July 23, 1935. E. G. WYATT 2,009,156

HOSPITAL BED

Filed July 24, 1934 4 Sheets-Sheet 1

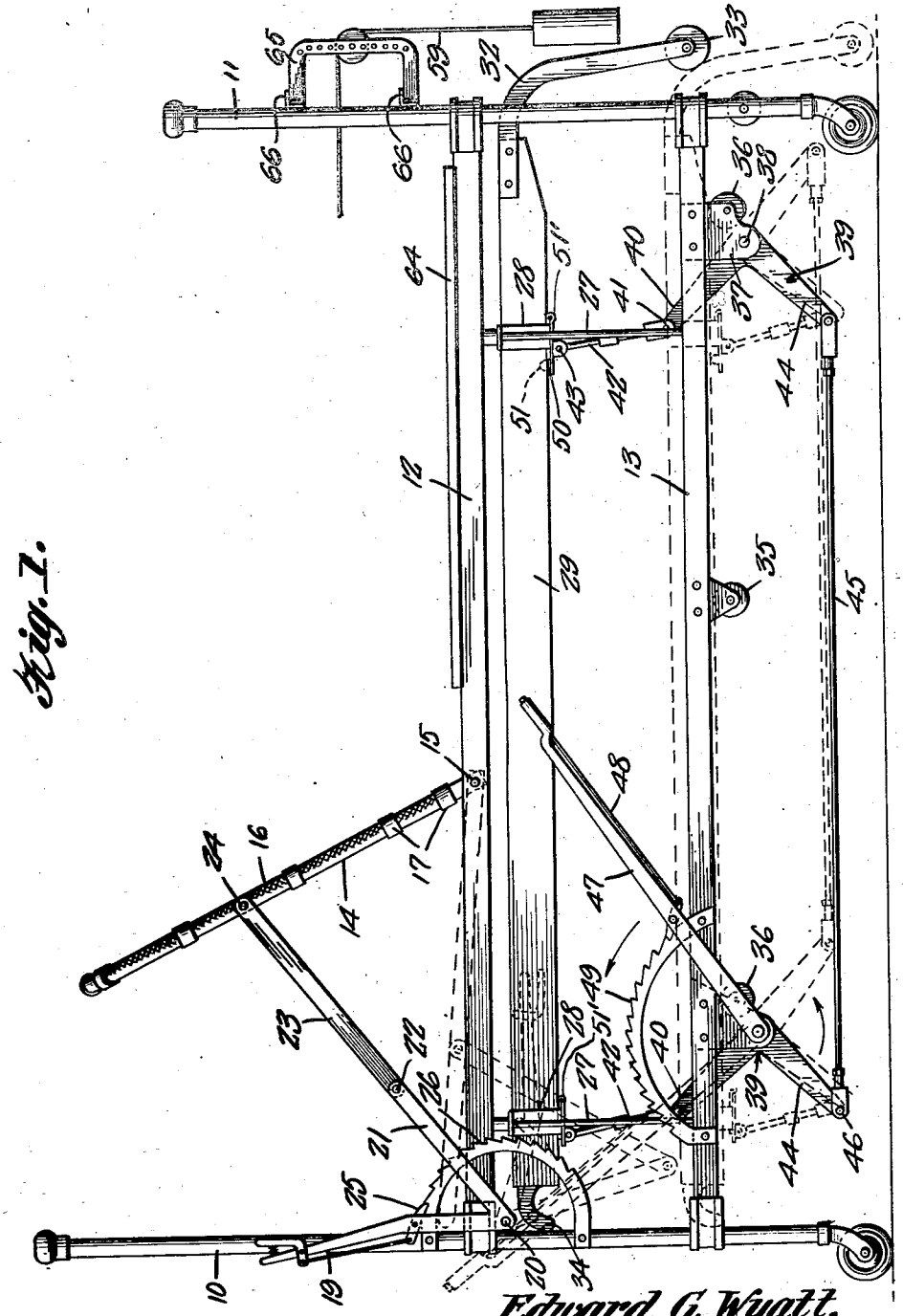


Fig. 1.

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July 23, 1935. E. G. WYATT 2,009,156

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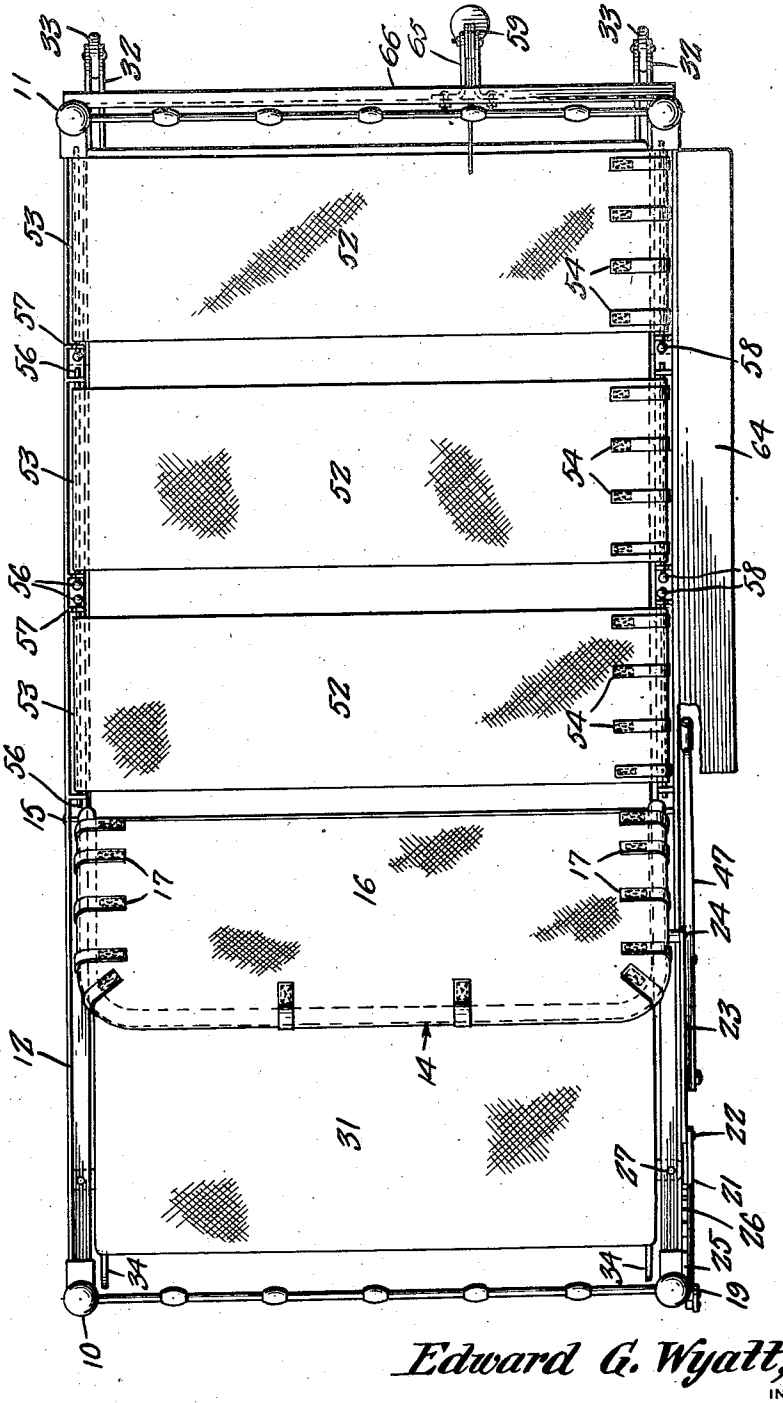


Fig. 2.

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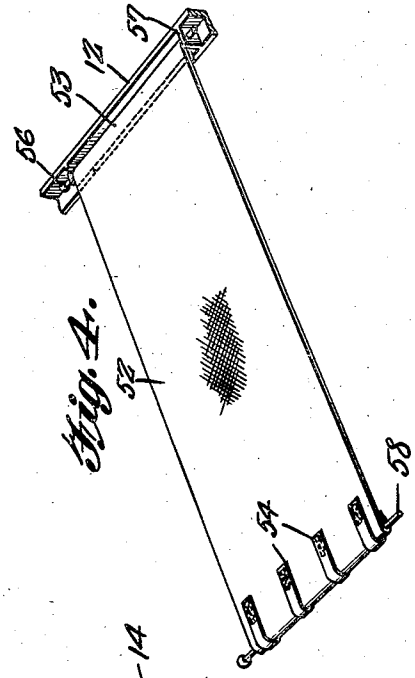


Fig. 4.

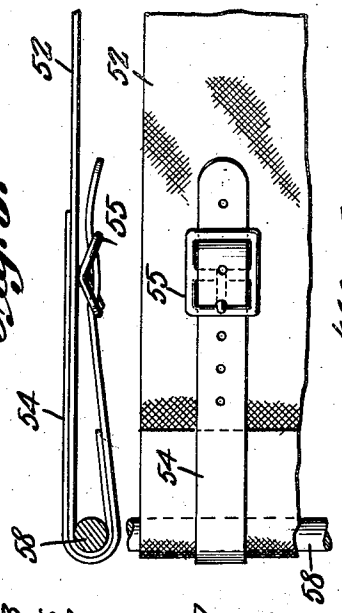


Fig. 5.

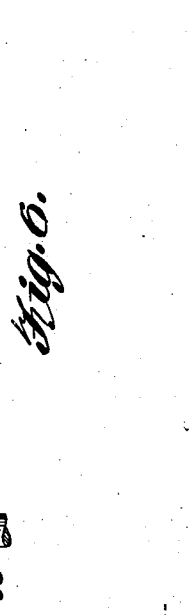


Fig. 6.

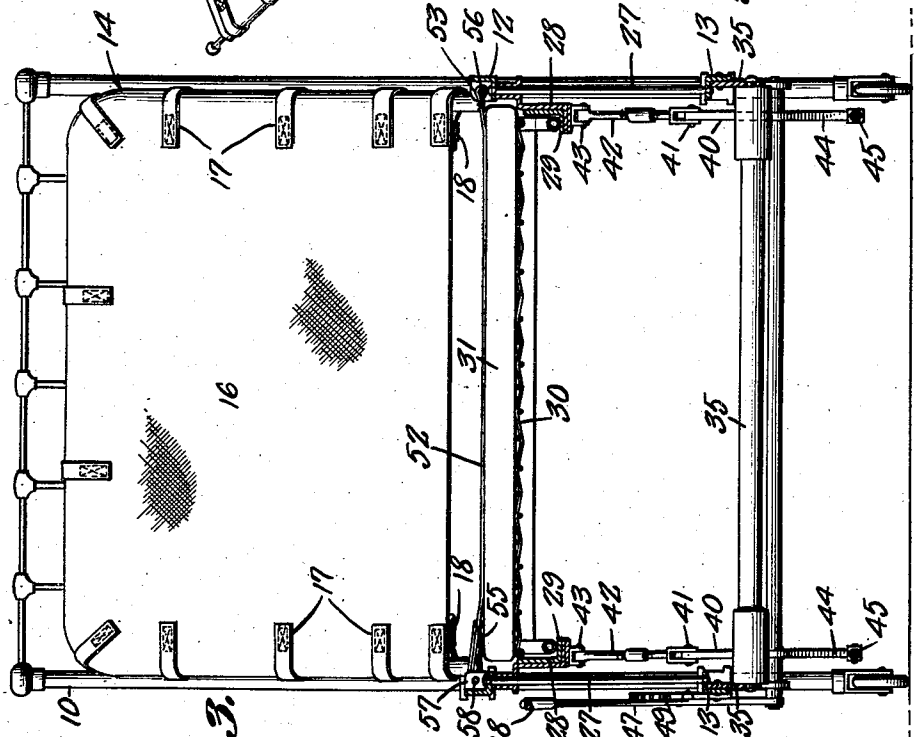


Fig. 3.

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July 23, 1935. E. G. WYATT 2,009,156

HOSPITAL BED

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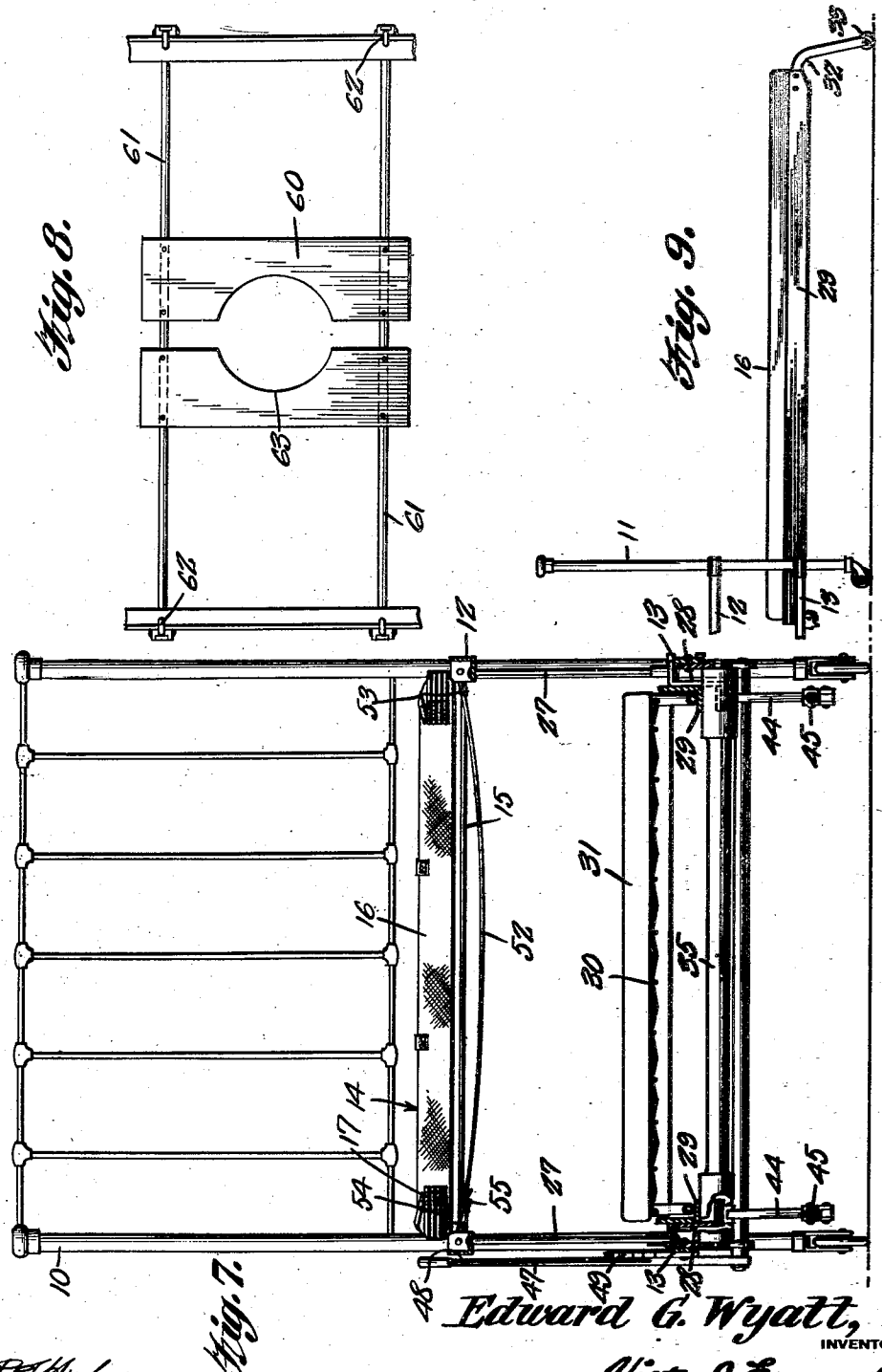


Fig. 7.

Fig. 8.

Fig. 9.

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Patented July 23, 1935 2,009,156

UNITED STATES PATENT OFFICE

2,009,156

HOSPITAL BED

Edward G. Wyatt, Sault Ste. Marie, Ontario, Canada

Application July 24, 1934, Serial No. 736,727

2 Claims. (Cl. 5—65)

The invention relates to a bed construction and more especially to a hospital bed or invalid's bed.

The primary object of the invention is the provision of a bed of this character, wherein a patient when occupying the same will be relieved from inconvenience due to the arranging of the mattress, the bed covering or other requirements incident to a person when confined to the bed, and also to facilitate the handling of the occupant, particularly should the same be severely injured or helpless, and the making easy of the work of nurses and attendants.

Another object of the invention is the provision of a bed of this character, wherein the occupant will be better served and handled by a single nurse, thereby eliminating the use of extra help and such bed can be maintained in proper condition and for proper servicing of a patient when confined thereto.

A further object of the invention is the provision of a bed of this character, wherein the person confined thereto can be properly handled without inconvenience to such person, so that he or she can be raised to a seating position or to a reclining position without excessive labor on the part of an attendant, and the person can be serviced with dispatch according to the character of ailment or injury, and in this service the patient is relieved from being handled, or disturbances incident thereto.

A still further object of the invention is the provision of a bed of this character, wherein its construction is novel in form to render it adaptable for the treatment of injuries or ailments without undue disturbance of the patient and minimizing the labor on the part of an attendant, as such patient will not be required to be bodily handled to assume a posture for the required treatment or for the rearranging of the bed covering or the making of the bed, or the bathing of the patient and treatments as may be required.

A still further object of the invention is the provision of a bed of this character which is comparatively simple in construction, thoroughly reliable and efficient in its purposes, readily and easily adjusted, strong, durable, and inexpensive to manufacture.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawings, which disclose the preferred embodiment of the invention, and pointed out in the claims hereunto appended.

In the accompanying drawings:

Figure 1 is a side elevation of a bed constructed in accordance with the invention, showing by full lines one adjustment thereof and by dotted lines other adjustments.

Figure 2 is a top plan view.

Figure 3 is a vertical transverse sectional view.

Figure 4 is a perspective view of one of the supporting sections showing fragmentarily the mounting thereof.

Figure 5 is an enlarged fragmentary vertical sectional view thereof.

Figure 6 is a fragmentary bottom plan view.

Figure 7 is a view similar to Figure 3, but the bed being differently adjusted with respect thereto.

Figure 8 is a fragmentary plan view showing in detail a buttocks support.

Figure 9 is a fragmentary side elevation of the bed showing the mattress frame extended for convenience in applying bed covering.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings in detail, the bed comprises head and foot pieces 10 and 11, respectively, each being in the nature of frames made from metal tubing, although they may be made from any other suitable material, and separably joined with upper and lower side rails 12 and 13, respectively, the matching end rails to these side rails being a part of the head and foot pieces. The side rails are preferably of L-shape irons and are separably joined with the head and foot pieces in any conventional manner. Swingingly carried by the upper side rails 12 is a back rest 14, it being connected with the said side rails by pivots 15, so that it is susceptible of vertically swinging movement. This back rest 14 carries a covering section 16 having marginally at the sides and outer end, at intervals, the attaching straps 17 and buckles 18 so that this section 16 can be detachably carried by the back rest 14 and adjusted to give the desired stretch thereto for comfort to an occupant of the bed.

At the head piece and on one side of the bed is a lever 19 which is fixed to a rocking shaft 20 suitably journaled transversely of the bed next to the said head piece and this shaft has fixed thereto swinging arms 21 to which are pivoted, at 22, links 23, these being pivoted, at 24, to the back rest 14, so that on the turning of the shaft 20 the said rest can be raised to an inclined position or lowered to an approximate horizontal position. The lever 19 carries a manually con-

trolled latch 25 engageable with a toothed keeper sector 26 made secure to the head piece 10. Thus the back rest 14 on the throw of the lever 19 can be adjusted and, through the medium of the latch 25, held in such adjusted position.

Attached to and arranged between the upper and lower side rails 12 and 13 are vertical guide rods 27 on which are fitted slidable hangers 28 supporting a slidable bed spring frame 29, the springs thereof being indicated at 30 and the same supporting a mattress 31. This frame 29, at the foot end thereof, carries legs 32 supporting rubber tired rollers or wheels 33 for contact with a floor so that the frame 29 can be pulled outwardly through the foot piece 11 between the corner posts thereof when the hangers 28 have been lowered on the guide rods 27 to enable the covering of the mattress with sheeting and other bed clothing, as the occasion requires. The frame 29, at the head end thereof, carries handles 34, so that should it become necessary to separate the said frame 29 from the bed proper, these handles 34 are serviceable for holding the head end of the frame, while the foot end will be supported by the legs 32, having the rollers or wheels 33 upon the floor.

The side rails 13 at intervals support rollers 35 and 36, respectively, for the frame 29 when being pulled outwardly from or pushed inwardly of the bed proper and support the load of said frame when in its lowermost position.

On the side rails 13 are the brackets 37 in which are journaled the rocking shafts 38, these being disposed transversely of the bed beneath the lowermost side rails 13 thereof. The shafts 38 carry bell cranks 39, the arms 40 of which have pivotal connection, at 41, with adjustable throw links 42, these being pivoted, at 43, to the hangers 28. The other arms 44 of said bell cranks 39 are connected through the medium of an adjustable connecting rod 45, it being pivoted, at 46, to said arms so that motion imparted to one crank will be transmitted to the other crank as the same operate in unison, and on moving these cranks 39 the frame 29 will be raised and lowered on the guide rods 27, as should be obvious.

Connected to one of the shafts 38 is a throw lever 47 carrying a manually controlled latch 48 engageable with a toothed keeper sector 49 secured to one of the lowermost side rails 13. Thus it will be seen that the lever 47 when operated will move the cranks 39 for the adjustment of the frame 29 and this lever can be held in adjusted position by the latch 48 engaging the sector 49.

The hangers 28 next to the foot piece 11 of the bed are provided with holding lugs 50, these being received in suitable companion notches 51 in the sides of the frame 29 to latch the latter when pushed inwardly of the bed. When the lever 47 is released and moved a slight distance, the frame 29 makes contact with the rollers 35, but the said frame cannot be pulled out because the rollers 33 do not quite reach the floor and thus will not lift the frame 29, the lugs 50 being held until the lever 47 is released as far as possible. This action is necessary when raising and lowering the frame 29 so that it will always return to where it was last positioned. It is understood that the lever 47 is not used or swung to the full extent of its toothed keeper unless it is desired to pull the frame 29 out to change bed clothing or mattress.

The bed may be moved around the floor when the frame 29 rests on the rollers 35 without the rollers 33 touching the floor and these rollers do not touch the floor until the frame 29 is pulled part way out. The lugs 50 are hinged to the slidable hangers 28 and will drop clear of the frame 29 when the lever is released and swung to its full extent and the frame 29 resting on the rollers 35.

The lugs 50 are carried on plates hinged at 51' to the said hangers 28, as should be clearly apparent from Figure 1 of the drawings. When the frame 29 is raised to the uppermost elevation therefor the springs 30 and mattress 31 are in a position for occupancy by the user of the bed.

Between the foot piece 11 and the axis of movement of the back rest 14 and disposed transversely between the upper side rails 12 of the bed is the series of removable supporting sections 52, each having a casement 53 at one end and attaching straps 54 and buckles 55, respectively, at the other end. The casement 53 at one end of a section 52 receives a holding rod 56, this being removably fitted in retaining ears or brackets 57 and likewise the straps embrace a holding rod 58 similar to the rod 56 and said rod 58 is mounted alike to the rod 56 for the placement of the series of sections 52 in the bed to support an occupant thereof when the frame 29 has been lowered from the elevated occupying position heretofore referred to. Selectively the sections 52 can be detached in a convenient manner for the service of the frame 29 carrying the springs and mattress hereinbefore mentioned.

On the foot piece 11 is arranged a vertically and horizontally adjustable weighted leg hoist or lifting device 59, it being seen that the said device can be adjusted vertically and transversely to the requirements in the use thereof by an occupant of the bed in that the bracket 65 for the hoist is adjustably fastened to the horizontal rail 66 on the foot piece 11, so that such bracket can be selectively positioned transversely with respect to the foot piece.

In Figure 8 of the drawings there is shown a buttocks support which includes a pair of spaced boards or plates 60, these being made secure to bridge rods 61 having attaching terminals 62 for separably engaging the side rails 12 of the bed when the support is mounted for service. The boards or plates 60 have the companion opposed notches or cutaway portions 63 for the locating of an air cushion or a bed pan when the service of these is required, either being placeable upon the frame 29 to be brought into register with the notches or cutaway portions 63 in said boards or plates 60 for use by an occupant of the bed.

The cushion or pan for service is placed upon the frame 29 when in lowered position and thereafter this frame is elevated for the locating of the said cushion or pan. This support just described is only applied to the bed when the cushion or pan is desired for service.

The sections 52 can be readily removed from beneath a patient when the mattress has been supplied with bed clothing and the frame 29 moved to bring such mattress with the bed clothing into proper position for service or occupancy. These sections 52 support the patient when the frame 29 has been lowered from occupying position and it should be apparent that the bed clothing can be applied to the mattress when on the frame 29 without in the least disturbing the occupant of the bed.

The bed in its construction assures convenience to an attendant and avoids any possibility

of discomfort to the occupant of the bed, as well as enabling ease in the treatment of the patient, and facilitates the handling of the injured or helpless.

On one side of the rail 12 is a bench-like seat 64 for the convenience of an attendant or nurse when required to be seated close to the occupant of the bed or when giving service to such occupant.

What is claimed is:

1. A bed of the kind described comprising head and foot pieces, upper and lower side rails connected with said pieces, vertical guides between and connecting the rails, hangers vertically movable between the rails on the guides, a spring and mattress carrier slidably engaged with the hangers and vertically movable therewith, means for moving the hangers, handles at one end of the carrier, and wheeled legs at the other end.

2. A bed of the kind described comprising head and foot pieces, upper and lower side rails connected with said pieces, vertical guides between and connecting the rails, hangers vertically movable between the rails on the guides, a spring and mattress carrier slidably engaged with the hangers and vertically movable therewith, means for moving the hangers, handles at one end of the carrier, wheeled legs at the other end, and guide rollers on the lower rails and coacting with the wheeled legs for movably supporting the carrier when the hangers are in lowermost position.

EDWARD G. WYATT.