

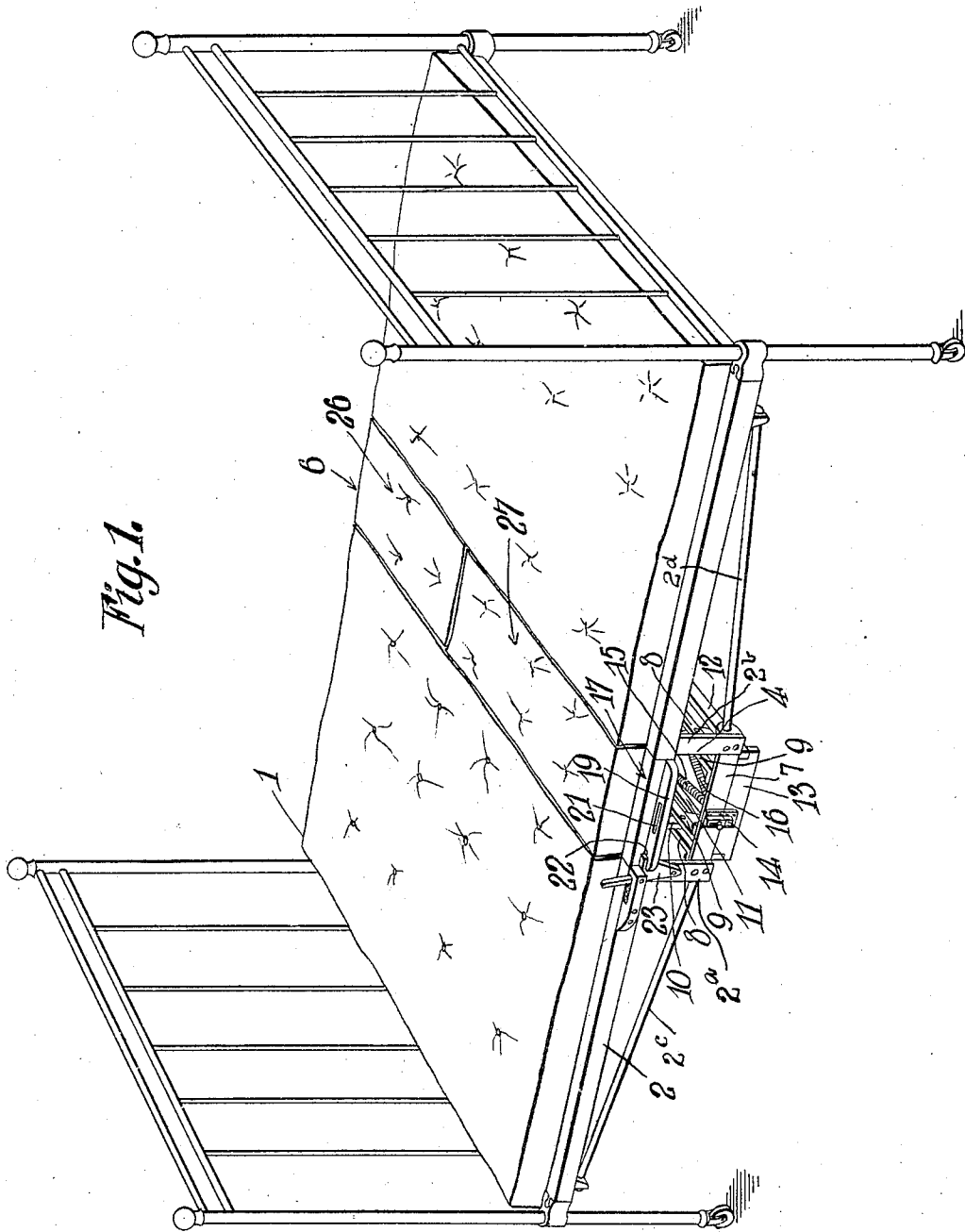
No. 878,045.

PATENTED FEB. 4, 1908.

J. J. COLLINS.  
INVALID OR HOISTING BED.

APPLICATION FILED MAR. 21, 1907.

3 SHEETS—SHEET 1.



Witnesses

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C. H. Giesbauer

Inventor

John J. Collins.

By

A. B. Wilson & Co.  
Attorneys

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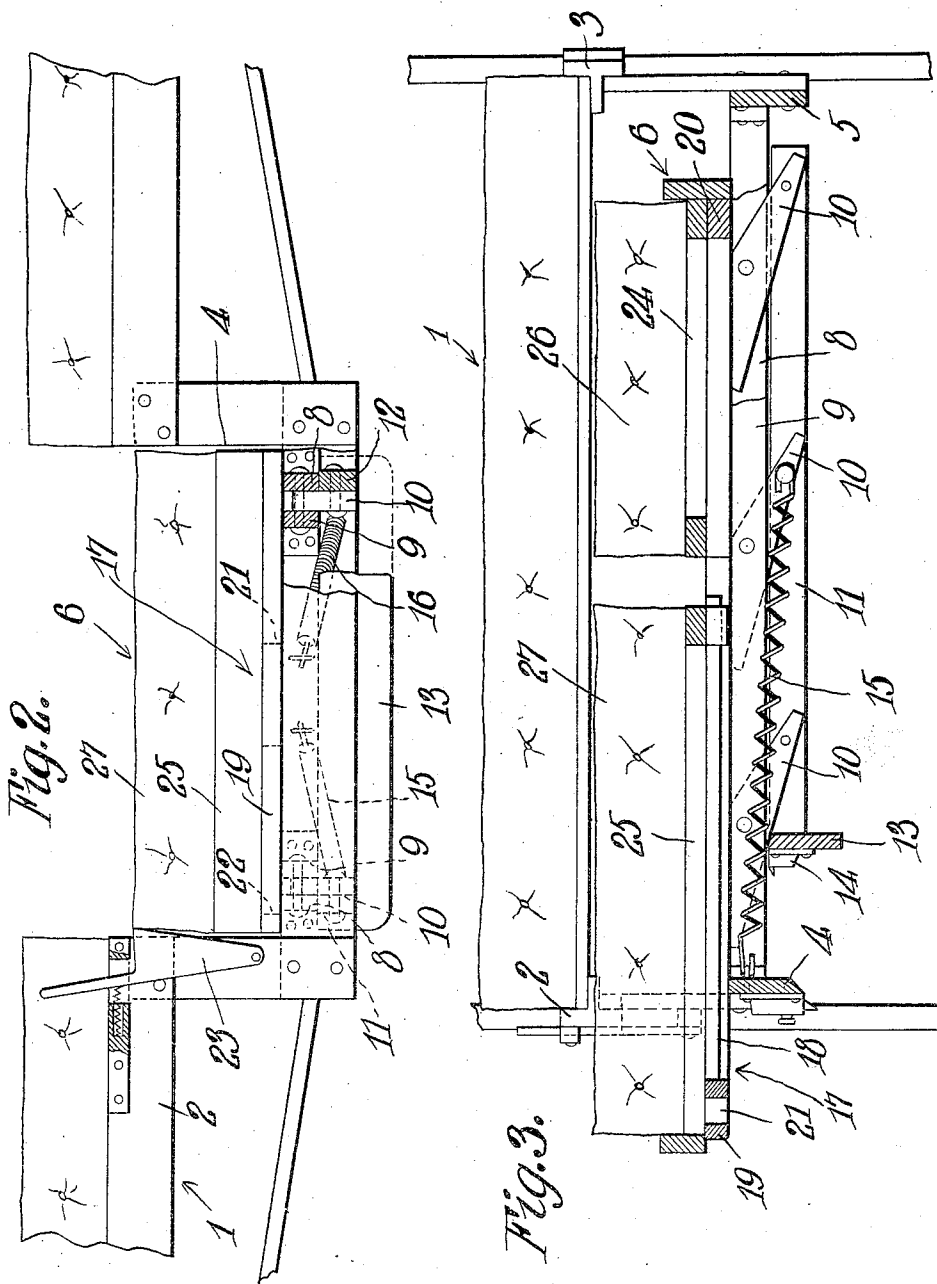
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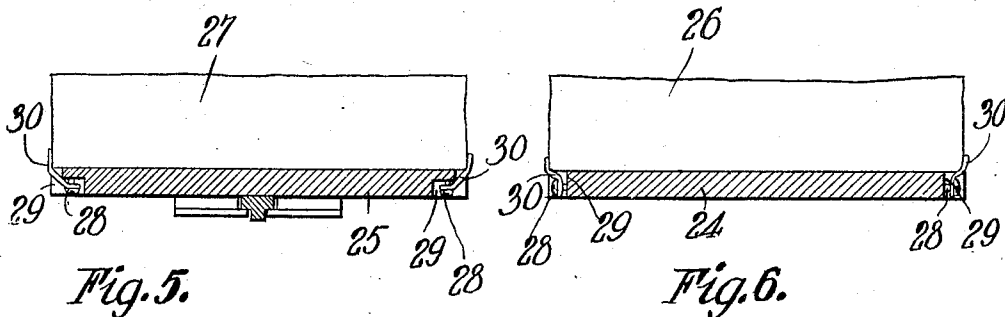
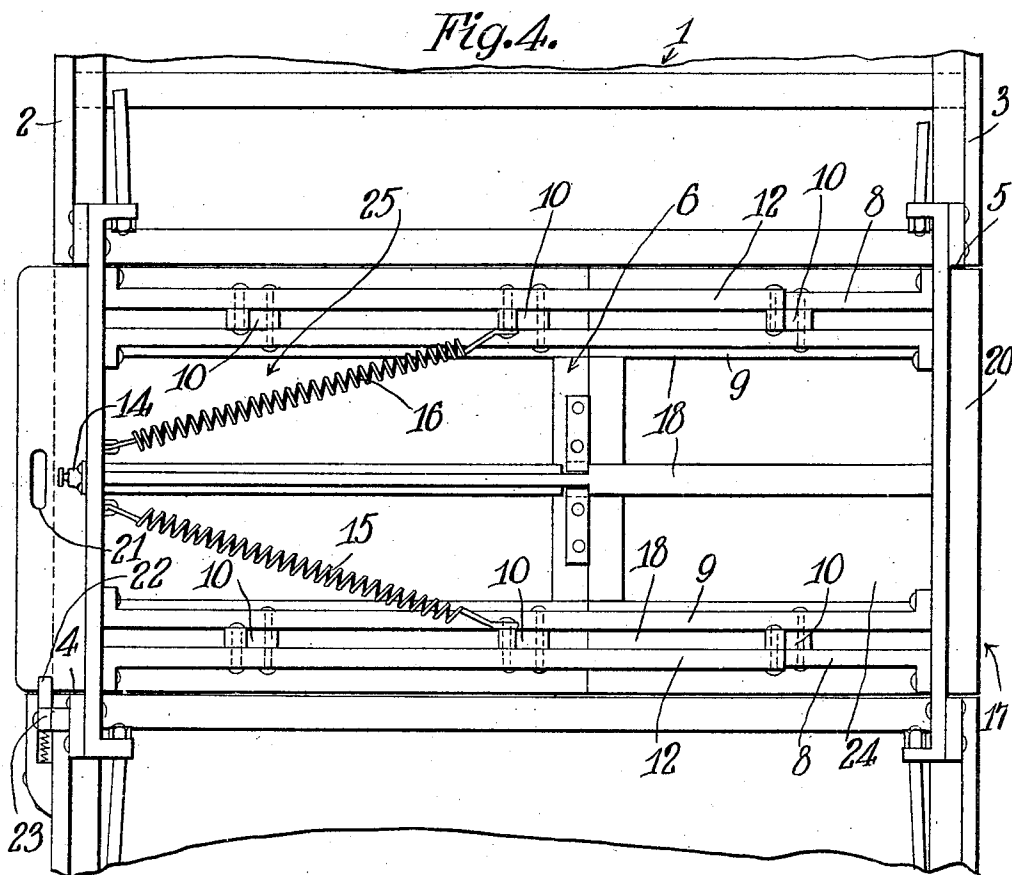
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3 SHEETS—SHEET 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN J. COLLINS, OF CLEMO, PENNSYLVANIA.

## INVALID OR HOISTING BED.

No. 878,045.

Specification of Letters Patent.

Patented Feb. 4, 1908.

Application filed March 21, 1907. Serial No. 363,623.

*To all whom it may concern:*

Be it known that I, JOHN J. COLLINS, a citizen of the United States, residing at Clemo, in the county of Wayne and State of Pennsylvania, have invented certain new and useful Improvements in Invalid or Hoisting Beds; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an invalid or hospital bed provided with means for inserting and removing a bed pan without disturbing the patient.

The object of the invention is to provide a bed with simple and efficient mechanism for inserting and removing a bed pan.

In the accompanying drawings,—Figure 1 represents a side perspective view of this improved bed in normal position. Fig. 2 represents a side elevation a section of the bed on an enlarged scale lowered in position to permit the insertion or removal of the bed pan; Fig. 3 represents a transverse sectional view with the parts in lowered position; Fig. 4 represents a bottom plan view of a portion of the bed. Figs. 5 and 6 are detail sectional views of the slide, showing the means for attaching the mattress section.

In the embodiment illustrated, the bedstead 1 shown is preferably of iron and has a head and foot board of ordinary construction. The side members 2 and 3 are made in the ordinary form, of angle-iron and each has a portion cut out preferably at or near the middle thereof and provided with depending bars or rods as 2<sup>a</sup> and 2<sup>b</sup> connected at their lower ends by a bar as 7 and forming a depression or recess 4 which extends transversely across the bed and in which a central section 6 is mounted to move vertically. Brace-rods as 2<sup>c</sup> and 2<sup>d</sup> are connected at one end to the lower ends of the vertical bars or members as 2<sup>a</sup> and 2<sup>b</sup> and at their opposite ends to the side members 2 and 3 near the head and foot of the bed. Secured at their opposite ends to the bars as 7 at opposite sides of the recess 4 are two pairs of transversely extending spaced bars 8 and 9, between each pair of which is pivoted immediately of their ends cam arms, as 10. The lower ends of each set of these arms, as 10, at opposite sides of the recess are pivoted to operating bars 11 and 12, which are connected at one end by a cross bar 13. On this cross bar 13

is secured one member of a latch 14, which is adapted to be engaged by the other member secured to the side bar 2 to lock the arms in upright or normal position for holding the movable bed section in elevated position with the top thereof in the same plane as the stationary sections of the bed. Two spiral springs 15 and 16 are attached at one end to the side bar 2 of the bedstead and at their other ends to the operating rods or bars 11 and 12 at about the center thereof. The upper ends of the arms 10 are of the same height to form a support for a sliding member 17 to be described. This sliding member 17 is of any desired construction, and as shown, is formed of three slats, as 18, and connected by end cross bars 19 and 20, one of which is provided with a hand grip 21 and with a notch 22 at one side to be engaged by a spring-pressed latch 23 disposed at one side of the recess 4 on the side member 2, and is adapted to lock said slide 17 against movement. This slide 17 is designed to receive a bed pan, (not shown), and mounted thereon are the mattress supporting sections, any desired number of which may be employed. Two of such sections are shown, one of which, 24, is fixed to the slide 17 and the other, 25, is arranged to slide back and forth thereon to permit the bed pan to be placed on and removed from the slide 17 at any desired point between the sections 24 and 25. These sections 24 and 25 may be of any desired construction and preferably correspond with the remainder of the bed bottom and are provided with means to which the mattress sections 26 and 27 may be secured to hold them securely in place when the section 25 is moved. As shown, these mattress-securing means comprise headed studs, as 28, arranged in recesses, as 29, in opposite sides of the sections 24 and 25, the mattress being provided with loops, as 30, which hook over these studs, as 28.

The central transverse opening in the bed-frame in which this mechanism is arranged is of a width sufficient to receive and permit the use of a bed pan, but not wide enough to permit the body of the patient to sink thereinto or be disturbed when the section 6 is lowered or raised.

In the operation of this apparatus the bed being in its normal position, as shown in Fig. 1, when it is desired to insert the pan, the member of the lock or latch 14 carried by the cross bar 13 is released from its coacting

member and the side bar 2 and the bar 13 with its connected operating bars 11 and 12, is pushed inward against the tension of the springs 15 and 16, whereby the cam arms, as 5 10, are turned downward, carrying with them the slide 17 which rests thereon and the parts supported on said slide. After the lowering of the section 6 the latch 23 is disengaged from the notches in the slide 17 and 10 the mattress section 25 and the slide 17 is drawn outward at the side of the bed; the section 25 is slipped outward to form a space between it and the fixed section 24, and the bed pan is placed on the slide 17, which is 15 then pushed into position under the patient. To remove the pan the slide 17 is again drawn out, the pan removed, the section 25 pushed back into contact with the section 24, and the slide run in until the latch 23 springs in 20 front of the section 25 and into the notch of the slide 17, and the parts are thus locked against transverse movement. The cross bar 13 is then drawn forward, being assisted by the springs attached to the operating 25 bars, which cause the cam arms, as 10 to move into upright position and raise the slide 17 and sections 24 and 25 supported thereon into normal position with the upper surfaces of the mattress sections 26 and 27 in 30 the same horizontal plane as the stationary sections of the mattress. The coacting members of the latch 14 then spring into engagement and the section 6 is locked in its normal position.

35 I claim as my invention:—

1. An invalid bed comprising a frame having oppositely disposed depressions or recesses formed in the side members thereof, means extending transversely of said bed and connected 40 with the side walls of said recesses, a series of cam arms pivotally connected intermediately of their ends to said means, an operating rod pivotally connected with the lower ends of said arms, means for locking 45 said rod in out-drawn position to hold said cam arms upright, a slide supported on said cam arms and a sectional mattress support mounted on said slide.

2. An invalid bed comprising a frame having 50 a vertically movable section, a member arranged transversely of said frame adjacent to said section, supporting arms for said section pivoted intermediately of their ends to said transversely arranged member, means 55 for operating said arms to raise and lower

said section and a sliding member arranged on said section.

3. An invalid bed comprising a frame having a vertically movable section, supporting arms for said section pivoted intermediately 60 of their ends to said frame, means for operating said arms to raise and lower said section, a sliding member arranged on said section and a bed-pan supporting member arranged to slide transversely in said vertically 65 movable section.

4. An invalid bed comprising a frame having a vertically movable section, supporting arms for said section pivoted intermediately 70 of their ends to said frame, means for operating said arms to raise and lower said section, a sliding member arranged on said section, a bed-pan supporting member arranged to slide transversely in said vertically movable section and means for locking said slide 75 in closed position.

5. An invalid bed comprising a frame having a vertically movable section, supporting arms for said section pivoted intermediately 80 of their ends to said frame, means for operating said arms to raise and lower said section, a sliding member arranged on said section and a spring pressed latch for engaging said slide to lock it in closed position.

6. An invalid bed consisting of a frame 85 having a depression extending transversely thereof, a section vertically movable in said depression, transversely extending bars arranged on opposite sides of said depression, operating means for said section comprising 90 a plurality of series of spaced arms pivoted intermediately of their ends to said bars, said series being spaced to form supports for the opposite sides of said vertically movable section, operating rods pivotally connecting 95 the lower ends of the arms of each of said series, a cross-bar connecting said rods, a latch member mounted on said cross-bar and adapted to engage a coacting member on the bed-frame, and a spring connected 100 with one of said operating rods and with the bed frame.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN J. COLLINS.

Witnesses:

PHILIP R. MURRAY,  
ROBT. J. MURRAY.