

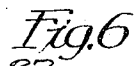
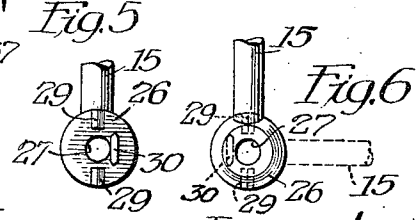
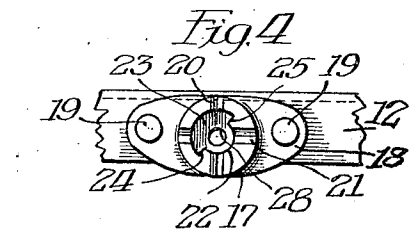
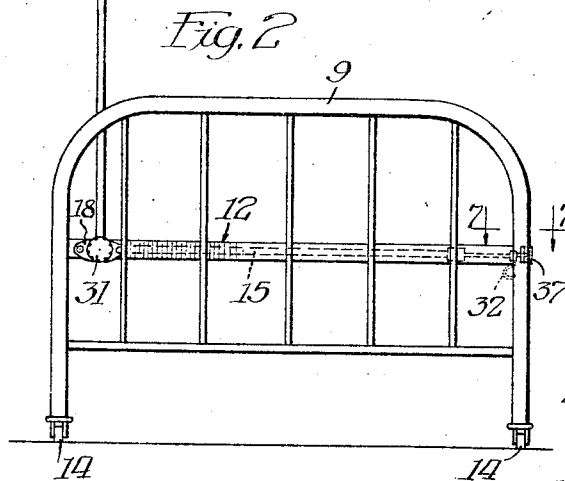
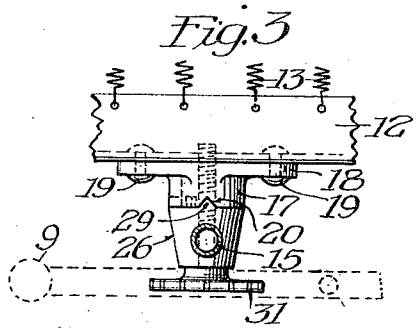
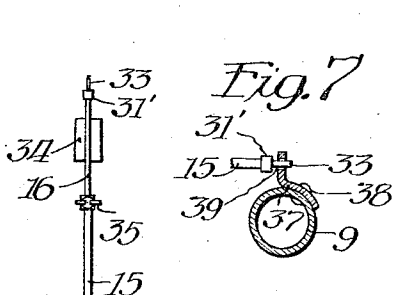
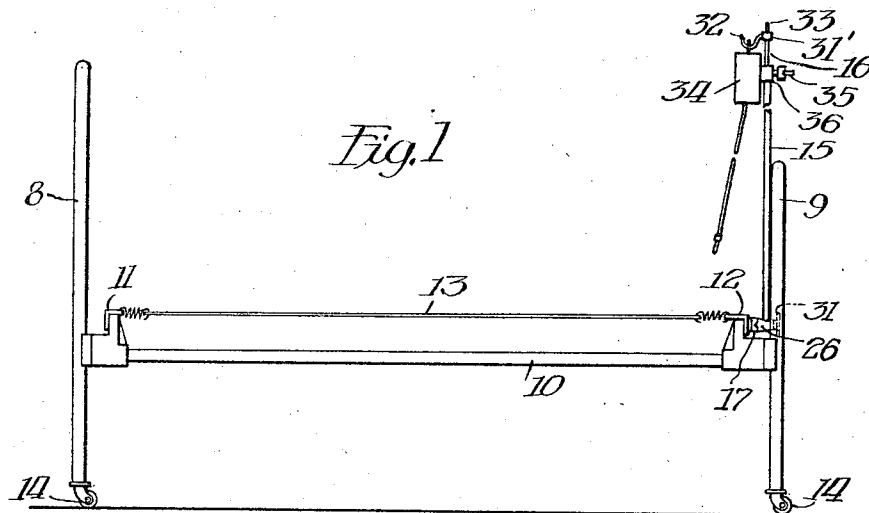
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F. KUSTERLE ET AL

1,704,979

TANK SUPPORT FOR HOSPITAL BEDSTEADS

Filed Nov. 11, 1925



Inventors:
Charles H. Busch,
Frank Kusterle,

by Fisher, Towle, Clapp & Sears, Attys.

UNITED STATES PATENT OFFICE.

FRANK KUSTERLE AND CHARLES H. BUSCH, OF KENOSHA, WISCONSIN, ASSIGNORS TO
SIMMONS COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

TANK SUPPORT FOR HOSPITAL BEDSTEADS.

Application filed November 11, 1925. Serial No. 68,252.

Our invention relates to improvements in hospital bedsteads and has particular reference to an attachment for supporting a tank of irrigating fluid, such as is employed for antiseptic purposes in accordance with modern hospital practice.

Among the objects of the invention are to provide a novel support which is an improvement upon the structure shown in the prior patent to Don Carlos Travis No. 1,297,043, dated March 11, 1919, and assigned to the Simmons Company, of Kenosha, Wisconsin, a corporation of Delaware, assignees in this case; to provide a novel arrangement whereby the irrigating tank support may be employed as a fracture bar when it is folded down along the foot end of the bed; to provide an arrangement whereby said support or bar may be more quickly and conveniently extended to an upright position or folded down and limited in its movement in either direction, as well as more positively held in said positions; to obviate the necessity of attaching the same to the tubular post of the foot end of the bed and permit attachment thereof to the foot end of the spring frame or end rail; to provide an adjustment means which requires but slight turning of the thumb screw and which serves to hold the support in adjusted position and obviates the possibility of the support dropping down inadvertently or the screw being entirely disconnected from its anchoring means, all of which objections are found present in previous structures; and to generally enhance, improve and simplify structures of the character to which this invention relates. This invention embodies a novel support for the irrigating apparatus so organized that it may be extended to ample height when in use, while it may be folded down into an inconspicuous position when it is not desired to use the irrigating device.

In the drawings:

Fig. 1 is a side elevation of a hospital bed equipped with our invention, the supporting rod being shown in a vertical or extended position.

Fig. 2 is an end elevation looking toward the foot end of Fig. 1.

Fig. 3 is an enlarged fragmentary plan view of the adjusting and clamping means for the receptacle support.

Fig. 4 is a fragmentary view of the end

rail showing part of the adjustment device or pivot block.

Fig. 5 is a detail view of one end of the supporting rod showing the head or block thereof which co-operates with the block on the head or foot rail.

Fig. 6 is a view of the parts assembled and in operative relation in the two positions referred to, and

Fig. 7 is a detail sectional view showing a strap lug for holding the support in a horizontal position.

The hospital bedstead to which our invention is shown applied may be of any approved design. However, as shown in the drawings to which reference is made in detail and in which like reference characters designate corresponding parts throughout several views, there is shown a metal bedstead of the continuous post type having a head end 8, a foot end 9, a spring frame 10 including side rails and angle iron head and foot rails 11 and 12, and incorporating therein a spring 13. The bedstead is shown supported on casters 14 and it is here pointed out that the legs may be extensible and the bed may be equipped with an adjustable back rest. However, since such features are common in the art and form no part of the present invention, further illustration or description thereof is deemed necessary.

The receptacle or tank support comprises a hollow bar or standard 15 in which may be telescopically adjusted an extension rod 16. This standard is supported when in upright position at its lower end by means which permits the same to be clamped or to be adjusted and held in a horizontal position at the end of the bed. For this purpose, a pivot block or boss 17 is provided and preferably formed on an attachment plate 18 which is riveted or otherwise fastened through apertures therein adjacent the ends of the plate and corresponding apertures in the angle iron foot rail 12, as by means of rivets 19 or the like. The block or boss 17 projects from the foot rail 12 and is provided with a vertical diametrical notch or groove 20 preferably of V-shaped cross section and a corresponding intersecting horizontal notch or groove 21 of similar cross-section, disposed at right angles thereto. The central portion of the block is provided with a semi-circular recessed portion 22 and a larger semi-circular recessed portion 23,

thus substantially providing a rim in which the grooves 20 and 21 are provided and forming inclined shoulders 24 and 25 for the purpose of limiting the movements or adjustment of the standard to vertical or horizontal positions as will be hereinafter more fully set forth.

The lower end of the standard 15 is formed with a circular or frusto-conical enlargement 26 having an unthreaded axial opening 27 aligning with a corresponding threaded opening 28 in the pivot block 17 and also provided on its inner face with diametrically arranged V-shaped projections 29 adapted to conform to and take in the grooves or notches 20 and 21. This face is further provided with a stop lug or projection 30 which is arranged offcenter but parallel to the projections 29 and having the ends thereof preferably tapered so as to lodge in the corners between the shoulders 24 and 25 and the adjacent inside face of the rim formed by the large recess 23. A thumb screw 31 is engaged through the head or enlargement 26 and has threaded engagement with the pivot block and foot rail so that when the screw is tightened while the lugs 29 are extended vertically and seated in the notches 20, the lug 30 will engage the shoulder 24 and limit the movement of the standard 15 to a vertical position at which it will positively be held adjusted.

On the end of the extension rod 16 and by means of a cast joint or enlargement as indicated at 31', there is secured a hook 32 having an extension tip 33 in line with the axis of the rod 16. The hook 32 constitutes a convenient support for the tank 34 of irrigating fluid, which may be adjusted to the proper height by means of a thumb screw 35 threaded into a collar 36 secured to the upper end of the hollow standard or lower pipe section 15.

When the device is not required for irrigating purposes it may be folded across the end of the bed below the top of the bed clothes and between the foot rail 12 of the spring frame and the foot end 9 of the bedstead. When so folded it will be below the top of the bed clothes and is practically invisible. Such folding is accomplished by first loosening the adjusting screw 35, whereupon the rod 16 may be telescoped into the lower pipe or hollow standard 15, after which the thumb screw 31 is slacked off sufficiently to permit the projections 29 to move out of the recesses 20 and into the recesses 21 while the lug 30 is shifting from the shoulder 24 to the shoulder 25 in the recessed portion 23, the rods being swung downwardly from the full line position shown in Figs. 1, 2, 5 and 6 to the dotted line position shown in Figs. 2 and 6. When the rods are in said horizontal or dotted line position, the thumb screw 31 is tightened so

that the projections or lugs 29 will positively engage in the recesses 21 and the lug 30 will engage the shoulder 25. When the rods are swung down to said horizontal or dotted line position, the thumb screw 31 is again tightened so as to securely hold the pivotal end of the rod 15.

In this position, special means are provided to rigidly lock the tip end of the supporting rod so as to prevent the parts from shaking or becoming damaged through accidental displacement. Such locking means comprises a small bent strap lug 37 secured to the foot rail or bed post by screws, rivets, or other fastenings 38, said lug being perforated as shown at 39 in order to receive the tip 33 on the end of the extension rod 16. After the tip 33 has been inserted in the aperture 39 by sliding out the extension rod 16, the same may be securely locked in position by tightening the thumb screw 35. It will be observed that when the rods 33 and 16 are locked in the horizontal dotted line position shown in Fig. 2, they may be advantageously employed to take the place of a fracture bar as employed in connection with modern hospital practice.

From Fig. 3 of the drawings, it will be observed that the thumb screw 31 extends through the projections 17 and 26 and into the vertical flange of the foot rail 12 and is sufficiently long to permit disengagement of the lugs 29 from the recesses 20 and 21 without the thumb screw becoming disengaged or loose and dropping out of position. That is, the thumb screw will still have threaded connection with the parts 17 and 12 and but slight turning thereof will be required to permit unseating of the lugs 29 as compared with the thumb screw 18 of the prior construction shown in the patent herein referred to and in which the pipe 14 must be unseated from the deep recesses or grooves 19 and 20.

While we have shown and described our invention in a preferred form, we are aware that various changes and modifications may be made without departing from the principles of our invention, the scope of which is to be determined by the appended claims.

We claim as our invention:

1. In a bedstead, the combination of an end frame, a standard provided with a projection at one end thereof, a pivotal support adjacent one side of said end frame for the other end of said standard, means at the other side of the end frame for receiving the projection, and clamping means for preventing movement of the standard when in a vertical or horizontal position and means for limiting movement of said standard from operative, vertically extending position to a substantially horizontal position extending across said end frame.

2. In a bedstead, the combination of an

end frame, a standard provided with a projection at one end thereof, a pivotal support for the other end of said standard located at one side of the end frame, means at the other side of the end frame for receiving the projection when the latter is moved outwardly substantially horizontally in a direction endwise of the axis of the standard, and clamping means for holding the standard in vertical or horizontal position and incorporating means for preventing pivotal movement of said support outwardly of the end frame from vertical position.

3. In a bedstead, the combination of an end frame, a standard provided with a projection at one end thereof, a pivotal support for the other end of said standard located at one side of the end frame, means at the other side of the end frame for receiving the projection when the latter is moved outwardly substantially horizontally in a direction endwise of the axis of the standard, and clamping means for holding the standard in vertical or horizontal position, said clamping means including a pivot lock having intersecting vertical and horizontal recesses and a central cutout portion with shoulders, and an enlargement on the standard having projections to engage the recesses and a lug to engage the cutout portion, and a clamping screw for drawing said parts together in adjusted position.

4. In a three piece bedstead including a pair of end frames and a bed bottom, the combination of a rod provided with a telescopic extension, a pivotal support for the end of the said rod remote from the extension and located at one side of one of said end frames, means on the other side of said end frame provided with an aperture for receiving the outer end of said extension when the rod is moved horizontally and the extension is projected, means for preventing telescopic movement of the extension, means carried by said bed bottom for clamping the rod in horizontal and vertical positions, and means for preventing pivotal movement of said rod outwardly of the bedstead.

5. In a receptacle supporting device for a bed frame having a foot rail, a standard, a pivot block mounted on the foot rail of the bed frame and having notches therein, a rod pivotally connected to said pivot block and provided with an enlargement having pro-

jections to engage said notches, and a clamping screw engaged with said parts to draw the projections into the notches.

6. In combination with a bedstead having a spring frame provided with angular end rails and end frames, a plate attached to the end rail at the foot end of the bed and at one side thereof and having an annular boss projecting therefrom toward the end frame with interior shoulders facing in the same direction and located opposite each other on the same diametrical line, said boss having its rim formed with aligned V-shaped notches, a standard having a head provided with diametrical projections adapted to seat in said notches, a stop lug parallel to said projections and positioned between the same to extend into the hollow portion of the boss for engaging the shoulders to limit the movement of the standard to vertical and horizontal positions, and a clamping screw extending through the enlargement and having threaded connection with the boss.

7. In a tank support for a hospital bedstead, the combination of a standard pivotally mounted on the bedstead, means for locking said standard in a pre-determined position of pivotal adjustment comprising a pair of separable members carried respectively by said bedstead and standard and provided with disengageable means for preventing relative rotation thereof, means for clamping said pair of members in cooperative engagement, and means for limiting the extent of pivotal movement of said standard when said clamping means is loosened.

8. In combination, a bedstead including end frames and a spring frame having end rails, a rod pivotally mounted on one of the end rails of said spring frame and provided with coacting means for holding the rod in adjusted horizontal or vertical position, said means comprising a pivot block mounted on said end rail, an enlargement on said rod, said block and enlargement being provided with interlocking notches and projections adapted to hold the rod in predetermined position of pivotal adjustment, and means carried by said pivot block and enlargement for locking the rod against pivotal movement beyond predetermined limits.

CHARLES H. BUSCH.
FRANK KUSTERLE.