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BED.

APPLICATION FILED MAY 3, 1921. RENEWED MAY 10, 1922.

1,419,624. **Patented June 13, 1922.**

3 SHEETS—SHEET 1.

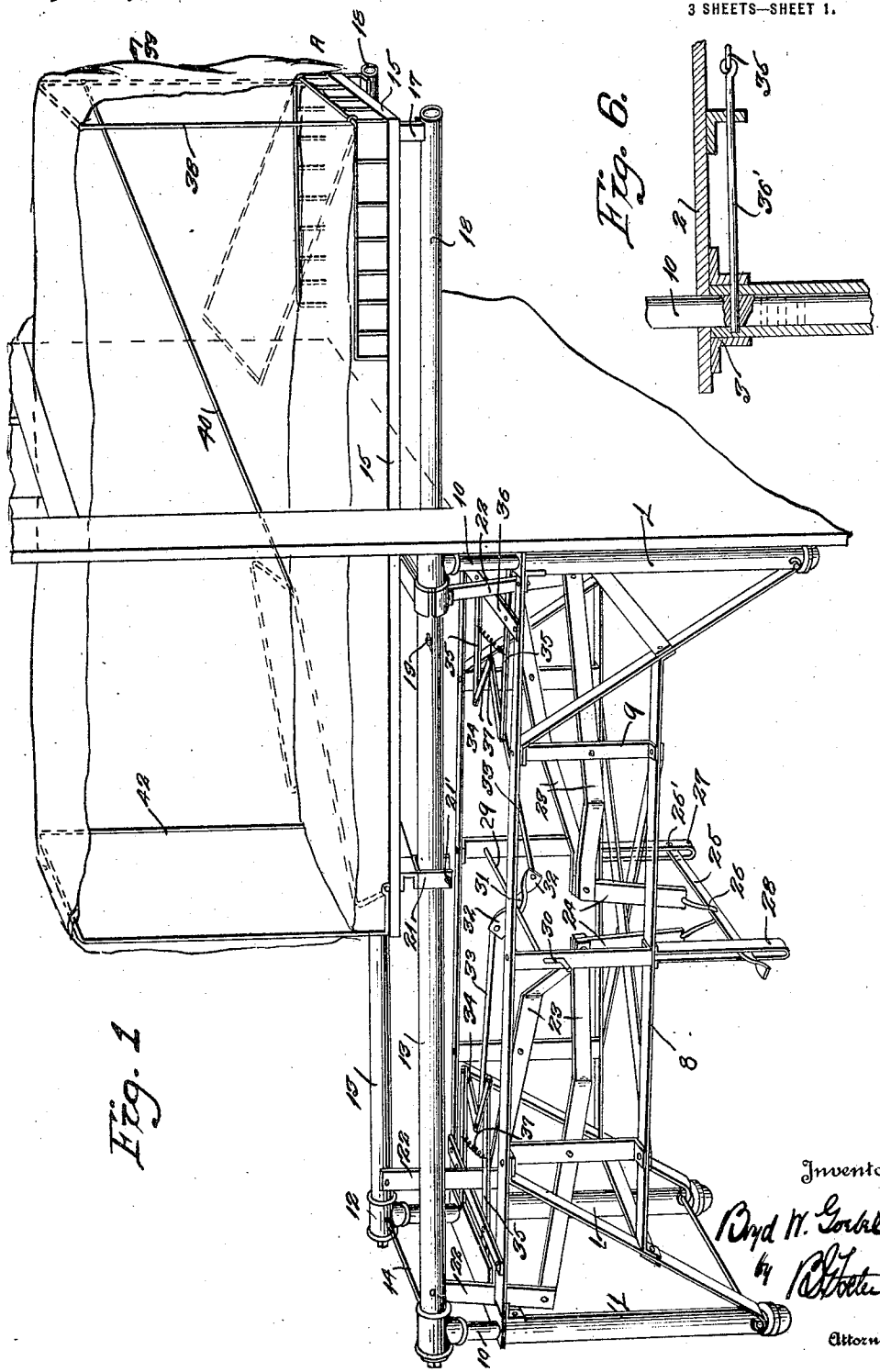


Fig. 1

Fig. 6.

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3 SHEETS—SHEET 2.

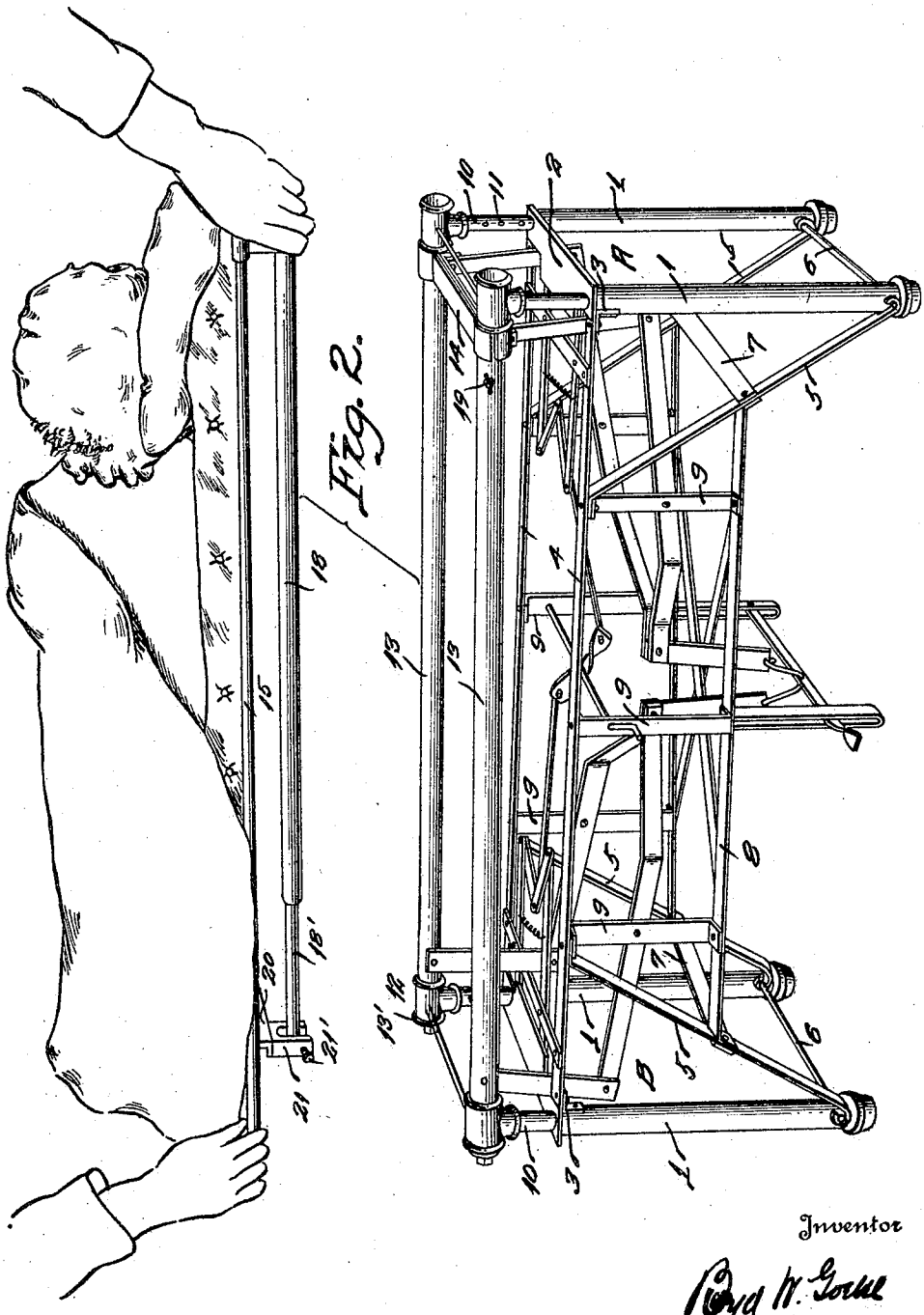


Fig. 2.

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3 SHEETS—SHEET 3.

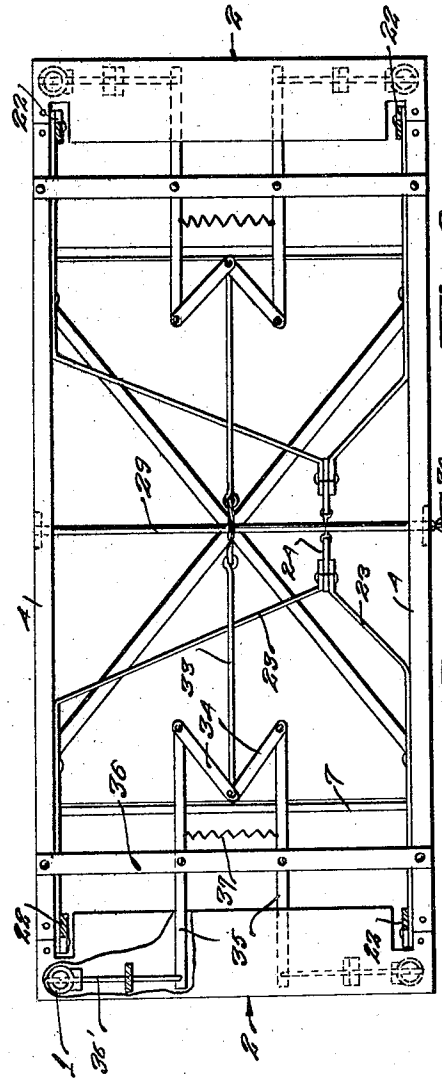


Fig. 3.

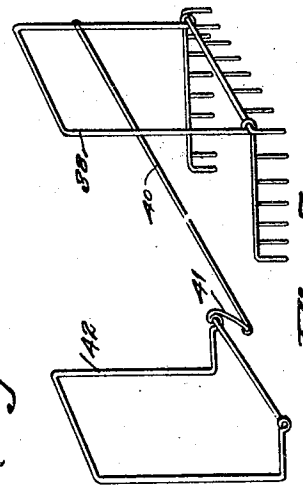


Fig. 5.

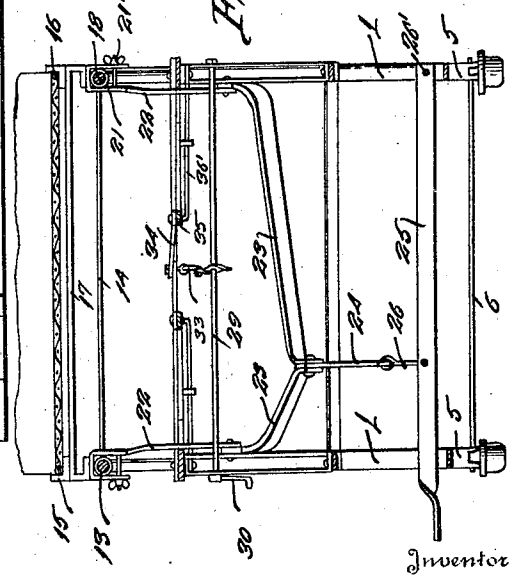


Fig. 4.

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UNITED STATES PATENT OFFICE.

BOYD W. GOEBEL, OF MADISON, NORTH CAROLINA, ASSIGNOR OF TWO-THIRDS TO DIEDRICH B. FEDDERWITZ, OF SAVANNAH, GEORGIA.

BED.

1,419,624. Specification of Letters Patent. Patented June 13, 1922.

Application filed May 3, 1921, Serial No. 466,406. Renewed May 10, 1922. Serial No. 559,899.

To all whom it may concern:

Be it known that I, BOYD W. GOEBEL, a citizen of the United States, residing at Madison, in the county of Rockingham and State of North Carolina, have invented certain new and useful Improvements in Beds, of which the following is a specification.

The object of my invention is to provide a bed which though particularly adapted for use in hospitals and the like, is also useful in the home, and constructed so as to provide a mattress-supporting frame which can be adjusted both vertically and longitudinally of the main frame, and removed entirely therefrom if occasion may demand.

Heretofore so far as I am aware, it has been the custom when necessary to remove a patient from one ward to another, or to the operating room, to transfer the patient from the ward-bed to a stretcher, or to roll the ward-bed to the operating room, all of which requires considerable time and is very disagreeable to the patient and attendants. It is one of the objects of my invention to provide a bed in which the mattress-supporting frame can be entirely removed therefrom and utilized as a stretcher when it becomes necessary to transfer the occupant of the bed from one place to another.

A further object of my invention is to provide a bed which can be projected out of a window and used by invalids, especially those suffering from tuberculosis or analogous diseases, said bed being equipped with means which enable the projecting portion to be readily moved from the interior of a room to the exterior thereof without necessitating the occupant's leaving the bed while the change is being made.

Still another object of my invention is the provision of a protecting canopy for the projected bed, the supporting frame of which may be either operated by the occupant of the bed, or a person within the interior of the room.

In the accompanying drawings:—

Figure 1 is a view illustrating in perspective my improved bed and showing the same partly projected out of a window.

Figure 2 shows in perspective the main and secondary frames with the mattress supporting frame removed therefrom.

Figure 3 is a top plan view of the main frame,

Figure 4 is a vertical transverse sectional view of the complete bed,

Figure 5 is a detail view of the canopy supporting elements, and

Figure 6 is a detail view of the locking pins.

Referring to the drawings in detail, the structure disclosed comprises a main frame and a secondary frame, the former comprising the tubular metallic posts 1, which are arranged in pairs A and B, connected by the horizontally disposed plate 2, the same resting upon the tops of the posts in each pair and connected thereto by suitable brackets 3, each plate having openings aligning with the interior of each post. The sections A and B are further connected together by the side bars 4 which are secured to the supporting brackets of the plates 2, and adjacent the edges of the latter.

The side bars 4 have secured thereto adjacent their connection with the plates 2, the downwardly inclined braces 5, the lower ends of which are bifurcated and adapted to straddle the lower end of the posts 1, and are connected thereto by having the furcations of each bent around the lower horizontal brace rod 6 of the posts. The braces 5 have connected thereto in their intermediate portion the end bars 7 and side bars 8, the latter being disposed in the vertical planes of the bars 4, and connected thereto by the vertically extending braces 9, one of which is arranged centrally of the side bars.

The secondary frame, which is vertically adjustable with respect to the main frame, is composed of the vertical members 10 arranged for sliding movement within the tubular posts 1 and locked in their adjusted position by means of suitable elements hereinafter described engaging the holes 11 in the members 10.

The upper end of each member 10 is provided with a T 12, each having connected thereto in any suitable manner the ends of the tubular side bars 13 and the end rods 14, one end of each tubular bar remaining open while its other end is closed by a suitable plug or cap 13′, thus forming a rectangular secondary frame adapted for vertical movement with respect to the main frame.

The mattress-supporting frame, which is carried by the secondary frame, is composed of the side and end bars 15, formed of angle iron and so arranged as to present vertical and horizontal extending flanges, the latter supporting thereon the frame 16 of the bed-spring.

The head portion of the bed spring frame, that indicated by the letter A, has connected thereto on its under portion and extending transversely of the same, the bar 17, the ends of which are bent upon themselves and connected to the horizontally extending side rods 18, and adapted to slide within the tubular side bars 13 of the secondary frame and be locked therein by the thumb screw 19. The foot portion of the bed-spring frame has extending transversely of its under portion and somewhat remote from its end, an angle iron 20, the extremities of which have connected thereto the vertically and downwardly extending U-shaped yokes 21, the same adapted to straddle the side bars 13 of the secondary frame and serve as guides for the rear end of the bed as the same is moved into such a position as that indicated in Figure 1. The legs of each yoke 21 are connected by suitable bolts provided with wing nuts 21′, the said bolts underlying the rods 13. By this arrangement, it will be noted that when the major portion of the bed projects out of the window the minor portion of the same will be held down upon the secondary frame by the yokes.

In order that the secondary frame may be adjusted vertically with respect to the main frame, to compensate for the various types of windows and any other purpose that may present itself, I have provided novel means for elevating the same and locking it in its adjusted positions.

Referring to Figure 2, it will be noted that the side bars 13 have pivotally connected thereto in any suitable manner, downwardly extending links 22 passing through cut-out portions within the ends of the plates 2 and having their lower ends pivotally connected to levers 23, the latter being connected medially of their end portions to the vertically extending braces 9. The ends of the levers 23 are bent so as to bring the end portions in each pair adjacent each other, the same then being pivotally connected to arms 24 which are connected to a foot lever 25 by means of suitable links 26. The foot lever 25 is pivoted as at 26′ to the vertically extending U-shaped member 27 which extends downwardly from one of the side braces 8, while its free end is movable vertically within the confines of a similar member 28 carried by the other side bar 8.

In order that the secondary frame may be locked in its various adjusted positions with respect to the main frame, after the same has been moved therein by the means previously described, I have arranged transversely of the main frame and mounted within the braces 9 a horizontal shaft 29 having connected thereto a hand-operating lever 30 and adapted for oscillation. The shaft 29 has secured thereto within its intermediate portion a bar 31, the ends of which are given a quarter turn to form the oppositely disposed arms 32, each having pivotally connected thereto the rods 33, the free ends of which are connected to toggle links 34 whose ends are pivotally connected to the pin-operating bars 35.

Extending transversely of the main frame, are bars 36, each having pivotally connected thereto adjacent its intermediate portion the parallel bars 35, the free ends of which have connected thereto the locking pins 36′, which pass through suitable depending brackets arranged on the under face of the plates 2 and through perforations in the posts 1 which align with the openings 11 arranged within the vertical sliding member 10. For throwing the pins 36 into the openings 11, I have arranged between the pivots of the bars 35 and their connections with the links 34 a tension spring 37.

As illustrated in Figure 1, the head portion of the projected bed may be provided with vertically extending guard frames, the same having pivotally mounted thereon the outer U-shaped supporting bow 38 for a suitable canopy 39, the former having pivotally connected to its upper portion a rod 40, the free end of which is connected to a depending arm 41 extending below the pivot of the interior bow 42 and made integral therewith. Thus it will be seen that when one bow, for instance the interior bow, is moved upwardly the outer bow will correspondingly be raised. Furthermore by reason of the fact that the rod 40 lies within the canopy 39, the occupant of the bed may actuate the movement of the arms at will. By reason of the canopy supported upon the bows, it will be observed that when the window is drawn down upon the top of the canopy draft will be prevented from entering the interior of the room.

Briefly speaking, the operation of the elevating and locking means is as follows: Assuming that it is desired to project the bed out of a window, as illustrated in Figure 1, the attendant rolls the bed in front of the same and by a slight foot pressure upon the foot lever 25, elevates the secondary frame sufficiently to permit the easy withdrawal of the locking pins 36′ by means of the oscillation of the shaft 29, through the various links and levers. After the pins are withdrawn the secondary frame is elevated by a continued pressure upon the lever 25 until the frame reaches such a height as to permit the free passage of the bed above

the windowsill. When such a position is reached the handle 30 is released and through the medium of the springs 37 the locking pins are thrown into engagement with the members 10. The frame is then moved until one of the openings in the members 10 falls into alignment with the pins 36′, then by action of the springs 37 the secondary frame will be locked in its adjusted position. All that remains necessary to project the bed out of the window is to loosen the locking screws 19 and slide the bed longitudinally of the secondary frame.

When it is desired to remove the mattress frame from the secondary frame, the same is moved longitudinally of the latter frame until the bars 18 are free of the tubular bars 13, the bolts in the yoke members 21 are then removed and the frame is free to be lifted. In order that the free ends of the side bars 18 may be supported when the frame is removed from the secondary frame the bars 18 as illustrated in Figure 3 may be tubular in form and each having slidable longitudinally thereof extension bars 18′, the free ends of which are adapted to engage the yokes 21 when in an extended position and support the bars 18.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. A bed of the character described comprising a main frame, a secondary frame and a body supporting frame carried by the latter, a foot pedal pivotally mounted upon the main frame, links pivotally mounted upon the secondary frame, and connecting means between the two, whereby the secondary frame may be vertically adjusted with respect to the main frame by the movement of the foot lever.

2. A bed of the character described, comprising a main frame having tubular supporting legs, a secondary frame arranged for vertical movement upon the main frame and provided with depending members adapted to slide within the tubular legs, an oscillatory shaft mounted upon the main frame, pins slidably mounted upon the main frame and movable by said shaft, said pins adapted to pass through openings in the depending members and lock the same against vertical movement within the tubular legs.

In testimony whereof, I affix my signature in the presence of two witnesses.

BOYD W. GOEBEL.

Witnsesses:
T. J. ROBERTSON,
W. T. CHAMBERS.