

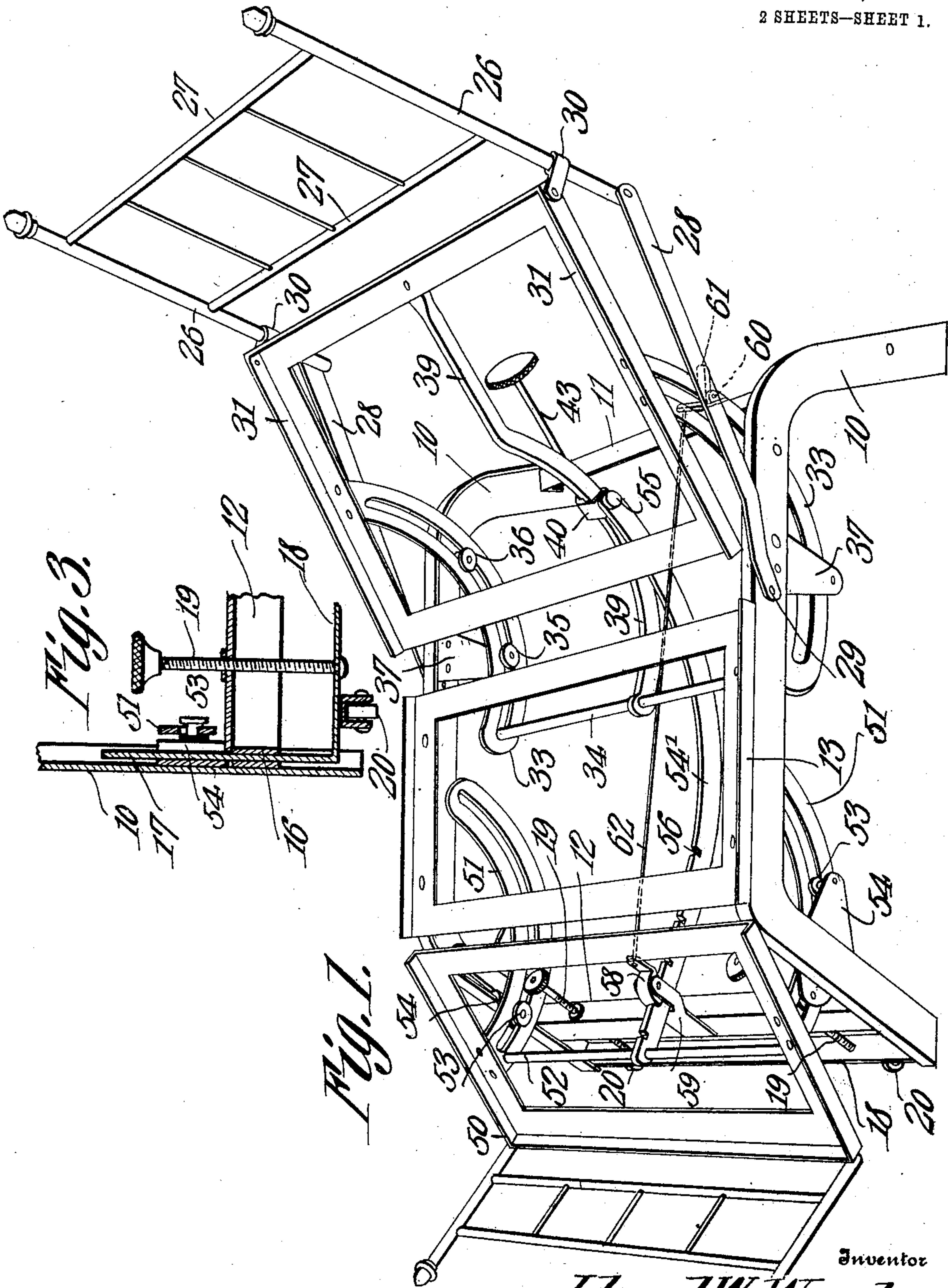
L. W. WARD.
INVALID BED.

APPLICATION FILED JULY 18, 1908.

912,214.

Patented Feb. 9, 1909.

2 SHEETS—SHEET 1.



Witnesses

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J. H. Parker

Inventor

Lloyd W. Ward.

384

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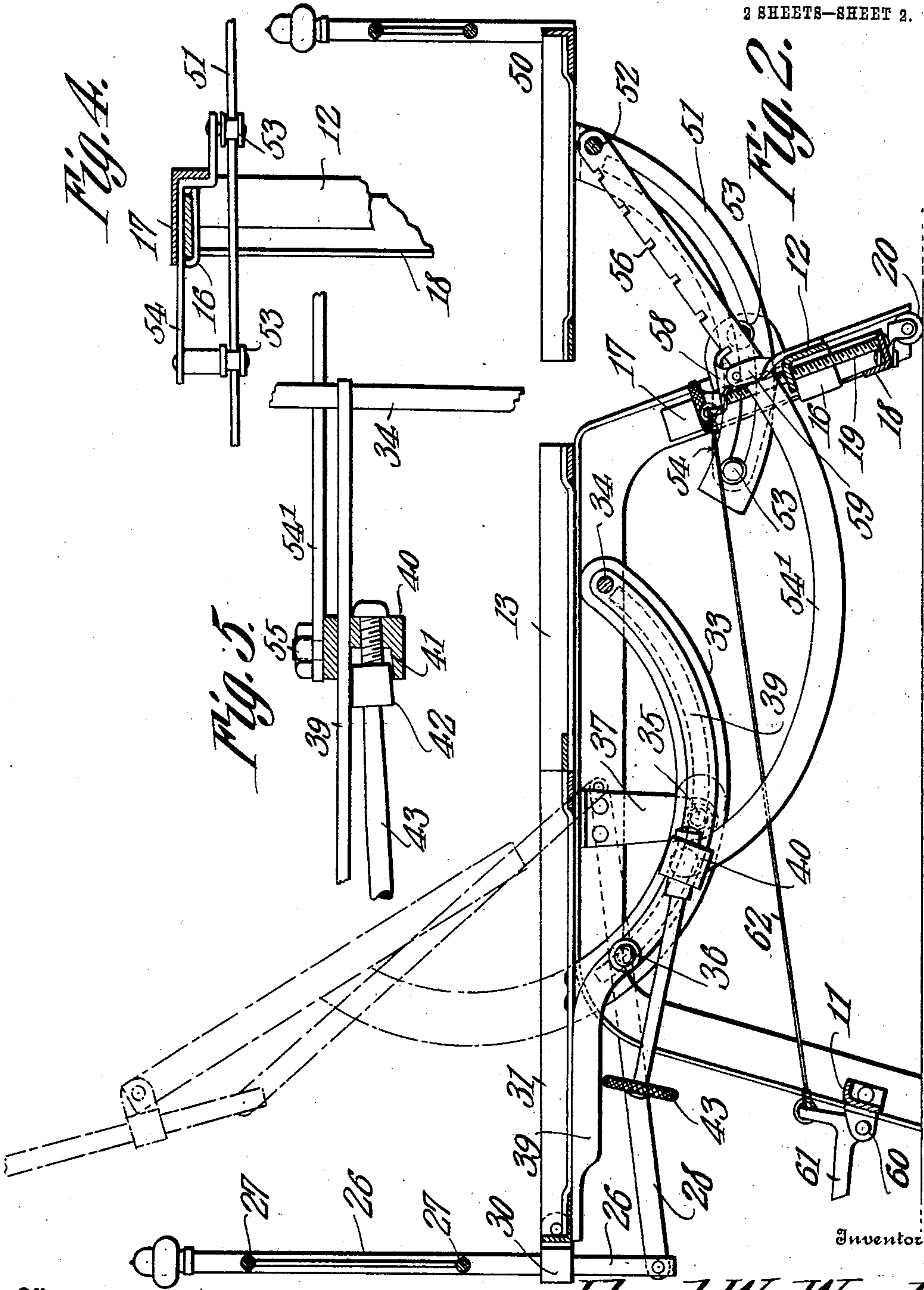
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UNITED STATES PATENT OFFICE.

LLOYD W. WARD, OF BUCKHANNON, WEST VIRGINIA.

INVALID-BED

No. 912,214.

Specification of Letters Patent.

Patented Feb. 9, 1909

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To all whom it may concern:

Be it known that I, LLOYD W. WARD, a citizen of the United States, residing at Buckhannon, in the county of Upshur and State of West Virginia, have invented a new and useful Invalid-Bed, of which the following is a specification.

This invention relates to invalid beds, and has for its principal object to provide a novel form of bed structure in which the various parts may be readily adjusted for the purpose of enabling the patient to assume either a reclining or sitting position.

A further object of the invention is to provide a means for adjusting and holding the head of the bed frame and that portion of the frame adjacent the head in varying angular positions for the purpose of forming a back rest.

A still further object of the invention is to provide means whereby the head and foot sections may be adjusted either independently of each other or simultaneously and locked in adjusted position.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is a perspective view of a bed constructed in accordance with the present invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a detail transverse section of a portion of the bed. Fig. 4 is a sectional plan view on the line 4—4 of Fig. 2. Fig. 5 is a detail view on an enlarged scale of the clamp for locking parts of the bed frame in adjusted position.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The bed structure is supported by a main frame comprising a pair of opposite side standards 10, each of inverted U-shape. The rear legs of the standards are connected by

an angle bar 11 and the front legs by an angle bar 12, while at the forward portion of the frame is secured a rigid portion 13 of the bed bottom, this portion constituting a seat when the device is adjusted for use as a reclining chair.

Secured to the inner faces of the front legs are metallic guides 16 arranged for the reception of a pair of vertical strips 17 that extend upward from the opposite ends of an angle bar 18. To the approximately horizontal web of the angle bar are swiveled two screws 19 that pass through threaded openings in the angle bar 12, and the upper ends of these screws have milled heads by which the screws may be turned for the purpose of adjusting the vertical height of the bar 18. This bar 18 carries casters or rollers 20 that rest on the floor and by turning the screws the vertical height of the forward end of the bed may be readily adjusted.

The head section 25 includes a pair of opposite side posts 26 connected by cross bars 27 and at the lower ends of the bars 26 are pivoted links 28 which extend forward and are pivoted at their front ends on studs 29 projecting from the opposite sides of the standards 10. The two bars 26 form guides for the reception of a pair of clips or collars 30 which are free to slide on the bars and the clips or collars carry forwardly projecting arms that are pivoted to the rear end of the back section 31 of the bed frame, this back section together with the head section being adjustable to varying angular positions for the purpose of forming a reclining chair. Rigidly secured to the side bars of the back section 31 are two arcuate bars 33 that are connected at their forward ends by a cross bar 34. The bars 33 are provided with arcuate slots that are arranged for the reception of grooved anti-friction rollers 35 and 36, the rollers 35 being supported on suitable hangers 37 depending from the standards 10, while the rollers 36 are mounted on studs projecting directly from said standards. As the anti-friction rollers are spaced apart and the bars 33 are rigidly secured to the back section, the rollers will serve to support the weight of the back section when the latter is locked from downward movement.

Extending from the forward bar 34 to the rear bar of the back frame is a bar 39, the

forward end of which is curved to follow the arc of the bars 33. This bar 39 receives a slidable block 40 in the rear portion of which is an angularly disposed recess 41 for the reception of a frusto conical clamping block 42. The clamping block is arranged near the forward end of a hand wheel rod 43, and the forward threaded end of the rod engages in a threaded opening that is formed in the block 40, the axis of such opening being slightly inclined with respect to the opening that is formed for the passage of the bar 39, so that when the rod 43 is turned in one direction and the screw is forced into its threaded opening, the block 42 will be carried against the bar 39 and will serve to positively clamp the bar against one of the walls of the guiding opening in block 40 and thus form a rigid lock between the bar and block and prevent independent movement of either member.

The foot section 50 of the bed is carried by a pair of arcuate bars 51 which are rigidly secured to said foot section and which are connected by a cross bar 52. The bars 51 are provided with arcuate slots for the reception of grooved anti-friction rollers 53 that are carried by plates 54 rigidly secured to the inner walls of the front legs of the standards and bent to follow the angular contour of said legs. To the central portion of the cross bar 52 is pivoted a curved link 54', the rear end of which is pivoted on a bolt 55 carried by the block 40, so that the link forms a connecting means between the back and foot sections of the bed.

The upper edge of the link 54' is provided with a series of locking notches 56 for the reception of a latch 58 that is pivoted to a bracket 59 on the cross bar 12. On the forward cross bar 11 of the main frame is a bracket 60 carrying a bell crank foot lever 61 that is connected to the latch by a rod 62 and by depressing the foot lever, the latch may be moved to release position and if the clamp 42 is then in locking position the back and foot sections of the bed may be simultaneously rocked for the purpose of lowering the legs and raising the back of the patient to a more or less erect position, or the two parts may be moved until in horizontal alinement with the central or seat section 13 of the bed.

By unscrewing the clamp 42 and allowing the latch 58 to remain in locked position, the back section may be independently adjusted to varying angular positions without disturbing the foot section, and if the back section is then held and the latch released, the foot section may be adjusted independently of the head section, so that the body and limbs of the patient may be moved independently to the most comfortable position.

What is claimed is:—

65 1. In a bed, a stationary frame, a seat sec-

tion supported thereby, a head section, links forming a pivotal connection between the stationary frame and the head section, a back section slidably connected to the head section, a pair of arcuate bars secured to the back section, guiding means carried by the frame and engaging said bars, and means for locking the back section in adjusted position. 70

2. In a bed, a main frame, a seat section supported thereby, a head section, links connecting the head section to the frame, a back section having a slidable connection with the head section, a pair of bars secured to the back section and provided with arcuate slots, anti-friction rollers supported by the main frame and extending through the slots, and means for locking the back section in adjusted position. 80

3. In a bed, a main frame, a seat section supported thereby, a head section including a pair of side bars, links connecting the lower ends of said side bars to the main frame, a pair of collars slidable on the side bars, a back section pivotally connected to said collar, a pair of bars secured to the back section and provided with arcuate slots, anti-friction rollers supported by the main frame and extending through the slots, and means for locking the back section in adjusted position. 85 90 95

4. In a bed, a main frame, a seat section supported thereby, a back section, a foot section, a pair of bars rigidly secured thereto and provided with arcuate slots, anti-friction rollers supported by the frame and extending through the slots, a notched link movable with said bars, and a latch arranged to engage the notches of the link and hold the foot section in adjusted position. 100 105

5. In a bed, a main frame, a seat section supported thereby, foot and back sections, bars secured to the foot and back sections and provided with arcuate slots, anti-friction rollers supported by the main frame and extending through said slots, an arcuate bar carried by the back section, a block slidable on said arcuate bar, a link forming a pivotal connection between said block and the slotted bars of the foot section, said link having a series of notches in one edge, a latch arranged to engage in said notches, and a locking clamp carried by the block and arranged to rigidly hold the block against the arcuate bar. 110 115 120

6. In a bed of the class described, a main frame, a seat section, a movable section having an arcuate bar, a block slidably mounted on the bar and provided with a tapered recess and having a threaded opening in alinement with the recess, and a threaded rod extending through said opening and provided with a frusto conical locking block mounted in the recess and arranged to engage against said arcuate bar. 125 130

7. In an adjustable bed structure, a main frame, a head section loosely supported thereby, and a back section having a slidable and pivotal connection with the head section and serving to move the latter to varying angular positions as the back section is adjusted.

In testimony that I claim the foregoing as

my own, I have hereto affixed my signature in the presence of two witnesses.

LLOYD W. WARD.

Witnesses:

G. M. BUCKLEW,
J. E. PARKER.