A. M. KIRBY.

HOSPITAL BED.

APPLICATION FILED NOV. 12, 1921.

1,429,080.

Patented Sept. 12, 1922.

2 SHEETS—SHEET 1.

Fig. 1

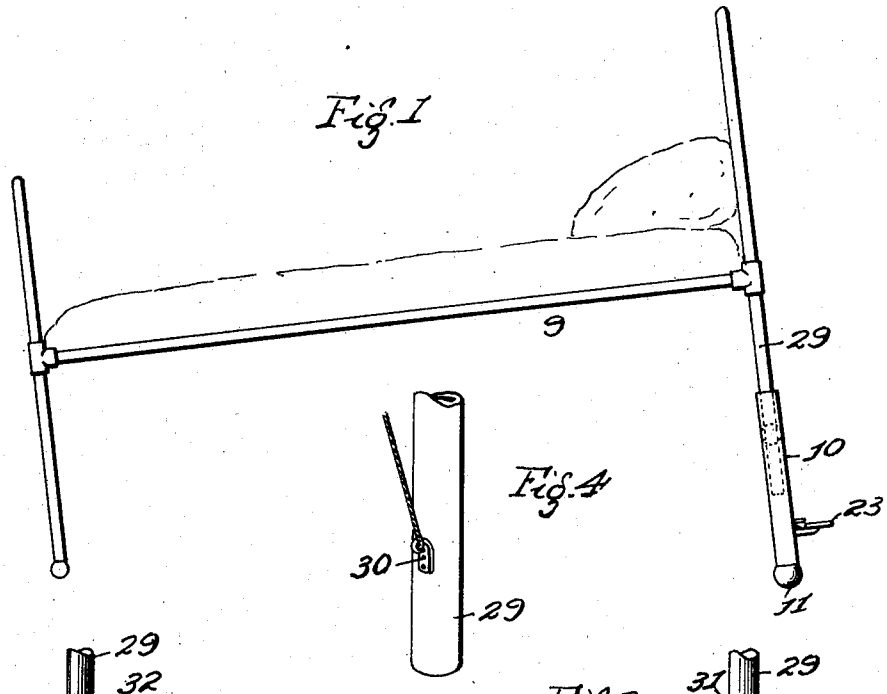
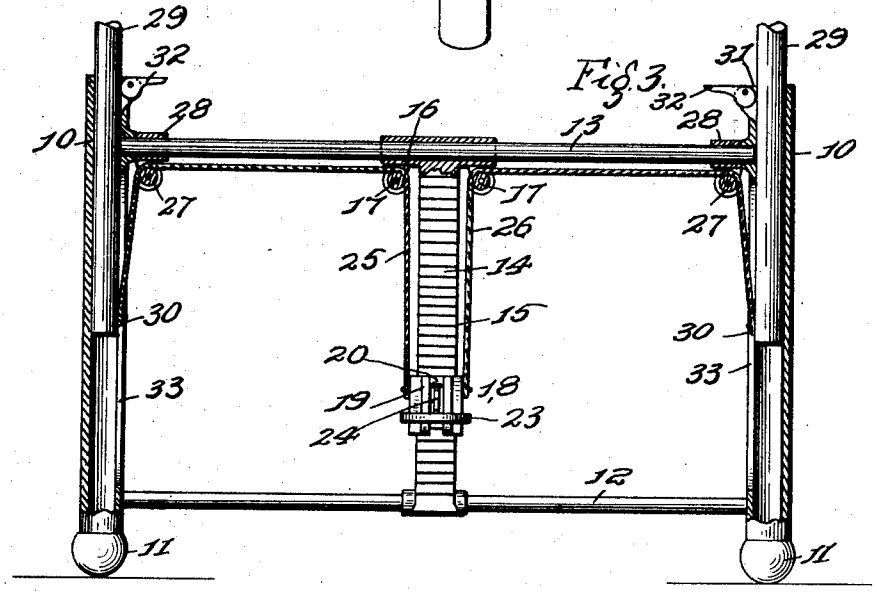


Fig. 4

Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 2.

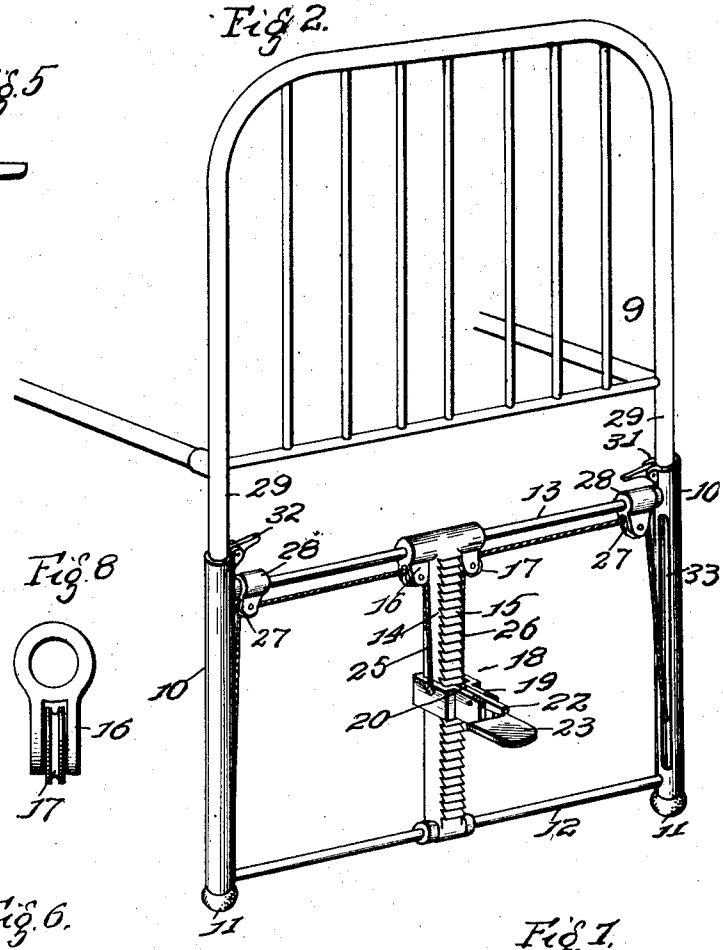


Fig. 5.

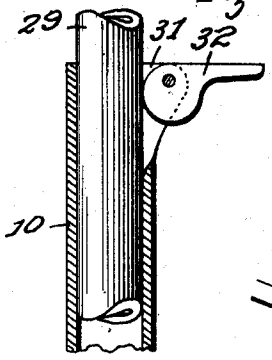


Fig. 8.

Fig. 6.

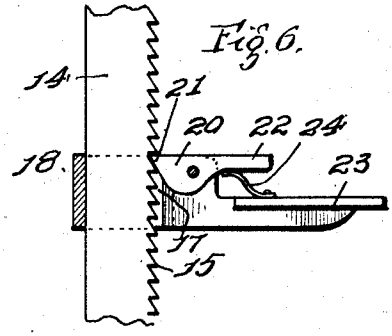
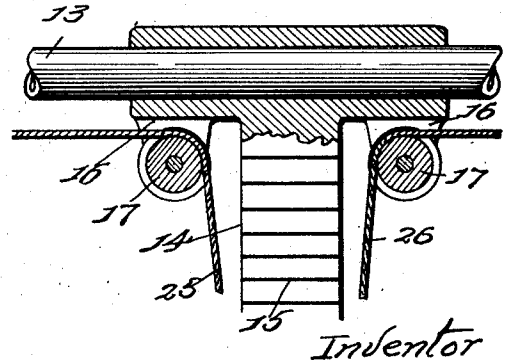


Fig. 7.



Inventor

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UNITED STATES PATENT OFFICE.

AMBROSE M. KIRBY, OF ST. LOUIS, MISSOURI.

HOSPITAL BED.

Application filed November 12, 1921. Serial No. 514,531.

To all whom it may concern.

Be it known that I, AMBROSE M. KIRBY, a citizen of the United States, and resident of St. Louis, Missouri, have invented certain new and useful Improvements in Hospital Beds, of which the following is a specification.

This invention relates to improvements in a hospital bed and has for its object an attachment by which the bed may be raised or inclined at any angle to suit the convenience of the patient. The means being so arranged as to be attached to the head-piece or foot board of the bed and by means of the foot placed upon a pedal that portion of the bed to which the device is attached can be inclined to any desirable degree.

The invention consists preferably of two hollow standards in which the legs or bed posts are inserted and means for telescopically elevating the bed portion, and a means for locking the same when in its proper adjusted or inclined position.

Figure 1, is a side elevation of a bed showing my invention attached thereto.

Fig. 2, is a detail perspective view of a portion of the bed showing my invention applied thereto.

Fig. 3, is a combination front and sectional view of my invention showing the same as applied to the bed.

Fig. 4, is a detail perspective view of one of the bed legs showing the hoisting connection.

Fig. 5, is a detail sectional view of the upper portion of one of the standards of my invention, showing the frictional locking means by which the bed is additionally locked when in its adjusted position.

Fig. 6, is a detail sectional view of the pedal mechanism made use of in connection with my invention.

Fig. 7, is a detail sectional view of the ratchet post and the means for supporting the cables by which the bed is hoisted.

Fig. 8, is a detail end view of one of the sheave supporting members which is in use in connection with my invention.

Referring to the drawings in detail 9, indicates an ordinary hospital bed which is of the usual construction preferably made of iron tubing and to this structure of bed is attached my invention which consists of two tubular standards 10, the bottom ends being provided with a rounded contacting surface 11 or on the same may be attached casters of the marketable structure. These two tubular standards are connected together by cross-bars 12 and 13, one near the top and one near the bottom. Approximately centrally located and connected to each of the rods 12 and 13 is a ratchet bar 14. This bar is preferably constructed rectangular in form and its one surface provided with ratchet teeth 15. The upper portion of the bar is provided with a cylindrical structure through which the bar 13 is placed and on the lower edge of this cylindrical structure is formed ears 16, in which is usually mounted sheave wheels 17. The bottom end is also made in the form of a cylinder through which is placed the rod 12. This ratchet bar is firmly held in its set position either by rivets, set-screws or the like as found desirable in the mechanical structure.

On the ratchet bar is placed a rectangular frame 18. This frame is constructed loose enough to allow the same to move up and down on the bar, and is provided with two projecting ears 19 between which is pivotally mounted a ratchet pawl 20. Its tooth 21 is arranged to contact with the ratchet teeth 15 of the bar, and its front end is provided with a lever 22 with which the toe of the operator's shoe may be brought in contact for manipulating the pawl and bringing the tooth 21 out of contact with the teeth 15. This is for the purpose of permitting the frame 18 to be raised in order that the bed which the device supports may be lowered. The ears 19 of the frame are arranged to support a pedal 23. This pedal is for the purpose of permitting the operator to place his foot on the same and press the frame downwardly and during this downward action the pawl 20 will normally contact with the teeth the same being held intact by the spring 24. This frame is attached to one end of the cables 25 and 26. These cables operate over the sheaves 17 and are then placed towards the sides and over the sheave wheels 27 which are supported in the castings 28 located on the ends of the bars 13, and in close proximity to the tubular standards 10. The opposite and free ends of the cables are attached to the bed posts 29 which are telescopically located in the standards 10 and said cables are so attached to the posts by means of the connection 30. See Fig. 4.

The upper ends of the tubular standards 10 are provided with ears 31 between which is pivotally mounted a friction eccentric le-

ver 32. See Fig. 5. These eccentric levers are used to exert frictional contact against the bed posts when the same have been elevated to the desired degree and will prevent the bed from lowering itself when accidental contact is brought against the pedal mechanism by which the bed is elevated.

The posts 10 are provided with elongated slots 33 which permit proper operation of the cables during the elevation or lowering of the bed.

The device is simple in construction yet can be attached to any hospital bed by first removing the casters from the foot of the bed post and then attaching the free end of the cable thereto.

Having fully described my invention what I claim is:

1. A hospital bed comprising an independent frame consisting of a pair of hollow standards joined together, a rack bar forming a part of and carried by the frame, a foot operated ratchet mechanism operating on the rack bar, a resilient bed hoisting mechanism carried by the frame and controlled by the ratchet mechanism in combination with a bed to which the hoisting mechanism is attached, substantially as specified.

2. A device of the character described comprising a frame in combination with a hospital bed to which said frame is attached, a pair of hollow standards in which the post of the bed is telescopically mounted, a ratchet bar forming a part of the frame, a sliding ratchet mounted on the ratchet bar and cables leading from the sliding ratchet to the posts of the bed for elevating the bed when pressure is applied to the sliding ratchet, substantially as specified.

3. A device of the character described comprising a frame adapted to be attached to the end of a hospital bed, a ratchet mechanism, a bed elevating mechanism connected to the ratchet mechanism and to said bed and by which the bed is elevated when pressure is applied upon the ratchet mechanism, and a clamping means on the frame for binding the bed posts when in set position, substantially as specified.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

AMBROSE M. KIRBY.

Witnesses:
B. M. MANNE,
ALFRED A. EICKS.