

Oct. 3, 1961

C. E. MURCOTT

3,002,200

ADJUSTABLE GUARD FRAME FOR BEDS AND THE LIKE

Filed Nov. 12, 1959

FIG. 1.

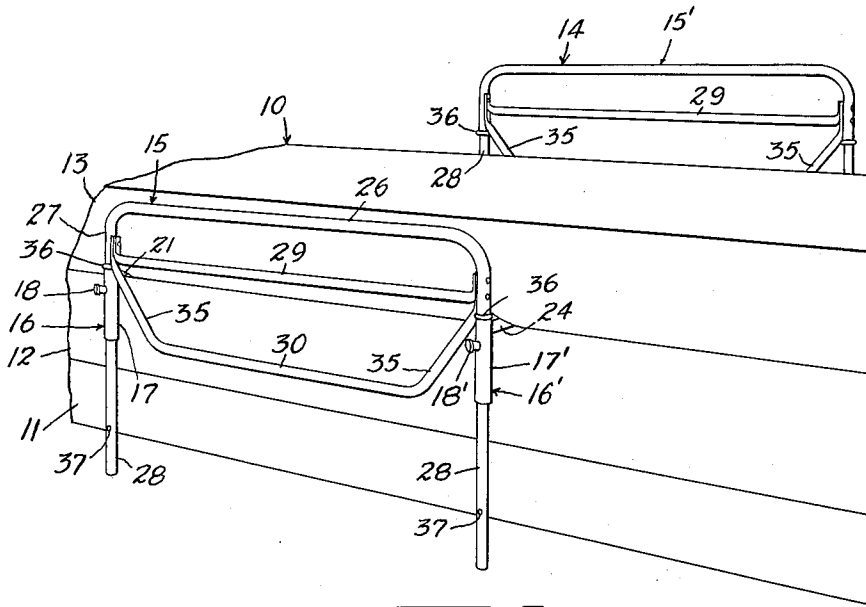


FIG. 2.

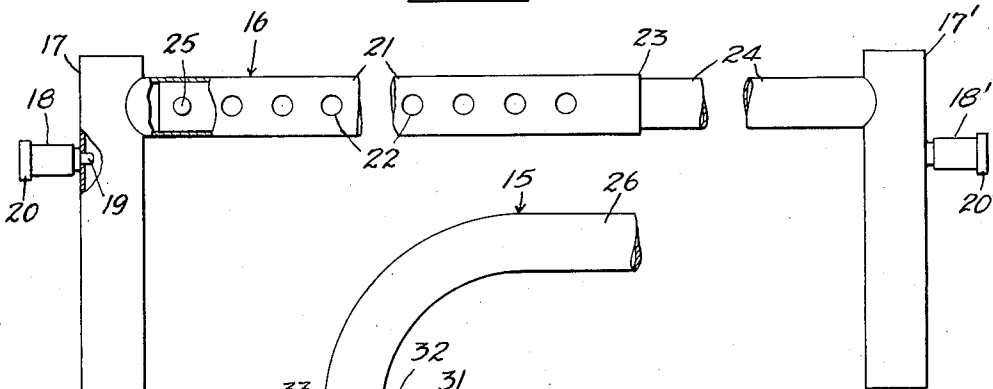
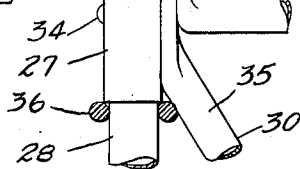


FIG. 3.



INVENTOR.
CHARLES E. MURCOTT
BY
Howard C. Thompson
ATTORNEY

1

3,002,200

ADJUSTABLE GUARD FRAME FOR BEDS AND THE LIKE

Charles E. Murcott, 134 Cabot Road, Massapequa, N.Y.
Filed Nov. 12, 1959, Ser. No. 852,437
3 Claims. (Cl. 5—331)

This invention relates to frames for use in connection with hospital and other beds of any type or kind for retaining the occupant of the bed against accidental displacement from the bed. More particularly, the invention deals with a frame comprising a pair of similar substantially U-shaped side frames and two substantially similar spreaders telescoped for controlling spacing of the U-shaped frame in adapting the device to beds, cots or the like of various widths.

Still more particularly, the invention deals with a device of the character described employing means for retaining the side U-shaped frames in raised operable position in the spreaders and for support of the frames in lowered position.

The novel features of the invention will be best understood from the following description, when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed and, in which, the separate parts are designated by suitable reference characters in each of the views and, in which:

FIG. 1 is a diagrammatic perspective view showing an intermediate portion of a bed structure and illustrating one of my improved frame devices arranged thereon with one of the rails of the device in raised position and the other in lowered position.

FIG. 2 is an enlarged detail view of one of the spreaders which I employ, with parts of the construction broken away and in section; and

FIG. 3 is an enlarged corner view of the upper portion of one of the U-shaped frames which I employ and indicating, in section, the shock-absorbing stop ring arranged on the side members of the frame.

In FIG. 1 of the drawing, I have diagrammatically illustrated at 10 the intermediate portion of a bed of any type or kind. In said view, 11 represents the side supporting rails of the bed, upon which is supported a box spring or the like 12 and at 13 is indicated the mattress.

At 14 I have shown one of my improved guard devices or frames, comprising two similar U-shaped side frames 15, 15' spaced and joined by two similar spreader frames 16, 16'. As each of the frames 15, 15' and spreaders 16, 16' are of the same construction, the brief description of one will apply to both, like references identifying like parts in both instances.

The spreaders comprise end vertical tubular columns or posts 17, 17', note FIG. 2, to which are welded pull-out pin devices 18, 18' of standard construction. At the left of FIG. 2 of the drawing, part of the post 17 is shown in section to illustrate the pin 19 normally protruding into the bore of the post 17. To withdraw the pin 19, the head 20, 20' is pulled outwardly against the action of the spring means normally supporting the pin in its operative position.

Welded to the post 17 is an elongated horizontal tube 21 positioned adjacent and slightly below the upper end of the post when the spreader is in operative position, as noted in FIG. 1 of the drawing. The tube 21 has, at one side thereof, longitudinally spaced apertures 22 which extend to a point closely adjacent the end 23 of the tube. By employing a large number of the apertures 22, a relatively fine adjustment of positioning of the two posts 17, 17' one with respect to the other is provided, thereby adapting the device to beds of varying widths. In

2

other words, from the smallest to the largest standard sizes.

Welded to the post 17' slightly below the upper end thereof is a horizontal tube 24 aligned with respect to the tube 21, the tube 24 telescoping in the tube 21, the tube 24 having, adjacent its free end, a standard spring actuated pin or button 25 normally protruding outwardly to engage one of the apertures 22 and manually depressed in adjustment of the tubes 21, 24 one with respect to the other. By locating the apertures 22 and the button 25 at one side of the spreader, it will appear that the button will not be subjected to any pressure to disengage the once adjusted and positioned tubes 21, 24. In other words, the axis of the apertures 22 and button 25 can be said to be at right angles to the axis of the posts 17, 17'.

Each of the frames 15, 15' comprise a U-shaped top tubular member 26, in the downwardly extending ends 27 of which are fixed depending tubes 28, note FIG. 3, forming the side members of the frames 15, 15'. Secured between 27 and 28 are crossed tubular rails 29 and 30, flattened ends 31, 32 of which are riveted or otherwise fixed to 27, diagrammatically illustrated at 33. At 34 is shown another fastener which extends into 31 and 32 to key 29 and 30 against any possible swinging movement in the frame. It will appear, from a consideration of FIG. 1 of the drawing, that the rail 30 has the upwardly and outwardly flared end portions 35.

In FIG. 1 of the drawing, the forward frame 15 is shown in its lowered position, with 26 disposed below the upper surface of the mattress 13; whereas, the rear frame 15' is arranged in its raised operative position and, in this position, it will appear that the rail 30 has a definite support upon the side of the mattress 13.

Each of the frames 15, 15' will be of sufficient length to provide assured protection, preventing accidental displacement of the occupant of the bed over the sides of the bed, this length being substantially in the neighborhood of forty-two inches.

Mounted upon each of the side members 28 are rubber or plastic O-rings 36 which maintain the position adjacent the lower ends of the downwardly extending sides 27, as diagrammatically illustrated in FIG. 3 of the drawing. These rings form shock-absorbing stops checking downward movement of the frames or, in other words, movement of the frames from the raised operative position to the lowered position, as shown at the front of FIG. 1 of the drawing. The lower portions of the side members 28 have, in registering alignment with the pins 19, apertures 37, note FIG. 1, to receive the pins 19 in support of the frames 15, 15' in raised position. Upon manually pulling out on the heads 20, 20' of both sides of each frame simultaneously, the frames will be released and automatically dropped into the lower position and this action is checked by the cushioning or shock-absorbing rings 36. When the frames are in the lowered position, the pins 19 are maintained in their extended position, in other words, do not enter holes in the side members 28 so that, at any time, the frames can be drawn upwardly by hand without actuation of the devices 18, 18' and, upon reaching the desired raised position, the pins 19 will automatically snap into the apertures 37 and check further upward movement of the frames and, at the same time, support the frames firmly in the raised position.

In shipment and storage of the device, the frames 15, 15' are detached from the posts 17, 17' of the spreaders and the tubes 21, 24 are fully collapsed or, in other words, moved into the position where the pin or button 25 is closely adjacent the post 17. When so collapsed, the entire length of the spreader is within the length of each of the side members, thus facilitating the storing and packaging of the device.

3

In setting up the device for use, the spreaders are first positioned between the box spring or any other comparable support, as at 12, and the mattress 13 which is employed. This is accomplished by arranging the posts 17, 17' in a horizontal position and simply sliding the spreaders across the bed between 12 and 13. Prior to performing this operation, the posts 17, 17' will be adjusted to conform with the width of the mattress 13. Thereafter, the spreaders are rotated to arrange the posts in vertical position and move longitudinally of the bed in adjusted position for reception of the side members 28 of each of the frames 15, 15'. In moving the side members downwardly in the posts, the devices 18 are actuated to draw the pins 19 outwardly and then each of the frames are ready for use and operated in the manner previously described.

It will be understood that the protective frame devices of the character described designed for preventing displacement of an occupant from a bed or the like can be made in different sizes adapting the same to sleeping equipment of any type or kind. Further, it will be apparent that the rails, as at 29 and 30, may be said to comprise closure portions, at least partially closing the openings at the upper portion of the frame so that, when the frames are in raised or operative position as viewed at the rear portion of FIG. 1, displacement of the occupant between the opening in the U-shaped frame is prevented.

In some instances, where one side of the bed or the like is arranged along a wall, then the use of the secondary frame can be dispensed with and, at the same time, the frame on the outer side of the bed can be arranged in the exposed ends of the posts 17, 17'. In this latter use, it will be apparent that the post on the inner or wall side of the bed will still engage the box spring or the like 12 and definitely retain the single frame against displacement from the bed. Uses of this type and kind would be practical in pullman and other types of sleeping quarters, particularly where the one side of the bed is disposed upon the side of a car or adjacent a wall transverse the car and, in referring to car, it will be understood that any type and kind of transportation, such as steamships, airplanes and the like would be comparable.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A device of the character described comprising a pair of U-shaped frames having widely spaced side members, a pair of spreaders, each spreader comprising telescoping horizontal tubes having vertical tubular posts at ends thereof for detachable and adjustable engagement with the side members of said frames in coupling and spacing said pair of frames, the side members of the

4

frames being movable into different vertical positions with respect to the posts at end portions of said spreaders, the horizontal tubes of said spreaders being fixed to the posts adjacent and below the upper ends of the posts, and said side members and posts having interengaging means for retaining said frames in said different positions.

2. A device of the character described comprising a pair of U-shaped frames having widely spaced side members, a pair of spreaders, each spreader comprising telescoping horizontal tubes having vertical tubular posts at ends thereof for detachable and adjustable engagement with the side members of said frames in coupling and spacing said pair of frames, the side members of the frames being movable into different vertical positions with respect to the posts at end portions of said spreaders, the horizontal tubes of said spreaders being fixed to the posts adjacent and below the upper ends of the posts, said side members and posts having interengaging means for retaining said frames in said different positions, and the telescoping tubes of said spreaders having interengaging means adjustably spacing the posts at ends of said spreaders.

3. A device of the character described comprising a pair of U-shaped frames having widely spaced side members, a pair of spreaders, each spreader comprising telescoping horizontal tubes having vertical tubular posts at ends thereof for detachable and adjustable engagement with the side members of said frames in coupling and spacing said pair of frames, the side members of the frames being movable into different vertical positions with respect to the posts at end portions of said spreaders, the horizontal tubes of said spreaders being fixed to the posts adjacent and below the upper ends of the posts, said side members and posts having interengaging means for retaining said frames in said different positions, each of said frames including two longitudinal brace rails intermediate side members of the frames, ends of said rails being fixed to upper portions of said side members, one of said rails of each frame having upwardly extending side portions, and means on said side members at the ends of said rails for cushioning downward movement of the frames in the posts of said spreaders.

References Cited in the file of this patent

UNITED STATES PATENTS

1,475,537	Bradley	Nov. 27, 1923
2,722,017	Burst et al.	Nov. 1, 1955
2,751,608	Lucas	June 26, 1956
2,817,854	Pratt	Dec. 31, 1957
2,859,454	Beckwell	Nov. 11, 1958
2,929,078	Smith et al.	Mar. 22, 1960