SAFETY AND PATIENT ASSIST DEVICE

Charles E. Murcott, Huntington, N.Y., assignor to Lumex, Inc., Bay Shore, N.Y., a corporation of New York
Filed Nov. 16, 1967, Ser. No. 683,526
Int. Cl. A47c 21/08
U.S. Cl. 5—331

3,486,176

ABSTRACT OF THE DISCLOSURE

A safety and assistant device for headrest sections of hospital beds comprising a rail member and a bracket assembly attachable to the rail of the headrest section of a bed, the rail member having a square or similar support post adjustably coupled with a similarly formed housing on one part of the bracket assembly for positioning the rail member in raised operative position and lowered inoperative position.

BACKGROUND OF THE INVENTION

(1) The invention deals with a device of the character defined whereby, in the lowered position of the rail member, full freedom of movement is provided on the bed and with respect thereto; whereas, in the raised operative position of the rail member, the same forms a protection for the patient to prevent accidental displacement of the patient from the bed, as well as in providing handgrip means assisting a patient getting onto or out of the bed.

(2) To applicant's knowledge, a device of his simple and practical structure from the standpoint of service and use is new and he is not aware of any patent structures of this type and kind.

SUMMARY OF THE INVENTION

By seating the housing part of the bracket assembly with such materials as "Versalon," the bracket assembly will provide long and durable use and the square or similar post operating in the housing of the bracket further materially simplifies the structure of the rail member of the device while, at the same time, providing a strong and durable support for said rail member.

The novel features of the invention will best understood from the following description, when taken together with the accompanying drawings, 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 small diagrammatic perspective of the headrest and portion of a hospital bed, showing one rail member in raised operative position and the opposed rail member in lowered inoperative position.

FIG. 2 is an enlarged perspective view of the bracket assembly mounted on the rail of the headrest section and indicating, in dot-dash lines, part of the post of a rail member.

FIG. 3 is a side view of the structure shown in FIG. 2 on an enlarged scale and indicating part of the post of a rail member; and

FIG. 4 is a plan view of the bracket assembly detached with parts of the construction shown in section.

In the diagrammatic showing of FIG. 1, 10 shows part of a bedstead supporting a spring frame 11, one angle-iron rail of a pivoted headrest section being shown at 12. At 13 is shown the mattress arranged on frame 11. This is generally the structure of hospital beds employing the pivoted headrest, as well as footrest sections.

At 14, 14' are shown two of the patient protecting and assisting devices. As both of these devices are of the same construction, the brief description of the device 14 will apply to the device 14'. The device 14 comprises a bracket assembly 15, shown in detail in FIGS. 2, 3 and 4, and a rail member 16, shown in FIG. 1.

The bracket assembly 15 comprises a housing part 17 and a clamp plate part 18, including a spacer strip 19. The housing part 17 may be said to be A-shaped in cross-sectional form. The channel 19 of the post 17 is defined by an outer crosshead 20 of the spaced side walls 21 and a plate 22 welded to the side walls, as diagrammatically seen at 23 in FIG. 3 of the drawing.

In the construction shown, the plate 22, in combination with the other walls of the housing part 17, forms a channel 19 which is square in cross-sectional form. However, the contour of this channel can be of any desired cross-sectional form, as long as it has the key functions as provided by the square channel. Extending laterally from the side walls 21 are coupling flanges 24.

Mounted in the flanges 24 are lower clamp bolts 25 and upper hook-shaped clamp bolts 26, the latter being adapted to engage the rail 12, as clearly illustrated in FIGS. 2 and 3 of the drawing. The bolts 25 are also mounted in the clamp plate 18, as clearly seen in FIG. 3 of the drawing, and these are used to firmly clamp the rail 12 between the housing 17 and clamp plate part 18; whereas, the hook-shaped bolts provide a rigid support for the upper portion of the bracket assembly upon the rail 12. One side wall 21 of the housing part 17 has a tubular extension 27 for support of a spring actuated coupling pin 28, having an enlarged finger-portion 29 at the outer end of the tube 27. The pin 28 is employed primarily for support of the rail member 16 in raised position, as seen on the device 14' in FIG. 1, the rectangular post 30 of the rail member 16 being aperured to receive the pin, as will be apparent. However, in the lowered position of the rail member 16, as seen in FIG. 1, the top horizontal rail 31 of the member 16 rests upon the top of the housing part 17, as diagrammatically seen in FIG. 1. In FIG. 4 of the drawing is diagrammatically shown the "Versalon" or other protective coating, which is provided on the housing part 17, the coating being indicated, in part, in section at 32 in said figure. This coating prevents any corrosive action and, at the same time, provides on the inner surfaces of the channel 19 a bearing surface for free action of the post 30 of the member 16.

In the construction shown, the ends of the top rail 31 of the member 16 terminate in U-shaped frame portions 33 reinforced by rods or elements 34. It will be understood that the rail 31, frame portions 33 and rods 34 are all preferably formed of tubing. The post 30 can be of solid metal or, for sake of lightness, can be tubing as indicated in the dot-dash showing of FIG. 2.

It will be understood that the devices 14, 14' or the rail members 16 thereof are moved into raised operative positions, or lowered inoperative position, when the headrest section 12 is in any of its adjusted positions from the horizontal to the inclined, the devices moving with the headrest. In any of the operative positions of the devices, the same may be used by a patient in grasping the members 16 while getting out of bed or in the operation of getting onto the bed. When the devices are in the raised operative position, they will retain the patient against accidental displacement from the bed. It will also be apparent that, if desired, the device 14 can be held in partially raised positions by providing suitable apertures in the post 30 for reception of the pin 28.

It will be apparent that the bracket assembly constitutes an article of manufacture that can be utilized in conjunction with various types and kinds of rail members fashioned with posts for engagement with the cross-sectional contour of the channel in the housing part 17 of the bracket assembly.
Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A bracket assemblage for adjustably supporting a bed rail post in connection with an angle section bed frame part providing top and side members with said post disposed perpendicularly to said frame part, said bracket assemblage comprising a housing part having a channel of rectangular cross-section for closely receiving a rectangular post, two sides of said channel being extended and terminating in divergent flanges adapted to bear against the outer surface of the side member of said bed frame part while supporting said channel in spaced relation to said part, each of said flanges having a pair of bolt holes spaced apart a distance slightly greater than the height of said side member, means operatively engaging the upper bolt holes of said flanges providing clamping engagement with the top member of said bed frame part, and other means operatively engaging the lower bolt holes of said flanges for adjustably clamping the side member of said bed frame part.

2. A bracket assemblage as defined in claim 1, wherein said first named means comprises hook bolts adapted to overlie and engage the top member of said bed frame part, and said last named means comprising a clamp plate having a bearing surface adapted to engage the inner surface of the side member of said bed frame part, said plate carrying an offset along one edge thereof adapted to bear against the flanges of said housing part, and said plate carrying bolts between the bearing surface and offset portion thereof registering with the lower holes in said flanges engaged by nuts outwardly of said flanges for film clamping engagement of the side member of said bed frame part.

3. A bracket assemblage as defined in claim 1, wherein said housing part includes manually controlled means adapted to engage a post within said channel in supporting the same in different positions of adjustment.

4. A bracket assemblage as defined in claim 3, wherein said manually controlled means comprises a spring actuated pin normally biased inwardly of said channel for engaging apertures in said post, and a fingerpiece for withdrawing said pin against the tension of said spring.

5. A bracket assemblage as defined in claim 1, wherein said housing part is entirely coated with a protective material.

6. The combination with a bracket assemblage as defined in claim 1, of a center post bed rail characterized as having a top rail joined to said center post and continuing at the ends thereof in integral downwardly, inwardly and upwardly extending portions of generally U-shaped contour, the distance between said top rail and inwardly extending portions providing a practical side support for a bed in the normally raised position of said bed rail, and the center post being of such length as to be wholly within the channel of said bracket in the normally raised position of said bed rail, while being disengaged from said bracket upon further elevation of said bed rail.

7. The combination as defined in claim 6, wherein said bed rail includes reinforcing members extending between said top rail and the inwardly extending portions of said U-shaped extension, said reinforcing members being parallel to said center post.

8. The combination as defined in claim 7, wherein said bed rail includes reinforcing members extending between said top rail and the inwardly extending portions of said U-shaped extension, said reinforcing members being parallel to said center post, and said bed rail having substantially uniform spacing between the several upright portions formed by said center post, reinforcing members, and upright portions of said U-shaped extensions.

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BOBBY R. GAY, Primary Examiner
ANDREW M. CALVERT, Assistant Examiner