

G. A. WILSON.
HOSPITAL BED.
APPLICATION FILED MAR. 1, 1912.

1,048,254.

Patented Dec. 24, 1912.

3 SHEETS-SHEET 1.

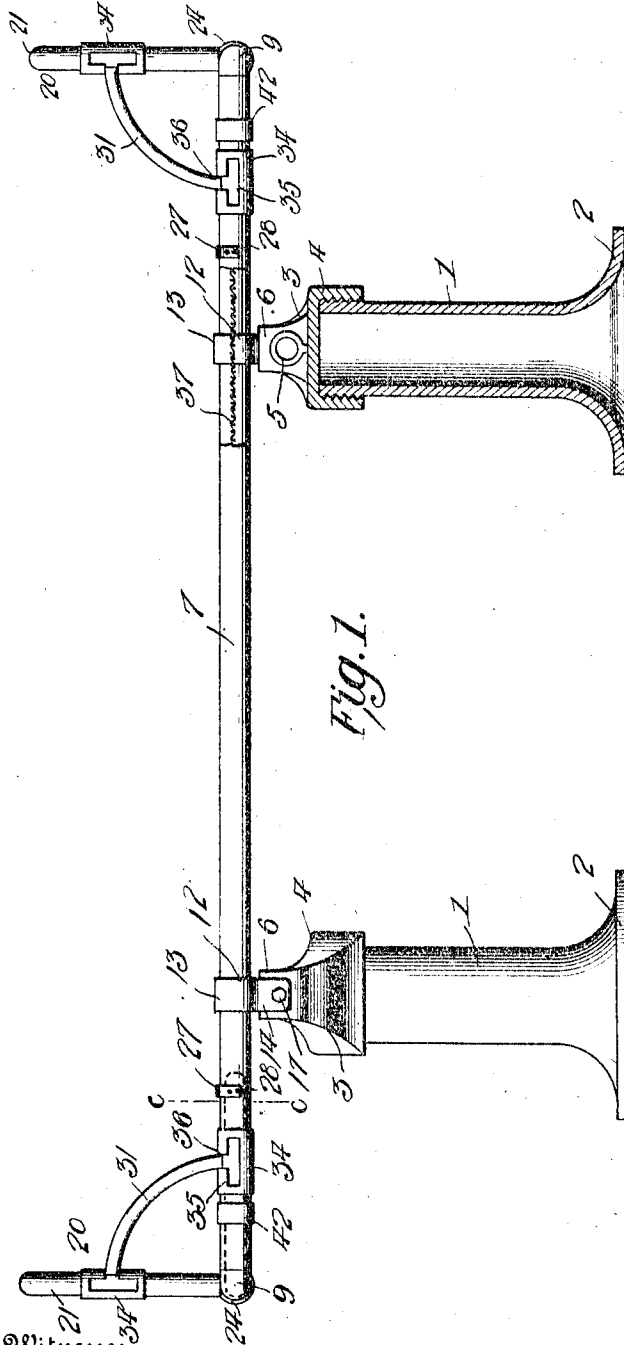


Fig. 1.

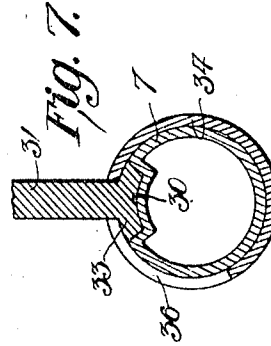


Fig. 7.

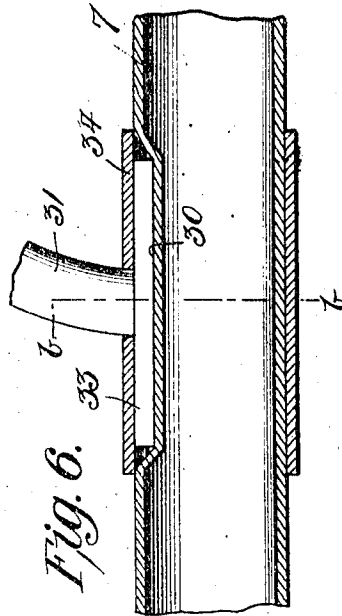


Fig. 6.

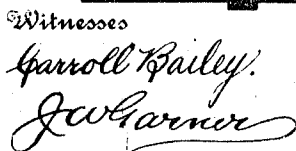
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3 SHEETS—SHEET 2.



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3 SHEETS-SHEET 3.

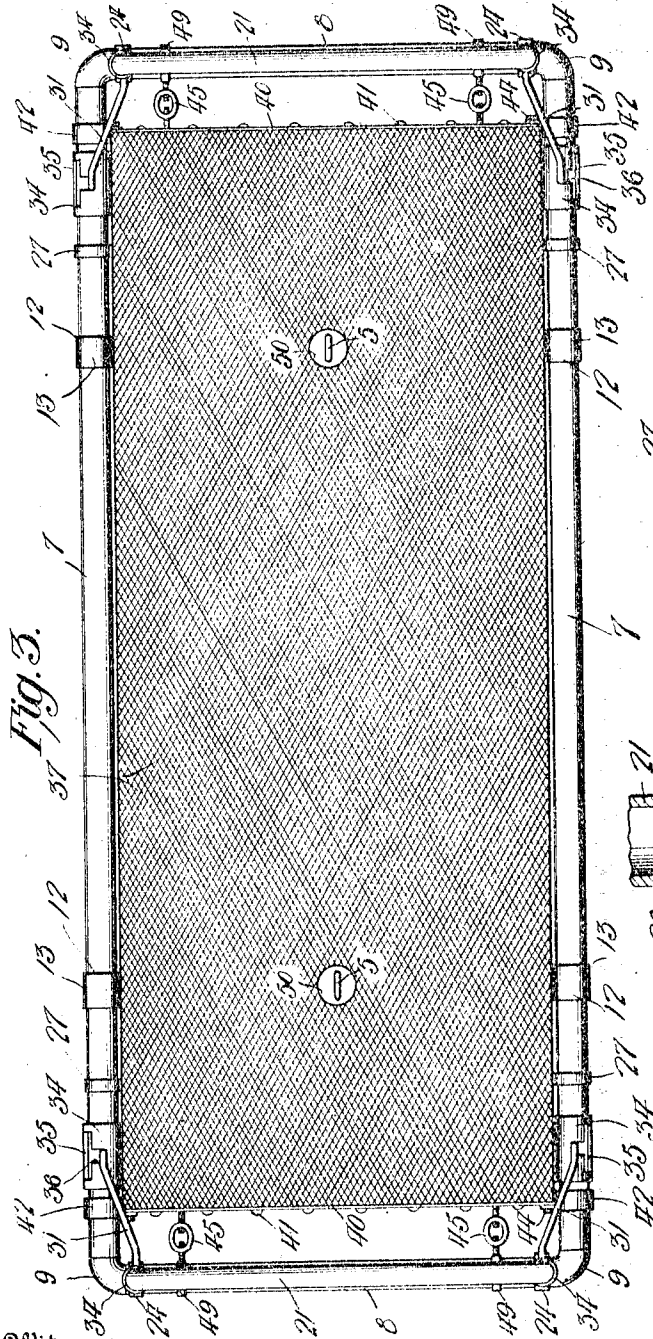


Fig. 3.

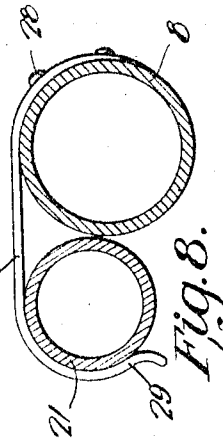


Fig. 8.

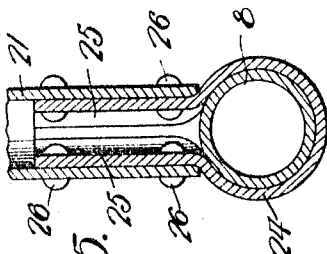


Fig. 5.

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UNITED STATES PATENT OFFICE

GEORGE A. WILSON, OF WORCESTER, MASSACHUSETTS.

HOSPITAL-BED.

1,048,254.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE A. WILSON, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented new and useful Improvements in Hospital-Beds, of which the following is a specification.

This invention is an improved hospital bed and consists in the construction, combination and arrangement of devices hereinafter described and claimed.

One object of this invention is to provide a bed having rounded corners and which presents no obstructions whatever at its sides or ends.

Another object of the invention is to effect improvements in the construction of the bed whereby it is provided with foot and head boards or frames which are adapted to be folded under the bed when desired.

A further object is to effect improvements in the construction of the braces for supporting the head and foot boards or frames in places and in the means for detachably securing the brace to the head and foot boards and to the sides of the bed frame.

A further object is to provide a bed of this character with improved supporting devices which are arranged out of the way under the bed.

Another object is to effect improvements in the construction of the main frame of the bed whereby its side and end bars are detachably secured together.

Another object of the invention is to effect improvements in the construction of the end bars of the spring bed bottom and to combine therewith means for adjusting the said bars longitudinally of the bed so that the spring bed bottom may be stretched to any desired tension.

In the accompanying drawing:—Figure 1 is partly a side elevation and partly a vertical longitudinal central sectional view of a hospital bed constructed in accordance with my invention. Fig. 2 is an end elevation of the same. Fig. 3 is a plan of the same. Fig. 4 is a detail sectional view of one corner of the bed frame. Fig. 5 is a detail sectional view, showing one of the hinge connections. Fig. 6 is a detail view, partly in elevation and partly in section, of one of the detachable brace connections. Fig. 7 is a detail vertical transverse sectional view of the same on the plane indicated by the line *b—b* of Fig. 6. Fig. 8 is a de-

tail transverse sectional view on the plane indicated by the line *c—c* of Fig. 1, showing one of the catches to secure the hinged head boards when in folded position under the bed frame. Fig. 9 is a detail sectional view, showing one of the connections between the side rails of the bed frame and the supporting arms. Fig. 10 is a detail plan of one of the end bars of the spring bed bottom and showing its connections with one of the side rails of the bed frame. Fig. 11 is a detail plan, showing a portion of one of the end bars or rails of the bed frame and the adjustable tensioning connection between the said bars.

In the embodiment of my invention, I provide a pair of pedestals 1 which are preferably hollow, may be made of iron or any other suitable material and the lower ends of which are preferably enlarged diametrically as at 2 to form supporting feet. In connection with the pedestals, I provide a pair of supporting arms 3 each of which is formed with a medially disposed cap 4 which is screwed on the upper end of one of the pedestals. Each cap is also provided on its upper side with a centrally arranged eye bolt 5. The supporting arms 3 are formed with upturned ends 6.

The bed frame comprises tubular side rails 7, tubular end rails 8 and preferably tubular elbows 9 which are arranged in the angles between the ends of the side and end rails and are provided with arms 10 arranged at right angles and which arms enter the ends of the side and end rails. The said elbows are also formed with shoulders 11 against which the ends of the side and end rails abut. The side rails 7 of the bed frame are engaged by clamps 12 each of which comprises a nearly circular portion 13 which passes around one of the bed rails and a pair of depending arms 14—15. A bolt 17 passes through openings 18 in the arms 14 and 15 and engages a threaded opening 19 in one of the upturned ends 6 of one of the supporting arms. By means of the said bolts 17 the clamps may be tightened on the side rails of the bed frame so as to firmly engage the same and, hence, firmly secure the bed frame on the supporting arms. By this construction of the bed frame, the same is provided with rounded corners which enable a person to pass around the bed without the likelihood of striking the corners and jarring the bed so as not to disturb the patient there-

on and by the provision of the supporting arms and the pedestals and the arrangement of the pedestals under the center of the bed, the pedestals are entirely out of the way and I am enabled to dispense with supporting legs such as bedsteads are usually provided with and which are likely to be struck by persons passing around the bed. Hence, by providing my improved supporting arms and pedestals, I avoid all possibility of the bed being struck by persons passing around the corners thereof and also avoid the consequent injury to or annoyance of the patient on the bed.

The construction of the bed frame with its side rails and end rails detachably connected together by the elbows enables the bed frame to be readily disassembled so that it can be packed very compactly for transportation or storage and this is also greatly facilitated by the construction of the pedestals, the supporting arms and the clamps which connect the supporting arms to the side rails of the bedstead, all of these parts adapted to be readily disassembled and compactly disposed, as will be understood.

Each head or foot board or frame 20 is here shown as comprising a substantially U-shaped bent tubular member 21 and connecting rods 22—23. The ends of the said bent tubular rods 21 which form the lower corners of the head and foot board or frames are pivotally connected to the end bars 8 of the frame by bent hinged straps 24 which pass around said end bars 8 and which have parallel end arms 25 which extend into the ends of the said tubular bars 21 and are secured thereto as by means of rivets or other suitable devices 26. Hence, the head and foot boards or frames are hingedly connected to the end bars of the bed frame so that they may be arranged in vertical position for use, as shown in full lines in Fig. 1 or may be swung inwardly under the ends of the bed frame and disposed out of the way as shown in dotted lines in the said figure. To secure the said head and foot boards or frames when thus folded under the ends of the bed frame out of the way, I provide catches 27 which are pivotally connected to the side rails of the bed frame as at 28 and are formed with spring bills 29 which may be engaged with or disengaged from the said bent rods 21 of the head and foot boards.

The side rails of the bed frame and the tubular sides of the head and foot boards or frames are formed with depressions or recesses 30. Segmental braces 31 are employed to support the head and foot boards or frames in vertical position and connect the same to the side rails of the bed frame and these segmental braces are provided at their ends with cross feet 33 of a size and shape adapting them to fit in the depressions 30. On the tubular sides of the head and foot

boards or frames and on the tubular side rails of the bed frame are locking sleeves 34 which are adapted to turn and each of which is provided with a longitudinal opening 35 of a size and shape adapting the same to receive one of the cross feet of the braces and also with a transverse slot 36 to clear the brace. In order to connect one of the braces to the side of one of the frames, the locking sleeve is first turned so as to dispose its opening 35 in alignment with the depression or recess 30, the foot of the brace then being passed through the said opening and arranged in the said recess or depression, concentric with and within the locking sleeve and the latter is then partly turned so as to engage the outer side of the cross foot of the brace, the slot 36 enabling this to be done and serving to clear the brace, one end of the slot coming in contact with the brace when the locking sleeve has been turned to a sufficient extent to secure the foot of the brace to the rail or bar. It will be understood that the braces may be detached from the bed frame and head and foot boards or frames whenever it is desired to turn the said head or foot boards or frames, under the ends of the bed frame out of the way.

By swinging the foot board down under the bed the attendant can the more readily tuck the bedding under the mattress, especially if the bed contains a tall patient. By dropping both the head and foot boards, the transferring of a patient to or from a stretcher is greatly facilitated. By just lowering the head board, the administration of an anesthetic to a patient or the performing of a surgical operation or changing dressings on the head is greatly facilitated. By dropping both the head and foot boards and by so constructing the bedstead as hereinbefore stated, so as to dispense with the usual corner posts, the possibility of an insane patient inflicting injury on himself by pushing his head against a corner of the bed is greatly lessened. Moreover, by thus providing means whereby the head and foot boards may be lowered and rendered under the ends of the bed, insane patients are prevented from attempting to commit suicide and, moreover, the attendants are enabled to the more readily control insane patients while being tube fed.

The woven wire spring bed bottom 37 is provided with end bars 38 each of which comprises a pair of members 39—40 between which the ends of the woven wire bed bottom fabric are clamped by means of screws 41. On the side rails of the bed frame, near the ends thereof are sleeves 42, which are movable longitudinally on the side rails and each of which is provided on its upper side with a pair of spaced lugs 43 between which one end of one of the end bars 38 is secured by means of a bolt or screw 44. The said

end bars 38 are connected to the end rails of the bed frame by means of display, tensioning connections 45 each of which comprises a turn buckle 46 and a pair of oppositely threaded adjusting screws 47—48 which are engaged with threaded openings at the ends of the turn buckle. Each bolt 47 is secured to one of the cross bars 38 and each bolt 48 has an eye 49 through which an end rail 8 of the bed frame extends. It will be understood that by turning the turn buckles 46, the said links are caused to co-act with the said bolts 47—48 in drawing the end bars 38 of the spring bed bottom toward or from the end rails of the bed frame, according to the direction in which the said turn buckles are turned. Hence, by this means the spring bed bottom may be stretched to any desired tension and the spring bed bottom may be tightened sufficiently to cause it to hold a "fracture box" level as when such a "fracture box" is being used in the case of a broken hip or leg.

The spring bed bottom 37 has openings 50 which are above the eye bolts 5 of the caps of the supporting arms 3. In practice, the mattress which is placed on the spring bed bottom is provided with straps or bands which pass around at points coincident with the openings 50 and these straps or bands are connected by suitable devices, such as snap hooks with the eye bolts 5, said snap hooks or fastening devices passing through the openings 50. By this arrangement and construction of devices, the mattress is held securely on the spring bed bottom so that it can not be dislodged or moved therefrom by the patient.

I claim:—

1. The combination of a bed frame having side rails, pedestals arranged under the bed frame, supporting arms on the pedestals and having upturned ends and securing devices connected to the side rails of the bed frame and detachably secured to the upturned ends of the supporting arms.

2. The combination of a bed frame having side rails, pedestals under the bed frame, supporting arms on the pedestals having up-

turned ends, clamps engaging the side rails of the bed frame and each having a pair of downwardly extending arms and securing and adjusting screws engaging the upturned ends of the supporting arms and said arms of the clamps.

3. In combination with a bed frame having side and end rails, foot and head boards pivotally connected to the end rails and arranged to be extended up from or to be swung inwardly under the bed frame and braces to support the foot and head boards in upright position, the said braces being detachably secured to the side rails and to the foot and head boards.

4. In combination with a bed frame having side rails and end rails, foot and head boards pivotally connected to the end rails, the said foot and head boards and the said end rails having recess near their meeting portions, braces to support the foot and head rails and having feet adapted to be disposed in the recesses of the foot and head boards and side rails, and locking sleeves on said side rails and foot and head boards, arranged for partial rotation thereon and provided with openings to receive the feet of the braces and also with slots extending transversely from said openings to clear the braces when the locking sleeves are turned into engagement with the outer sides of the feet of the braces.

5. In combination with a bed frame having side and end rails, foot and head boards of less width than the bed frame, pivotally mounted on the end rails and arranged to be swung under the ends of the bed frame, and catches engaging the sides of said foot and head boards and also engaging the said side rails to support the said foot and head boards when thus swung inwardly under the ends of the bed frame.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE A. WILSON.

Witnesses:

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ALEXANDER GARLAND.