

Aug. 10, 1943.

J. C. URBANK

2,326,183

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3 Sheets-Sheet 1

Fig. 1.

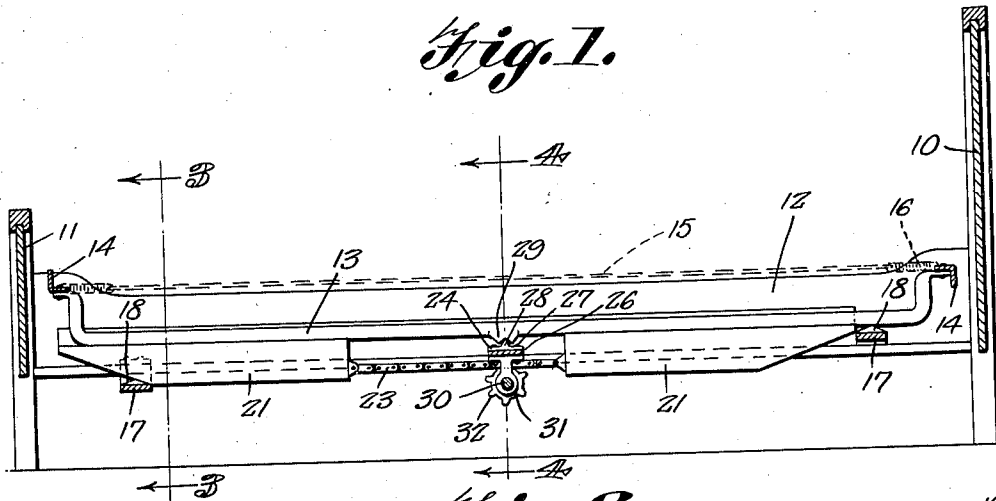


Fig. 2.

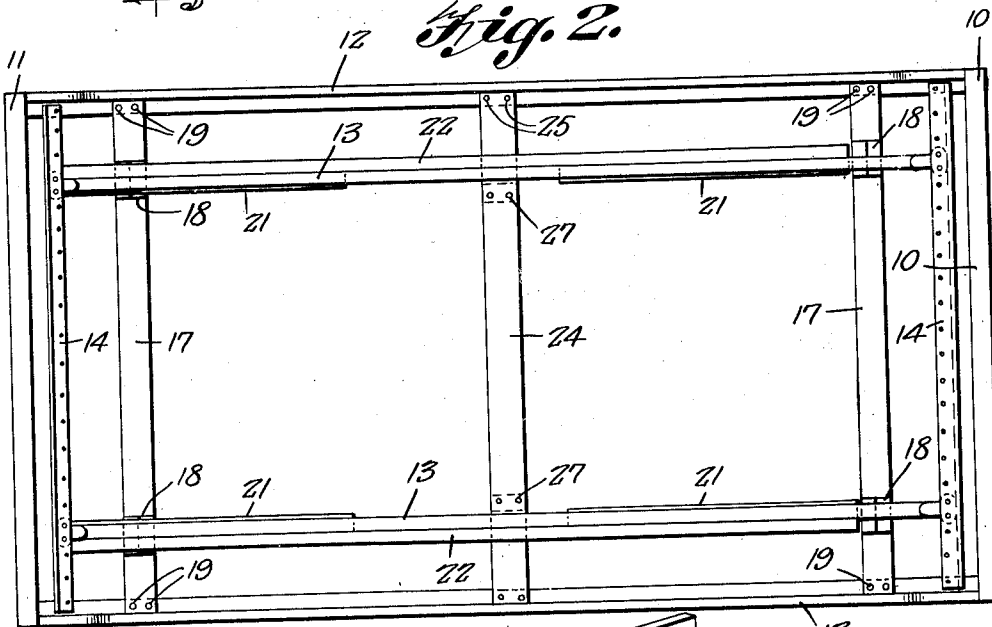
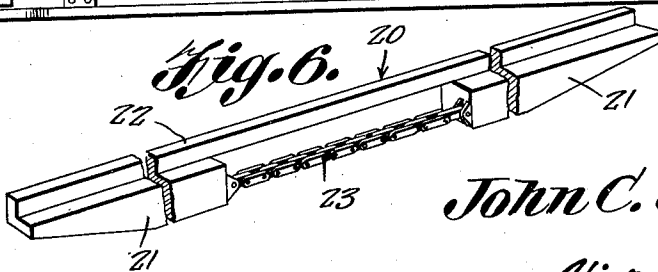


Fig. 6.



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3 Sheets-Sheet 2

Fig. 3.

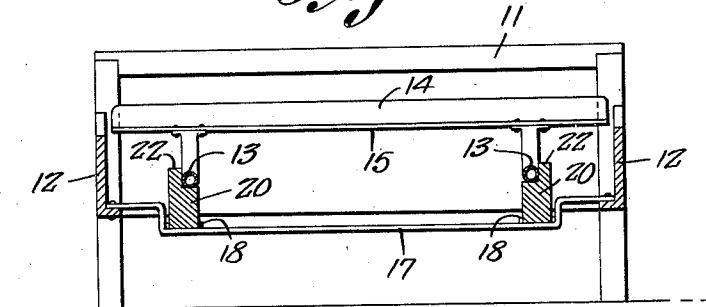


Fig. 4.

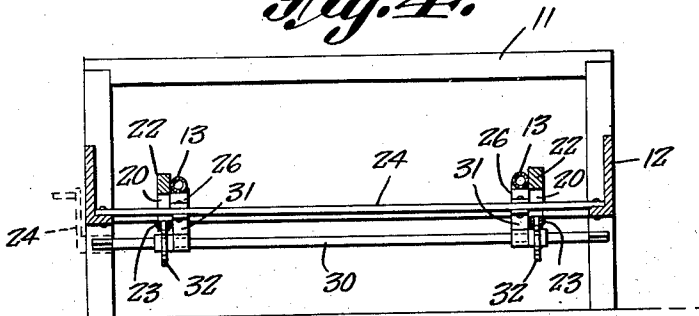
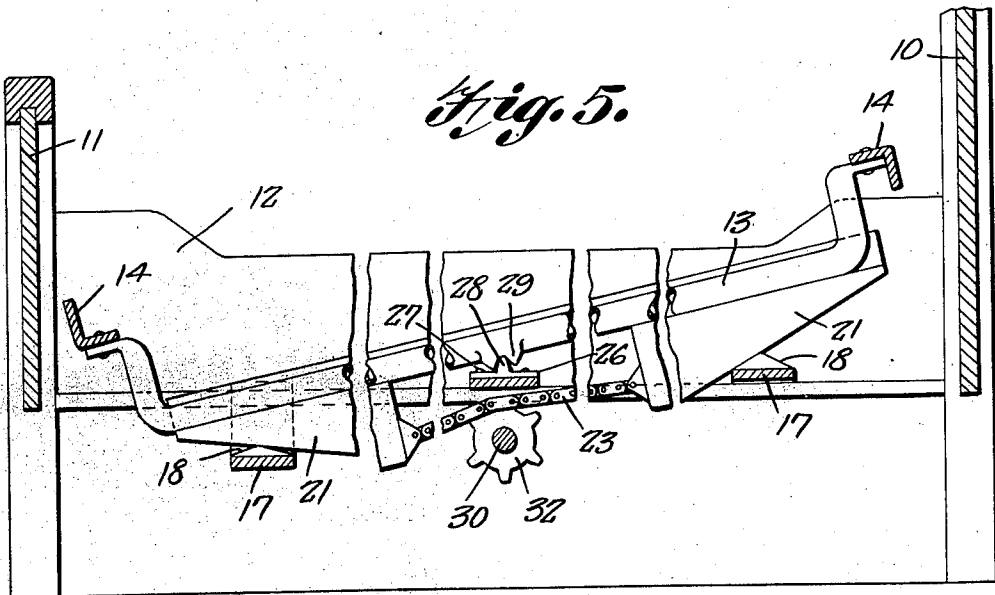


Fig. 5.



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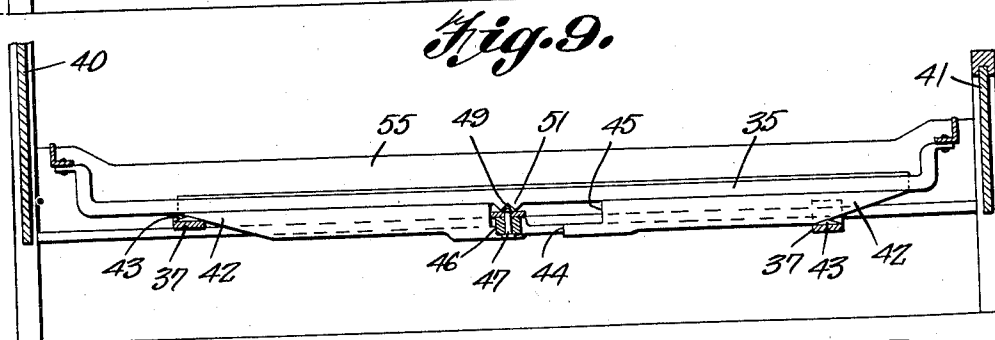
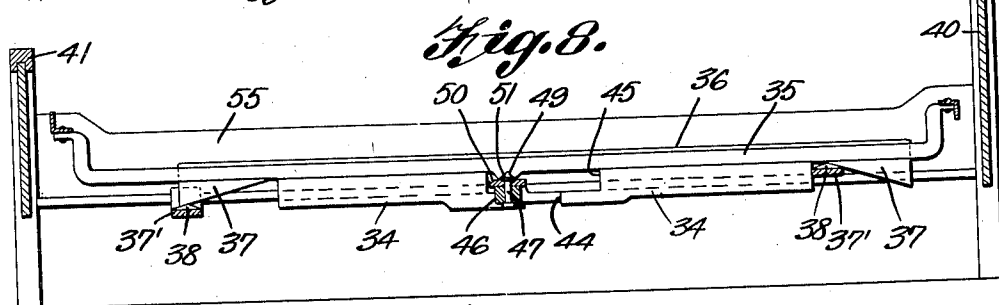
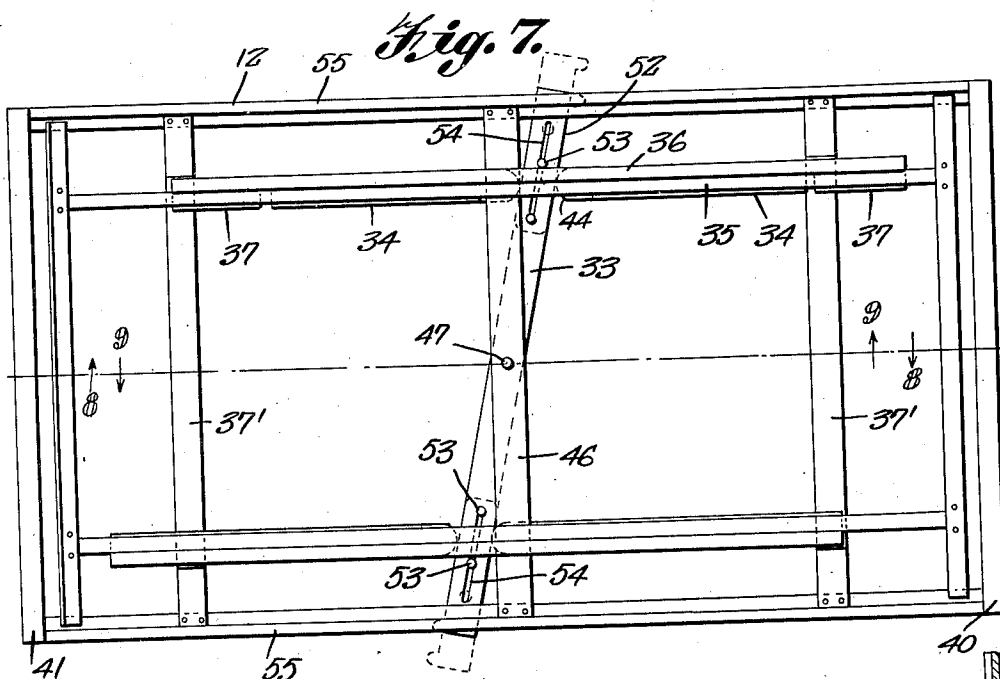
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

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Application September 15, 1941, Serial No. 410,926

4 Claims. (Cl. 5—62)

This invention relates to a bed and has for an object to provide a bed of ordinary construction having the bed spring frame mounted for pivotal movement about a central transverse axis so that the mattress may be inclined upwardly at various desired angular positions.

A further object is to provide apparatus of this character which will be formed of a few strong, simple and durable parts, which will be inexpensive to manufacture, and which will not easily get out of order.

With the above and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be restored to within the scope of the appended claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming a part of this specification:

Figure 1 is a longitudinal sectional view of a bed constructed in accordance with the invention.

Figure 2 is a top plan view of the bed shown in Figure 1.

Figure 3 is a cross sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a cross sectional view taken on the line 4—4 of Figure 1.

Figure 5 is a detail longitudinal sectional view of the bed showing the spring frame tilted to inclined position.

Figure 6 is a detail perspective view of a pair of the wedge members having flanges to engage the respective side of the spring frame, and showing the connecting chains of the members.

Figure 7 is a top plan view of a modified form of the invention in which the wedge members are operated without the use of chains.

Figure 8 is a longitudinal sectional view taken on the line 8—8 of Figure 7 looking in the direction of the arrows.

Figure 9 is a longitudinal sectional view taken on the line 9—9 of Figure 7 looking in the direction of the arrows.

Referring now to the drawings in which like characters of reference designate similar parts in the various views, the bed is shown to comprise a bedstead having a head member 10 and a foot member 11 connected by side members 12, as is conventional. The bed spring frame is of conventional construction comprising side bars 13 and end bars 14 to which the reticulate member

15 is connected by helical springs 16, as is also conventional.

In carrying out the invention a pair of cross members or slats 17 are secured adjacent the head and foot portions respectively of the bed spring, the cross member at the foot portion lying considerably below the cross member at the head portion, see Figure 1. Underneath the side bars 13 of the spring the cross members 17 are provided with projections 18 having the upper faces inclined downwardly from the center of the projection to the edges of the projection, see Figures 1 and 2. The cross members or slats 17 are secured at the ends to the side members 12 of the bedstead by screws 19 or other connectors.

Mounted below the under side of the side bars 13 of the bed spring frame, and adapted to engage the projections 18 of the cross members or slats 17, are longitudinally extending bars 20 having wedge members 21 at each end. The wedge members 21 of each bar as well as the bar itself is flanged as shown at 22 to engage the outer side of the respective side bar 13 of the bed spring frame. The wedge members 21 are connected by a sprocket chain 23.

A central cross member or slat 24 is secured at the ends to the side members 12 of the bed by screws 25 or other connectors. The central cross member or slat 24 is provided with spaced plates 26 secured to the upper face of the slat by screws 27 or other connectors. Each plate is provided with an upstanding tapered projection 28 which is received in a correspondingly shaped socket member 29 carried by the respective superposed side bar 13 of the bed spring frame. The transversely aligned projections 28 and socket member 29 form a transverse central axis of rotation upon which the bed spring may be inclined.

For inclining the bed spring a shaft 30 is secured to the under side of the central transverse cross member or slat 24 by bearing hangers 31. Sprocket gears 32 are fixed to the shaft to engage respective sprocket chains 23. A crank handle 33 is removably secured to one end of the shaft 30 for rotating the shaft to feed both chains longitudinally of the bedstead in either direction. When the shaft is rotated in one direction the wedge members will ride upon the inclined faces of the projections of the cross members or slats 17 and incline the bed spring and mattress, see Figure 5, the higher end of the bed spring and mattress being disposed at the head member 11 of the bedstead. Rotation of the shaft in the opposite direction returns the bed

spring and frame to normal horizontal position.

In the modified form of the invention shown in Figure 7 a lever 33 is utilized to operate the wedge members in lieu of the aforesaid chains, sprocket gears and shaft.

In the modified form of the invention bars 34 are disposed underneath the side rails 35 of the bed spring frame and have flanges 36 engaging the outer sides of the bed spring frame the same as previously described. One of the bars 10 is equipped with a pair of wedge members 37 inclined from their outer ends upwardly and engaging the inclined upper faces of projections 38 disposed upon the transverse bars or slats 37' at the head 40 and foot 41 of the bedstead, see Figure 8. The companion bar 34 is provided with wedge members 42 which are inclined downwardly from their outer ends and ride upon the inclined faces of projections 43 carried by the slats 37', see Figure 9. Both bars are provided with recesses 44 to receive the end portions of the operating lever 33 and are further provided with recesses 45 which receive the end portions of the centrally disposed transverse bar or slat 46.

The lever 33 is centrally pivoted on a pivot pin 47 secured to the center of the intermediate slat 46. When the lever is swung in one direction on the pivot pin both ends will move in opposite directions and will slide the companion bars 34 in opposite directions to move the wedge members in such manner on the projections of the outer slats 37' that the head of the bed spring frame will be raised and the foot thereof will be lowered, the members pivoting on tapered projections 49 carried by plates 50 secured to the centermost slat 46 and received in socket members 51 carried by the side bars 35 of the bed spring frame as heretofore described to form a horizontal axis of rotation for the bed spring frame during such angular inclination of the frame by operation of the lever 33.

The lever is provided with extensible end portions 52 which are secured by pins 53 carried by the end portions of the bar and projecting through slots 54 in the extensible end portions. When the extensible end portions are pulled out upon either side member 55 of the bedstead the extensible end portions form handles through the medium of which the operating lever 33 may be swung on its pivot.

Since the operation of the parts has been described as the description thereof progressed, it is thought the invention will be fully understood without further explanation.

What is claimed is:

1. A bed comprising a bedstead, a bed spring frame mounted for pivotal movement about a central transverse axis on the bedstead, a pair of slats secured adjacent the head and foot portions respectively of the bedstead, the slat at the foot portion lying in a plane considerably below the slat at the head portion, oppositely arranged

pairs of wedge members having side flanges engaging the sides of the bed spring frame to form guides, a centrally disposed slat on the bedstead, a lever pivoted centrally on the central slat and engaged through openings in said flanges to actuate the wedge members, movement of the lever in one direction causing the wedge members to tilt the bed spring frame downwardly at an angle while movement in the opposite direction causes the wedge members to return the frame to a level position.

2. A bed comprising a bedstead, a bed spring frame, means mounting the bed spring frame for pivotal movement about a central transverse axis on the bedstead, a slat carried by the bedstead adjacent the head and foot portions below the bed spring frame, the slat at the foot portion lying in a plane considerably below the slat at the head portion, a longitudinally extending bar on each side of the bed spring frame having oppositely disposed wedge shaped ends resting on the slats and having side flanges engaging the sides of the bed spring frame to form guides, and means for moving the longitudinally extending bars to cause the wedge shaped ends, at all times engaging the slats, to move on the slats tilting the pivotally mounted bed spring frame.

3. A bed comprising a bedstead, a slat carried by the bedstead adjacent the head and foot portions, a slat disposed midway between the first mentioned slat, projections on said slat, a bed spring frame above the slats, socket members on the lower sides of the bed spring frame pivotally receiving the projections, the slat adjacent the foot portions lying in a plane considerably below the slat at the head portion, a longitudinally extending bar on each side of the bed spring frame having oppositely disposed wedge shaped ends at all times resting on the slats and side flanges engaging the sides of the bed spring frame to form guides, and means for moving the longitudinally extending bars to cause the wedge shaped ends to move on the slats tilting the pivotally mounted bed spring frame.

4. A bed comprising a bedstead, a bed spring frame, means mounting the bed spring frame for pivotal movement about a central transverse axis on the bedstead, a slat carried by the bedstead adjacent the head and foot portions below the bed spring frame, the slat at the foot portion lying in a plane considerably below the slat at the head portion, a longitudinally extending bar on each side of the bed spring frame having oppositely disposed wedge shaped ends resting on the slats and at all times engaging the same and having side flanges engaging the sides of the bed spring frame to form guides, chains connecting the wedge shaped ends of the longitudinally extending bars, a shaft carried by the bedstead, and gears carried by the shaft and meshing with said chains.

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