

Oct. 24, 1950

A. WIDRICH

2,527,111

VERTICALLY ADJUSTABLE BED CONSTRUCTION

Filed Oct. 7, 1947

2 Sheets-Sheet 1

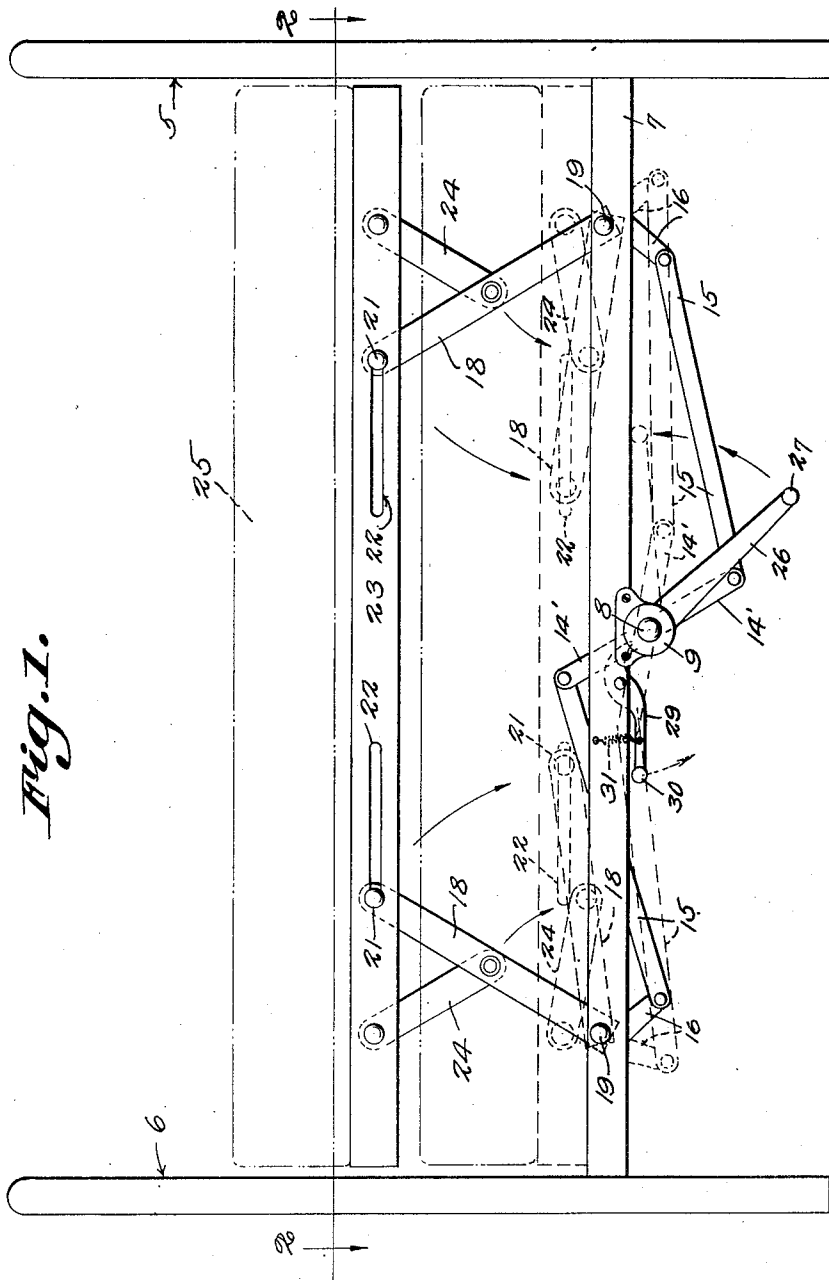


Fig. 1.

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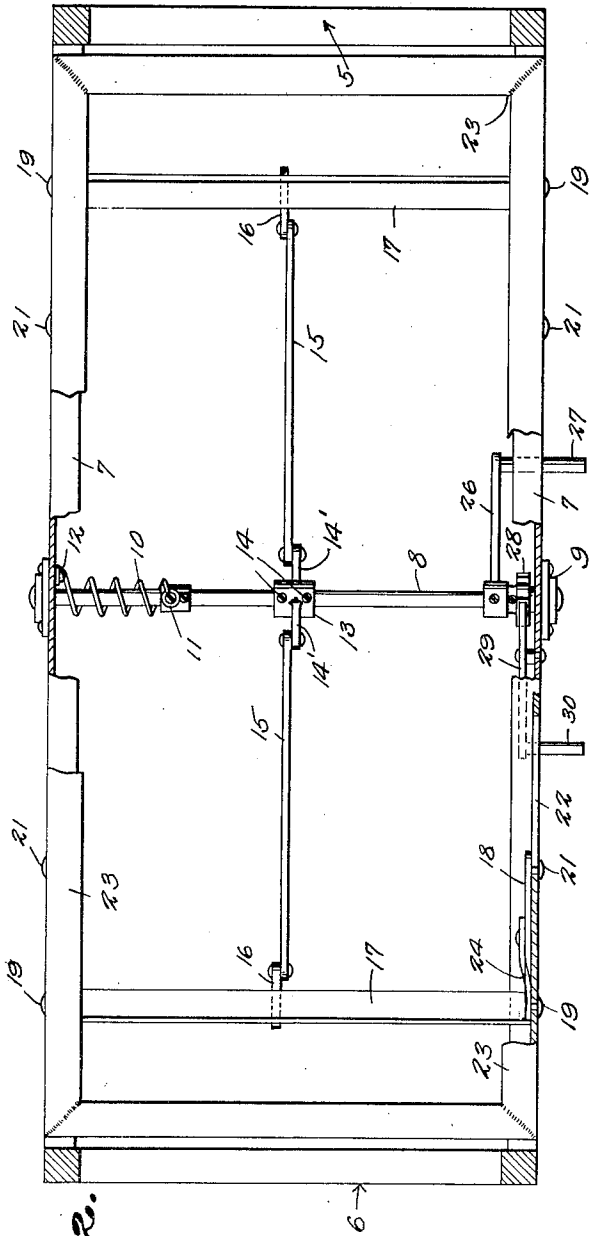


Fig. 2.

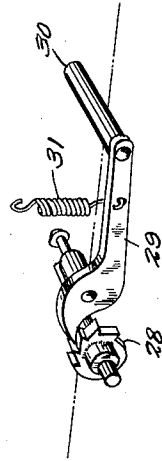


Fig. 4.

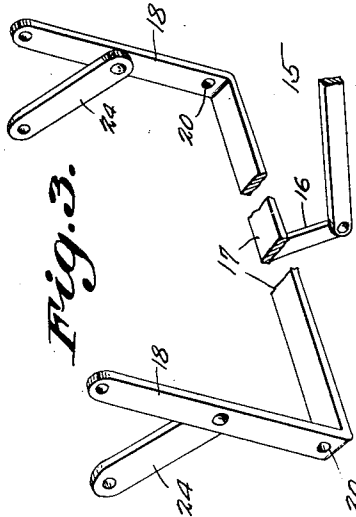


Fig. 3.

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UNITED STATES PATENT OFFICE

2,527,111

VERTICALLY ADJUSTABLE BED CONSTRUCTION

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one-third to Fritz Herrmann, St. Albans, N. Y.

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1 Claim. (Cl. 5-11)

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This invention relates to bed construction, the primary object of the invention being to provide a vertically adjustable support for the springs and mattress of the bed, whereby the springs and mattress of the bed may be elevated to a position whereby an infant, or invalid may be conveniently assisted in dressing.

An important object of the invention is to provide a vertically adjustable section which may be operated by foot pressure directed to the foot lever of the bed, means being provided for preventing reverse movement of the foot lever to the end that the adjustable section of the bed may be moved to the desired elevation, and held in such position automatically.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, herein-after more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawings

Figure 1 is a side elevational view of a bed constructed in accordance with the invention, the vertically adjustable section thereof being shown in its lowermost position, in dotted lines.

Figure 2 is a plan view of the vertically adjustable section, the springs and mattress having been removed therefrom.

Figure 3 is a perspective view of the operating arm at one end of the adjustable section.

Figure 4 is a perspective view of the ratchet mechanism used in supporting the vertically adjustable section in its positions of vertical adjustment.

Referring to the drawings in detail, the bed comprises a head section 5 and a foot section 6 connected by means of the side rails 7 that are secured to the head and foot sections in the usual and well known manner.

Connecting the side rails at points intermediate their ends, is the main shaft 8 that has its ends disposed in bearings 9 that are secured to the side rails.

The reference character 10 indicates a coiled spring that has one of its ends connected to the shaft 8, at 11, the opposite end of the spring being secured to one of the side rails 7, as at 12.

Disposed intermediate the ends of the shaft, is a collar 13 which is secured to the shaft by means of the screws 14, there being provided arms 14' connected to the collar 13 and extend-

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ing upwardly and downwardly from the collar 13. Connected with the arms 14', are links 15, which links are also pivotally connected with the arms 16 that extend downwardly from the U-shaped bars 17 of the operating mechanism.

The legs 18 of the bars 17 are substantially long, the width of the bars 17 being equal to the width of the bed, so that the legs 18 may be pivotally connected to the side rails 7, by means of the pivots 19 that extend through the side rails and are disposed within openings of the legs 18, the openings being indicated by the reference character 20.

The legs 18 are formed with openings in which the pins 21 are held, the pins 21 operating in openings 22 formed in the side rails of the vertically adjustable frame 23. The openings 22 are elongated longitudinally of the side rails of the vertically adjustable section as shown by Figure 1 of the drawings.

Connected with the legs 18 of the bars 17, are links 24 that are also pivotally connected with the side rails of the vertically movable section 23.

The vertically adjustable section 23 provides the support for the springs and mattress 25, shown in dotted lines, which fit within the adjustable section that is in the form of a frame, to the end that the springs and mattress may be readily and easily removed when desired.

Secured to the shaft 8 adjacent to one end thereof, is the foot lever 26 which under normal conditions, is horizontally disposed as shown in dotted lines in Figure 1 of the drawings, the lever 26 being provided with an arm 27 constituting a pedal, the arm 27 extending to a point beyond the side of the bed, where it may be easily engaged by the operator's foot, to rotate the shaft 8, in the direction of the arrows, as shown by Figure 1 of the drawings.

Also secured to the shaft 8, is a ratchet 28 that cooperates with the pawl 29 that is pivotally mounted on the side of the bed, the pawl 29 having a laterally extended operating handle 30 extending therefrom, the arm also terminating beyond the side of the bed where the operator will have easy access thereto. A coiled spring 31 has connection with the pawl 29, the opposite end of the spring being secured to the side rail 7 of the bed, so that the normal action of the spring is to urge the pawl into engagement with the ratchet to hold the shaft in its positions of adjustment after rotation by the foot lever 26.

In operation, assuming that the adjustable section is in its lowermost position, and it is desired to elevate the adjustable section, it is only neces-

sary to place the foot on the arm 27 of the foot lever, pressing the foot lever downwardly. This will cause the U-shaped bars and their legs, to swing upwardly to the positions shown in full lines in Figure 1 of the drawings. As the foot lever is operated, it is obvious that the pawl engaging the ratchet, will hold the shaft in its positions of adjustment retaining the adjustable section in its elevated position.

To lower the adjustable section, the foot lever is again depressed and the pawl raised to disengage the ratchet. By relieving the pressure on the foot pedal, the weight of the vertically adjustable section will now cause the vertical adjustable section to lower onto the main frame of the bed.

What is claimed is:

In a bed, a bed frame including stationary side rails, U-shaped bars pivotally mounted on the bed frame between the side rails thereof, a vertically adjustable bed section including side members having elongated openings, forming a part of the bed, pins extending from the ends of the U-shaped bars, said pins being disposed in the elongated openings to move therein, links pivotally connected with the U-shaped bars and being connected to the vertically adjustable section, arms connected to the U-shaped bars, links

connected with the arms, a main shaft mounted between the side rails of the bed frame, arms connected with the shaft to which the links are connected, a foot lever connected with the shaft adapted to rotate the shaft in one direction operating the vertically adjustable section of the bed, and a spring mounted on one end of the shaft for rotating the shaft in the opposite direction, returning the vertically adjustable section to its normal position.

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