W. H. MUIR.

BED.

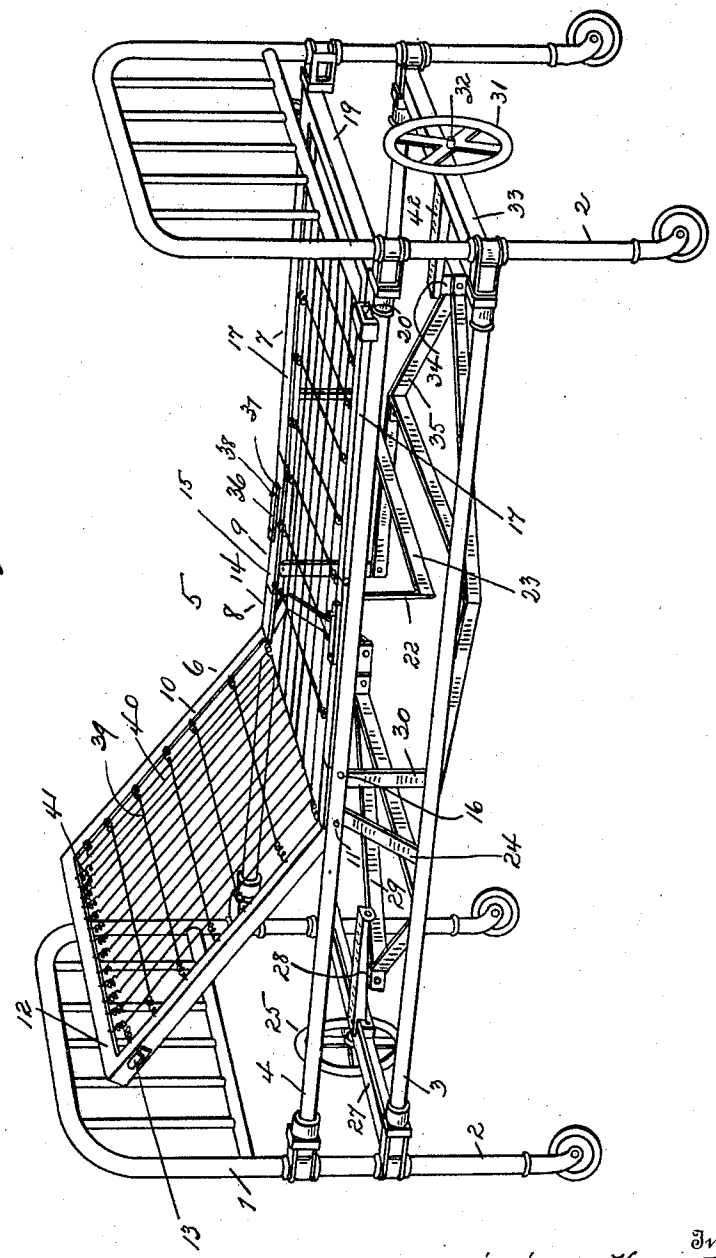
APPLICATION FILED NOV. 29, 1918.

1,397,773.

Patented Nov. 22, 1921.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

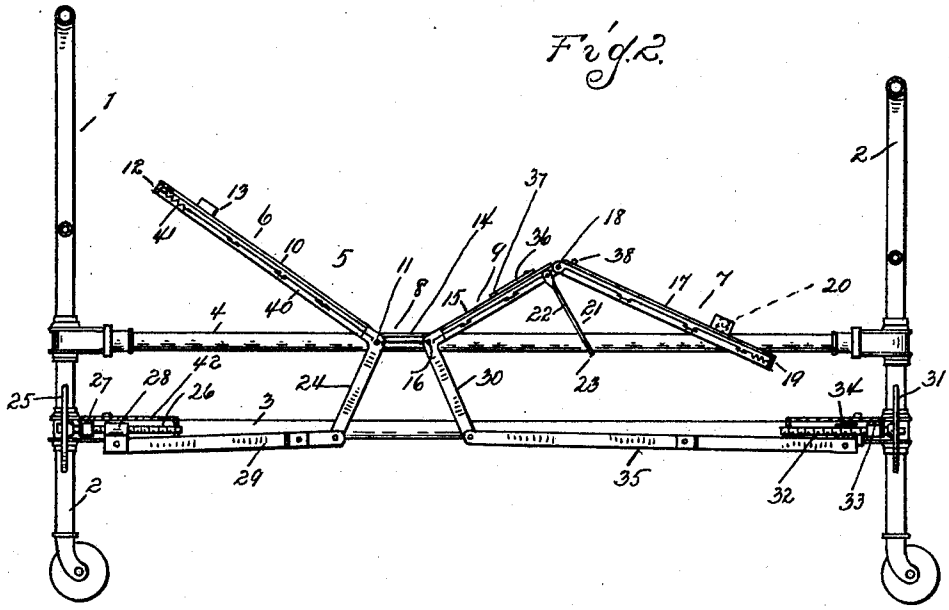


Fig. 3.

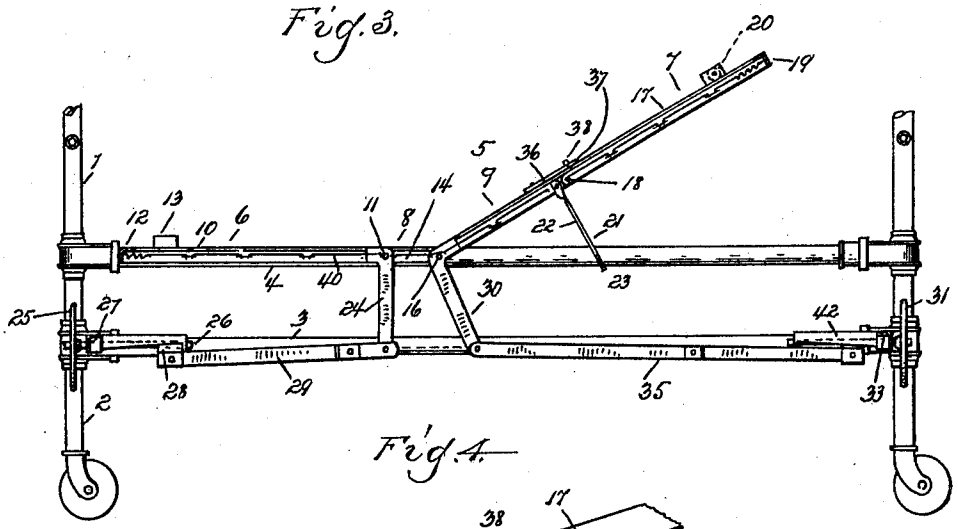
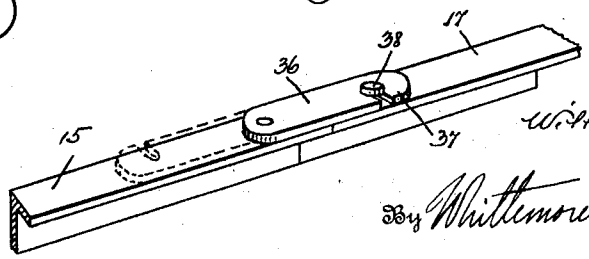


Fig. 4.



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BED.

1,397,773. Specification of Letters Patent. Patented Nov. 22, 1921.

Application filed November 29, 1918. Serial No. 264,536.

To all whom it may concern:

Be it known that I, WILLIAM HOWIE MUIR, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Beds, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to beds, which are adapted for use particularly in hospitals. The invention has for its main object the provision of a construction in which the spring fabric-carrying frame is rockably mounted upon the bed frame and is actuated by means at an end of the bed. Another object is to provide a construction in which the actuating means will adjust the fabric-carrying frame and retain the latter in its adjusted position. A further object of the invention is to provide connections between the actuating means and the fabric-carrying frame, arranged so that any downward pressure upon the fabric-carrying frame will not bind the actuating means. A still further object is to provide a construction in which the fabric-carrying frame is formed of a plurality of relatively rockable sections and the fabric is continuous and so constructed that it will permit of the relative rocking of the sections. Other objects of the invention reside in the novel arrangements and combinations of parts as more fully hereinafter set forth.

In the drawings:

Figure 1 is a perspective view of the bed, embodying my invention and showing one of the sections of the fabric-carrying frame in adjusted position;

Figs. 2 and 3 are longitudinal sections therethrough, showing the sections of the fabric-carrying member in different adjusted positions;

Fig. 4 is a detail view.

The bed frame comprises the end sections 1, supported upon the legs or standards 2 and connected by the lower and upper side bars 3 and 4 respectively. 5 is the spring fabric-carrying frame comprising the head section 6, the foot section 7 and the intermediate sections 8 and 9. The head section 6 has the side bars 10, the inner ends of which are pivoted at 11 to the upper side bar 4 of the bed frame. The forward ends of the side bars 10 are connected by the end bar 12 and are also provided with the brackets 13 adapted to engage the upper side bar 4 when the section is in its lowered position. The intermediate section 8 has the side bars 14 suitably secured to the upper side bar 4 of the bed frame and the intermediate section 9 has the side bars 15 pivotally secured at their forward ends 16 to the upper side bar 4 of the bed frame. The foot section 7 has the side bars 17, the forward ends of which are pivotally connected at 18 to the rear ends of the side bars 15 of the intermediate section 9. The end cross bar 19 is secured to the side bars 17 of the foot section and the rollers 20 are mounted upon the side bars 17 near their rear ends to engage the upper side bar 4 of the bed frame when the rear end of the foot section is in its lowered position.

For the purpose of bracing the rear ends of the side bars 15 of the intermediate section 9 the cross bar 21 is provided comprising the arms 22 rigidly secured to the side bars and the cross connection 23 secured to the lower ends of the arms a substantial distance beneath the side bars.

For rocking the head section of the fabric carrying frame, the following construction is provided: 24 are depending arms secured to the inner ends of the side bars 10, 25 is a hand wheel non-rotatably secured to the screw 26, which is rotatably mounted in the cross bar 27 of the head end section 1. 28 is an internally threaded shoe engaging the screw 26, and 29 are diverging rods pivotally connected to the shoe 28 and to the lower ends of the depending arms 24. The actuating mechanism for the intermediate section 9 is the same as that for the head section 6 and comprises the depending arms 30, the hand wheel 31 non-rotatably secured to the screw 32, which screw is rotatably mounted in the cross bar 33 of the foot end section 1 and is engaged by the threaded shoe 34, connected to the lower ends of the depending arms 30 by the diverging arms 35.

The lower ends of the depending arms 24 and 30 are in substantially the same level as their respective operating screws 26 and 32 so that their respective connections will not tend to bear down upon the screws to make the same bind in their bearings. Furthermore, the hand wheels 25 and 31 are within the planes of the ends of the bed so that they present no hindrance.

As thus far described, the head section 6 can be rocked about its pivots 11 to various positions, as shown in Fig. 1, as can also the intermediate section 9 about its pivots 16, as shown in Fig. 2.

Since the foot section 7 is pivotally secured to the intermediate section 9, the former will rock about its pivots 18 when the latter is adjusted and the rollers 20 will move longitudinally inward upon the upper side bars 4 of the bed frame. For rocking the foot section with the intermediate section the catch 36 is provided pivotally secured to the side bars 15 of the intermediate section 9 adjacent the pivots 18. This catch is provided with the hooked end 37, which is adapted to engage the headed pin 38 on the foot section 7 adjacent to the pivots 18. When these catches are secured to the headed pins, the intermediate and foot sections will be held in the same plane and when the catches are not secured to the headed pins, the intermediate and foot sections will rock relative to each other upon movement of the intermediate section.

39 is a continuous spring fabric extending between the side bars and the end bars of the sections forming the fabric-carrying frame 5. This fabric comprises the series of wire links 40 pivotally connected to each other and the coil springs 41 connecting the links to the side bars and end bars of the fabric carrying frame. For the purpose of permitting of the relative rocking of the sections the links are pivoted in substantial alinement with the pivots of the sections.

From the above description it will be readily seen that a simple construction of bed is provided in which the actuating means for the fabric-carrying frame cannot be actuated by the frame and furthermore the hand regulating means is at the end of the bed and presents no obstruction and also is easily operated. Moreover, a simple construction of continuous fabric is provided which permits of the relative rocking of the sections upon which it is mounted.

For protecting the screws and their cooperating shoes the coverings 42, preferably formed of sheet metal, are provided secured upon the cross bars of the end sections of the bed frame.

What I claim as my invention is:

1. In an invalid bed structure, the combination with a frame including side bars, of a head section supported on said frame, a foot section, an intermediate section having its inner end pivoted to the frame and its outer end pivoted to the foot section, the outer end of the foot section having sliding engagements with the side bars of the frame, downwardly extending arms rigidly secured to the intermediate section adjacent the inner end thereof, and operating means pivotally connected to the arms for tilting said intermediate and foot sections.

2. In an invalid bed structure, the combination with a frame including side bars, of a head section supported on said frame, a foot section, an intermediate section having its inner end pivoted to the frame and its outer end pivoted to the foot section, said sections being disposed within said side bars, the outer end of the foot section having outwardly extending brackets respectively carrying rollers for engagements with the side bars of the frame, downwardly extending arms rigidly secured to the intermediate section adjacent the inner end thereof, and operating means pivotally connected to the arms for tilting said intermediate and foot sections.

In testimony whereof I affix my signature

WILLIAM HOWIE MUIR.