afforded, at the several corners of the main frame, whereby the main frame can be rolled in selected directions, with minimum difficulty.

Rigid with the lower framework at the several corners thereof, and projecting upwardly from said framework, are corner posts 26. These are formed with a longitudinal, compound curvature, so as to impart a substantial S-shape to the several corner posts, said posts being provided with integral, vertical brace members to strengthen the corner posts or standards.

Fixedly connected to the upper ends of the corner posts, at the respective sides of the main frame, are horizontally disposed upper longitudinal frame members 28, extending along the opposite sides of the main frame. A rear cross member 30 (Fig. 2) is fixedly secured to the rear ends of the upper side frame members 28, and to the rear posts 26. The cross member 30 provides a transverse brace for the upper portion of the rollable main frame. At the same time, the cross member 30 provides an abutment limiting swinging movement of the patient-supporting frame 12 in a counterclockwise direction, viewing said frame 12 as in Figs. 1 and 2.

It will be seen that the rollable main frame, at the front thereof, is open above the front lower cross member 18, for the purpose of increasing access to the patient, as well as facilitating therapy.

The pivoted frame 12 includes a relatively elongated, rectangular, open framework including tubular side frame members 32 rigid at their ends with front and rear cross members 34. The front cross member 34 has a slot 36 for its full length (Fig. 4), to receive the lower edge of a rectangular, plate-like foot rest 38. The slot-engaged edge portion of said foot rest is welded or otherwise fixedly secured in place within the front cross member 34.

Mounted upon the rectangular framework defined by members 32, 34 is a lattice-like spring assembly including transversely spaced, parallel, longitudinal spring members 40 extending the full length of the rectangular, pivoted framework. Spaced longitudinally of the spring members 40, and supported upon the several spring members 40, are transverse spring members 42. These can be riveted in place or otherwise fixedly secured to the longitudinal spring members. At their opposite ends, the longitudinal spring members 40 are formed with upwardly offset end portions 44, engaged over the front and rear frame members 34 of the pivoted framework. The upwardly offset ends 44 can be fixedly secured in place to their associated members 34, in any suitable manner, as for example by screws, rivets, etc.

The pivoted frame 12 is mounted upon the rollable main frame for swinging movement about a horizontal axis extending transversely of said pivoted frame 12, medially between the opposite ends thereof. To this end, quadrantal gear segments 46 are secured along their upper edges to the undersides of the midlength portions of the side frame members 32, by welding or the like. Gear segments 46, adjacent their welded connections to the

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members 32, have bearing openings receiving the opposite end portions of a pivot shaft 48, said pivot shaft 48 defining the transverse, horizontal axis about which the frame 12 swings. A suitable bushing can be provided at each end of the shaft 48 (Fig. 5) to prevent wear of the end portions of the shaft.

The shaft 48, at its ends, is supported in transversely aligned openings formed in the upper end portions of vertically disposed support bars 50, welded or otherwise fixedly attached at their upper and lower ends to the side frame members 28, 16 respectively. Intermediate their ends, the support bars 50 have transversely aligned openings receiving the opposite ends of a rotatable operating shaft 52. Adjacent the support bars 50, the operating shaft 52 has small gears 54 keyed or otherwise secured thereto, the gears 54 being in mesh with the teeth of the gear segments 46. Accordingly, rotation of the shaft 52 will be effective to transmit rotatable movement of the gear segments 46 about the axis of the shaft 48, thus transmitting rocking or tilting movement to the frame 12.

For the purpose of rotating the shaft 52, there is provided an operating wheel 56 on one end of the shaft 52 (Fig. 5). Wheel 56 is secured fixedly to its associated end of the operating shaft 52, by means of a set screw or equivalent means. Wheel 56 is adapted to be rotated by the patient, through the medium of uniformly spaced, radially extending, elongated arms 58, provided with nob-like handles at their outer ends, said arms 58 being spaced equal distances apart circumferentially of the wheel 56. The arms 58 are of such a length as to extend to the upper portion of the rollable main frame (Figs. 1 and 2), and as a result, the patient, no matter what position he or she may be disposed in during tilting movement of the frame 12, will always be disposed in position to readily grasp and rotate the arms 58.

The wheel 56, as shown in Fig. 7, has a circumferential series of teeth 60, defining therebetween notches, any of which are adapted to receive the lower end of a detent 62. Detent 62 is slidably mounted in a vertically disposed casing 64 (Figs. 5 and 7), which casing is welded or otherwise fixedly attached to the adjacent support bar 50.

The detent 62, as shown in Fig. 5, is normally urged to the full line position shown in this figure of the drawing, said detent having an upper end portion projecting above the casing 64 and extended laterally to afford a handle 66 which can be readily grasped by the user. Within the casing, the detent is provided with a collar 68 fixedly secured to the detent shank, and abutting at its opposite ends against said collar and the upper end wall of the casing is a spring 70 held under compression within the casing. Spring 70, tending to expand, forces the detent to the full line position shown in Fig. 5, to cause the lower end of the detent to engage in a selected notch of wheel 56.

It will be seen that this permits the frame 12 to be

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locked in any selected position to which it is tiltably adjusted.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. A self-propelled rollable and tiltable hospital table for supporting a patient comprising a wheeled rectangular frame having an upper rectangular frame section and a lower rectangular frame section, the upper frame section being open at one end, an elongated table tiltably and adjustably mounted on the upper frame section midway its ends, said table including a rectangular frame with longitudinally and transversely arranged spring strips supported thereon, the end sections of said table frame being tubular, one of said tubular end sections being slitted, said table being supported by the closed end of the upper frame section when in horizontal position and being movable through the open end of said upper frame section for adjusting its position, and a foot supporting plate having an angular end portion disposed in the slit in the tubular end of the table.

2. In a device of the kind described, a tiltable table formed with elongated tubular side members connected at one end by a cross tubular member, said cross tubular member having a slot therealong, and a rectangular plate inserted into said slot and secured to the edges thereof and extending at right angles to the table for resting the feet of the patient thereon.

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