

Sept. 21, 1926.

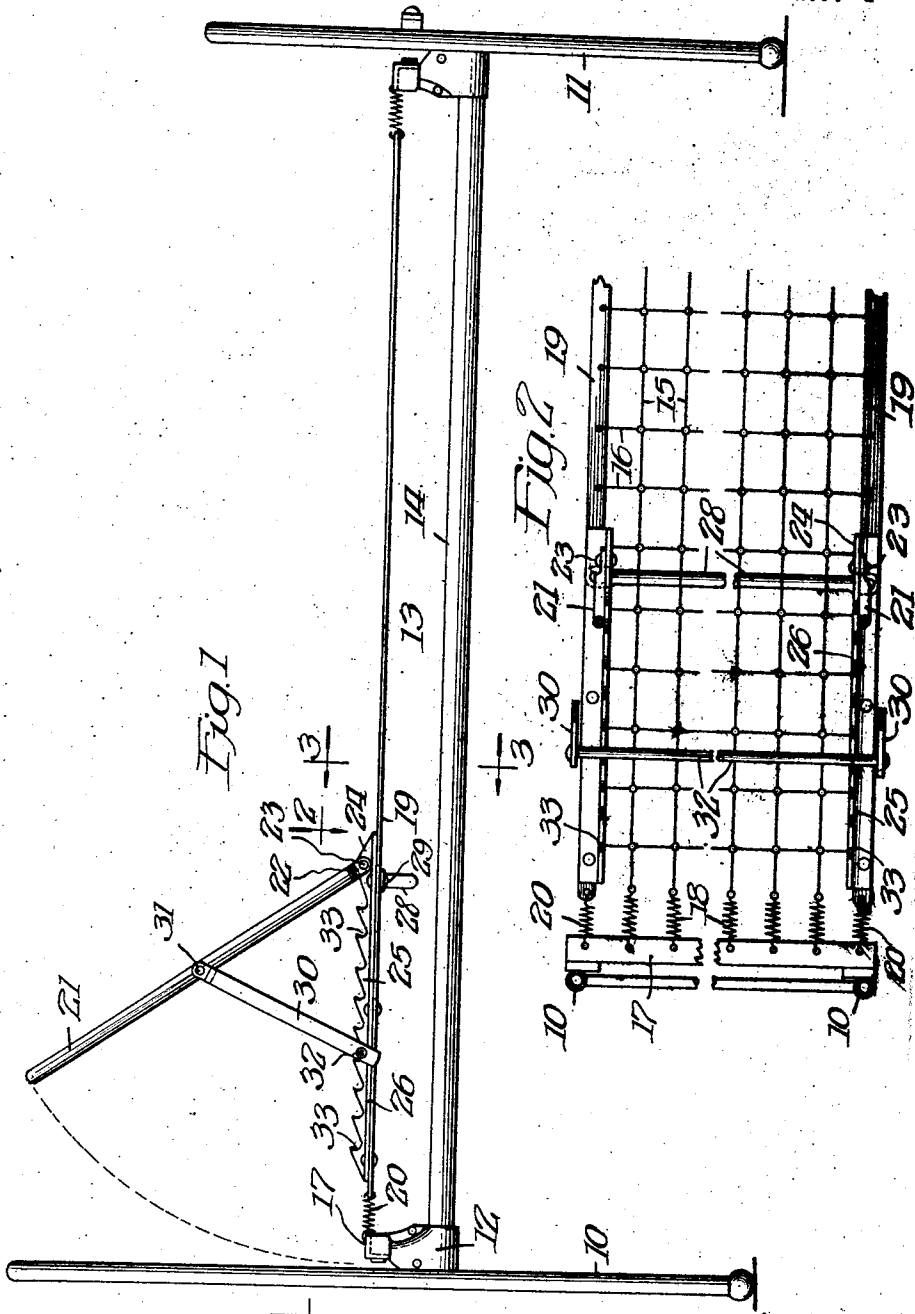
M. F. BAYER

1,600,392

ADJUSTABLE REST FOR BEDSTEADS

Filed March 24, 1922

2 Sheets-Sheet 1



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Fig. 3

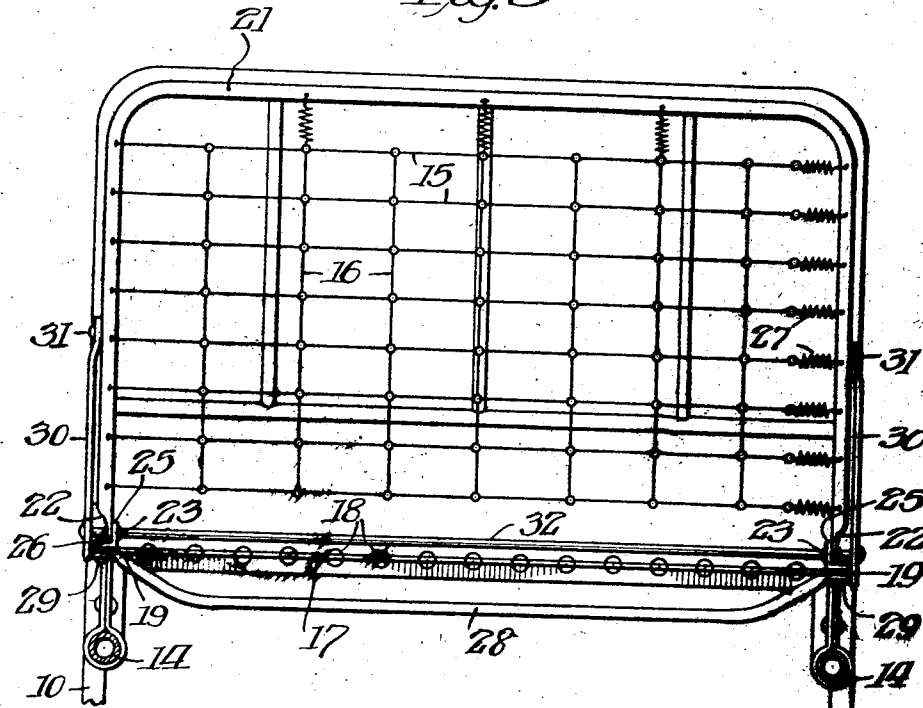
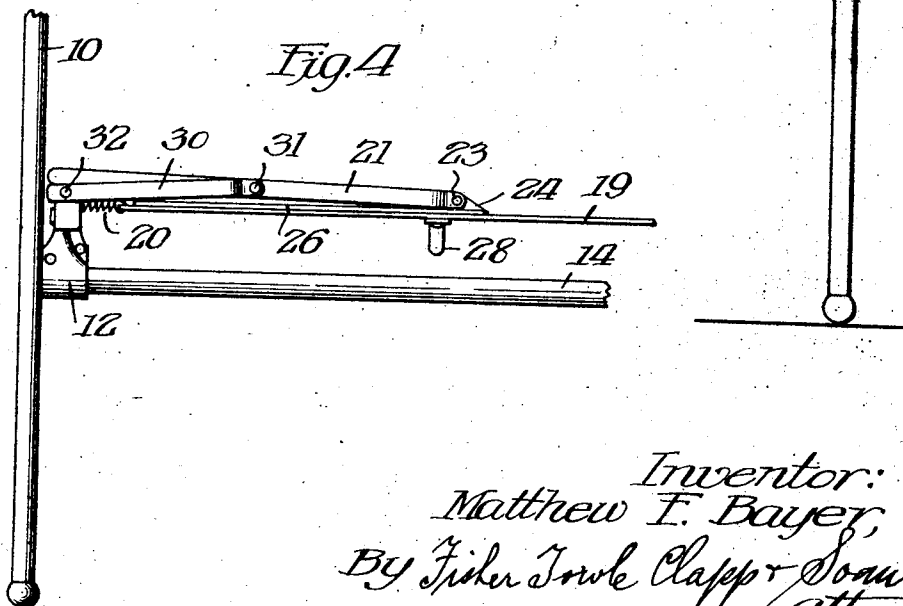


Fig. 4



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# UNITED STATES PATENT OFFICE.

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## ADJUSTABLE REST FOR BEDSTEADS.

Application filed March 24, 1922. Serial No. 546,435.

My invention relates to adjustable rests for bedsteads and is of particular value in connection with back rests employed on hospital beds equipped with resilient bed bottoms.

The principal objects of the invention are to provide an adjustable rest which can be conveniently applied to an ordinary bed bottom without extensive reconstruction of the frame or other parts; to provide a rest which will partake of the same general movement as the surface of the bed bottom itself; to provide a back rest which, when not in use, will not materially interfere with the normal action of the bed bottom or with the bed clothing; to provide a construction which shall be simple and economical to design and manufacture and in general to provide a neat, convenient, substantial and efficient rest of the character referred to.

In the drawings which illustrate my invention as applied to a bedstead of what, in the trade, is known as the three piece type—

Fig. 1 is an elevation of the bedstead showing the back rest in elevated position;

Fig. 2 is a section taken on the line 2—2 of Fig. 1;

Fig. 3 is a section taken on the line 3—3 of Fig. 1; and

Fig. 4 is a view similar to Fig. 1, but showing the back rest in depressed position.

Referring to the drawings, 10 and 11 represent respectively the head and foot end frames of the bedstead to which by means of suitable corner fastenings, as at 12 the combined bed bottom and connecting frame 13 is detachably connected. Said corner fastenings 12 are fully set forth and described in the U. S. patent to Busch, dated Nov. 15, 1921, No. 1,397,203.

The tubular stretcher bars or side rails 14 are located at some distance below the bed bottom-supporting surface in order to permit same to be depressed when conforming to the shape of the occupant of the bedstead. Said supporting surface in the present instance comprises a fabric made up of long links 15 connected end to end to form longitudinal chains, said chains being tied together transversely by cross links 16. The ends of the longitudinal chains are connected to the end pieces or cross angles 17 by helicals 18 in the usual manner and the side edges or side boundaries of the bed fabric

are composed of a pair of flexible steel slats 19 also connected to and stretched between the cross members 17 by helicals as at 20.

In the present instance I have shown my invention as applied to a back rest such as is desirably employed in hospitals in order to permit the patient to assume a more comfortable position or to sit up in bed when able to do so. Said back rest comprises a substantially rectangular section of fabric constructed like the main bed fabric of longitudinal and cross links suitably connected together. However, in the case of the back rest, the chains formed from the long links 15 are stretched transversely across the arms of a U-shaped frame 21.

The ends 22 of the arms of the U-shaped frame are preferably flattened and perforated to receive pivots or rivets 23. Said rivets 23 also extend through the upper or vertical flanges 24 of strips of angle iron 25 riveted through the horizontal flanges 26 to the slats or edge members 19 so that said longitudinally extending angle irons 25 move with the side slats 19 when the latter are depressed. Because helicals 27, by which the transverse chains of the back rest fabric are stretched across the U-shaped frame 21, exert considerable endwise pull upon the arms of the U-shaped frame 21, I find it desirable to employ means for maintaining the pivotal points of the back rest at the proper distance apart. Said means comprises a transverse stretcher bar or tube 28, the intermediate portion of which is offset a sufficient distance below the surface of the main bed fabric to prevent interference therewith due to the weight of the occupant. The ends of said transverse stretcher bar 28 are rigidly united to the ends of angle irons 25 by the rivets 29, the ends of bar 28 being suitably flattened to facilitate insertion of said rivets.

In order to maintain the back rest in its desired angular position of adjustment, I employ an adjustable strut frame comprising a pair of side members as at 30 pivoted at their upper ends to pins 31 on the outer sides of the U-shaped frame 21 and having their lower ends connected by means of a transversely extending horizontal tie rod 32. Said tie rod 32 is preferably a round bar and is adapted to cooperate with notches or serrations 33 formed in the upper or vertical flange 24 of the angle members 25. Said notches 33 are suitable spaced apart so as to

provide for all desirable positions of adjustment of the back rest.

Normally, when the back rest is not in use, the same occupies the position shown in Fig. 4, with the back rest fabric superposed over the main bed fabric and in effect supported thereby. Hence, the back rest does not affect undesirably, the resilience of the bed bottom when the latter is being used in the ordinary way for a recumbent patient. When it is desired to raise the back rest for a patient who desires to assume a sitting position, the nurse simply lifts up on U-shaped frame 21, permitting rod 32 to ride over the serrations and automatically locking the back rest when the rod 32 drops into the proper notches. To lower the back rest form its elevated position shown in Fig. 1 to the position shown in Fig. 4, or to an intermediate position the nurse raises the back rest slightly until rod 32 can be disengaged from its notch. Then the strut frame, by means of one of the side members 30 can be swung up into a substantially horizontal position permitting the back rest to be lowered.

It will be observed that when the back rest is in its operative position, as shown in Fig. 1, the lower edge of the back rest fabric is substantially in engagement with the upper surface of the main bed fabric, which condition prevails even though the main bed fabric is considerably depressed by the weight of the occupant. This results from the fact that the pivotal point of the back rest is supported on the flexible slat member 19, which partakes of the movement of the bed fabric.

The described details of construction and operation are merely illustrative of a single phase of my invention, the scope of which should be determined by reference to the appended claims, said claims being construed as broadly as possible, consistent with the state of the art.

I claim:—

1. In a bedstead, the combination of a main rectangular frame, cross members at the ends of said frame, a resilient link fabric connected between said cross members, said fabric also including as parts thereof, a pair of slats also resiliently connected between said cross members and constituting the side boundaries of the bed fabric, a U-shaped frame provided with a fabric portion adapted to overly the main fabric portion when the said frame is lowered into horizontal position, said U-shaped frame being pivoted at its ends, on the side slats of the fabric, strut means for supporting the said U-shaped frame in elevated position, said strut means comprising a member pivoted to a point on said U-shaped frame spaced from its pivot and interlocking with one of the side slats in a plurality of different posi-

tions, and a U-shaped brace extending crosswise under the bed bottom and having the ends secured to the side slats adjacent the pivots of the U-shaped frame.

2. In a device of the class described, the combination of a resilient bed bottom having side slats, bracket members secured to each of said side slats, a head rest comprising a U-shaped frame having metallic fabric connected between its arms under tension, the ends of said arms being pivotally mounted on said bracket members, and a brace extending transversely under said bed bottom and spaced therefrom, said brace having upturned ends secured to said brackets whereby the arms of said U-shaped head rest frame are held spaced apart against the tension of said fabric.

3. In a device of the class described, the combination of a main frame having an elevated cross member at each end, a bed bottom comprising a link fabric extending between and yieldingly connected to the elevated cross members, a flexible strap extending along each lateral edge of the bed bottom and yieldingly connected to the cross members, a notched bar mounted on each strap, a U-shaped frame having the extremities of the arms pivotally connected respectively to said bars, a U-shaped strut, having the extremities of the arms pivoted respectively to the arms of the aforesaid U-shaped frame, and adapted to optionally engage the notches of the said bars for resiliently supporting the U-shaped frame at different elevations, a link fabric carried by the U-shaped frame, and a cross brace extending transversely under the bed bottom and having upturned ends secured respectively to the notched bars at each side of the bed bottom.

4. In a device of the class described, a resilient bed bottom fabric having a flexible side slat at each side thereof, a reinforcing member on each of said side slats and secured thereto for stiffening a portion thereof, a back rest pivotally mounted on said side slats at said reinforcing members and adapted to be folded down upon one end of said bed fabric, and a strut supported by said reinforcing member, said strut being adjustable for regulating the angular position of said back rest.

5. In a device of the class described, a resilient bed bottom fabric having a flexible side slat along each side thereof, a reinforcing member secured to each of said side slats for stiffening a portion thereof, a back rest pivotally mounted on said reinforcing members and a strut at each side of said back rest pivotally attached thereto, and means on said reinforcing member for adjustably engaging said struts for supporting said back rest in the desired position.

6. In a device of the class described, a

resilient bed bottom fabric having a flexible side slat along each side thereof, a reinforcing member secured to each of said side slats comprising an angle iron having its horizontal flange secured to the side slat and its vertical flange extending upwardly and provided with a plurality of notches, a back rest pivotally attached to said reinforcing member, a strut at each side of said back rest and pivotally attached thereto and means on each of said struts for engaging one of said notches to adjustably support said back rest.

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