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3,564,627

MULTIPURPOSE BED ATTACHMENT

Filed Aug. 14, 1968

2 Sheets-Sheet 1

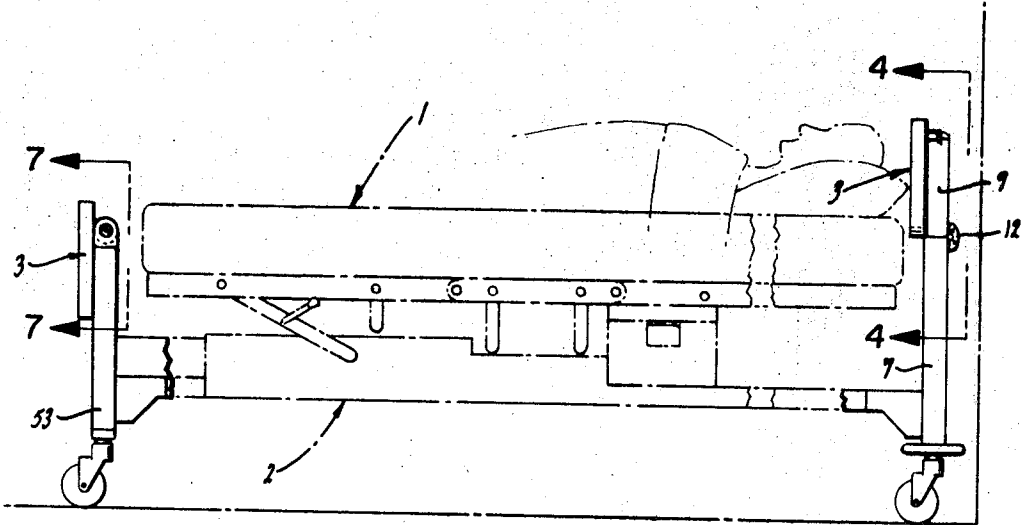


Fig. 1

Fig. 3

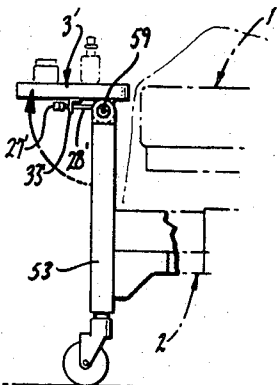


Fig. 2

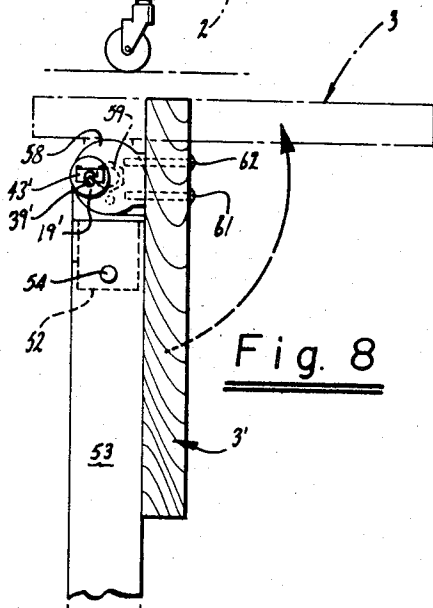
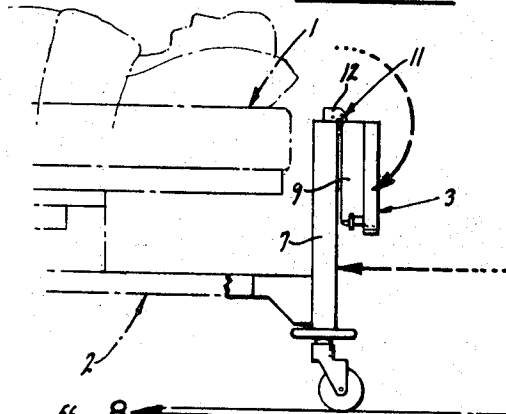


Fig. 8

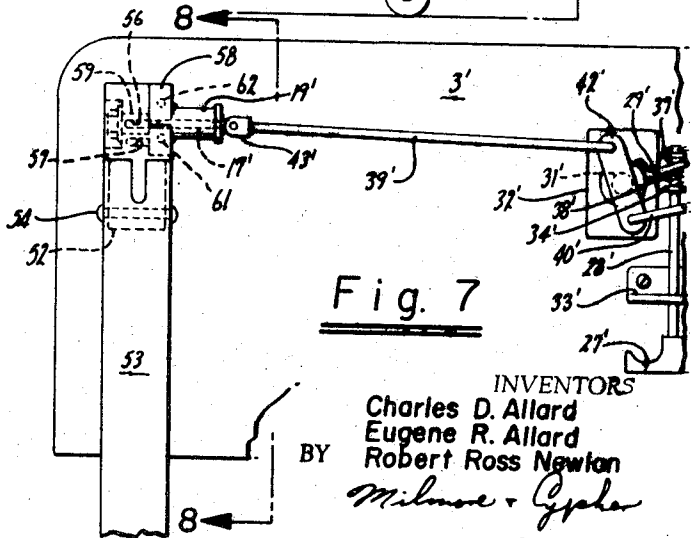


Fig. 7

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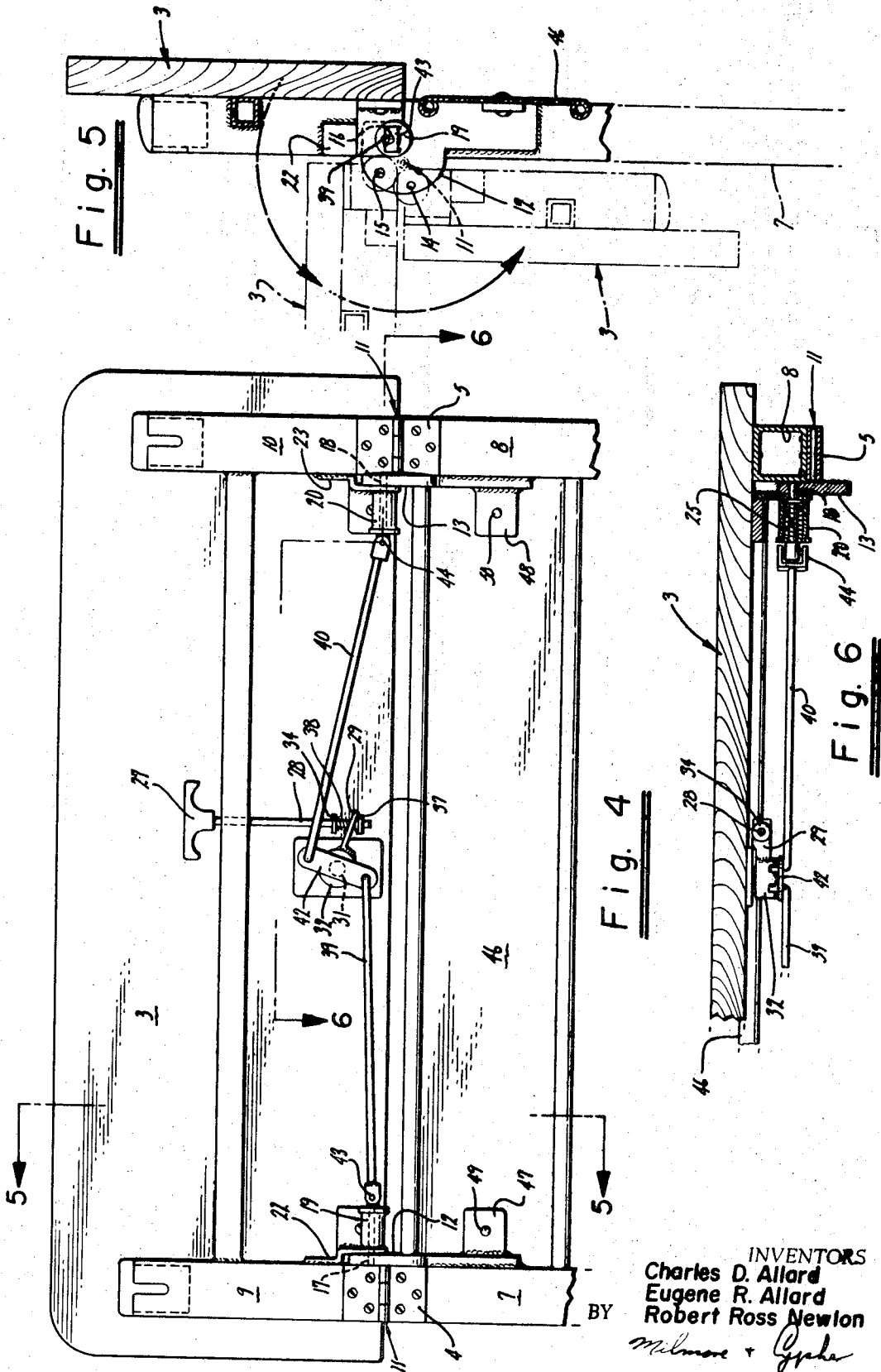
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MULTIPURPOSE BED ATTACHMENT

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2 Sheets-Sheet 2



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3,564,627

MULTIPURPOSE BED ATTACHMENT

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1 Claim

ABSTRACT OF THE DISCLOSURE

An attachment for a bed consisting of an elongated planar member substantially the width of the bed, a hinged means permitting vertical and horizontal positioning of the planar member and hand engageable release and locking means for selectively placing the planar member.

BACKGROUND OF THE INVENTION

Most beds are equipped with head and foot boards. The headboards are primarily decorative and function only to hold the pillow on the bed. In hospital beds the mattress is elevated for ease of treatment and care of patients by doctors and nurses and head and foot boards are necessarily quite high. These head and foot boards pose a substantial problem to doctors who wish to treat the patient from either the head or foot of the bed. In cardiac arrest cases for example it is essential for the doctor to be able to treat the patient from the head of the bed rather than from the side. In such cases, seconds count and there is presently no bed having a headboard which can be quickly folded down and out of the way.

SUMMARY

The gist of the invention is a unique bed construction in which the head and/or foot boards may be instantly folded out of the way.

Another object of the present invention is to construct the head and/or foot board so that it can be folded to a horizontal position so that it can be used as a shelf for temporarily placing supplies such as bed linens, medicines, surgical instruments and supplies and other attendant materials for the bed occupant.

A further object of the present invention is to provide a bed attachment which can be used in new bed construction or to modify existing beds.

A still further object is to provide an attachment which is inexpensive to manufacture, is of sturdy construction and can be quickly and easily operated with one hand.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevation view of the device constructed in accordance with the present invention.

FIG. 2 is a partial side elevation of the device shown in FIG. 1 with the device shown in another position.

FIG. 3 is a partial side view of the device shown in FIG. 1 with the device shown in another position.

FIG. 4 is an enlarged end elevation view of a portion of the device shown in FIG. 1 taken substantially along the lines 4—4.

FIG. 5 is a cross sectional view of the device taken substantially along the line 5—5 of FIG. 4.

FIG. 6 is a cross sectional view of the device taken substantially along the line 6—6 of FIG. 4.

FIG. 7 is a partial end elevation view of the device taken substantially along the line 7—7 in FIG. 1.

FIG. 8 is a cross sectional view taken substantially along the line 8—8 of FIG. 7.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The multipurpose attachment of the present invention for a bed 1 having a frame 2 consists briefly of an elongated planar member 3 having a length substantially the width of the bed and attaching means connecting the planar member to an end of the bed frame for selectively elevating the member from a depending vertical first position to a horizontal second position.

The attachment can be used either at the head or the foot of the bed. When used at the head of the bed it is desirable to provide a third position so that it is moveable to an upright vertical position. The planar member may be made of either metal or wood with at least one decorative planar surface.

The attaching means comprises a pair of hinges 4 and 5 which are attached to upright members 7 and 8 of the bed frame and to brace members 9 and 10 attached to the planar member and pivot about hinge point 11. Locking and releasing functions are provided by attaching a pair of flanges 12 and 13. The flange shown in FIG. 5 has three openings 14, 15 and 16 which correspond to the three positions of the planar member.

The portion of the locking and releasing means carried by the planar member consists of a pair of pins 17 and 18 which are mounted for sliding reciprocal movement in pin retainers 19 and 20 connected by brackets 22 and 23 to uprights 9 and 10 respectively. The pins are biased to a locking position by springs such as spring 25 shown in FIG. 6.

The pins are moved to a non-engaging position by pulling on the finger engageable handle 27 which is connected by rod 28 to crank lever 29 pivotally mounted on pin 31 journaled in bracket 32 connected to the planar member. Rod 28 is mounted for reciprocal sliding motion in brackets 33 and 34. Enlarged member 37 engages the crank lever and limits motion of the rod in the opposite direction. Spring 38 retained between bracket 34 and the crank lever biases the assembly to the lock position. Extension rods 39 and 40 are pivotally connected to opposite ends of crank arm 42 and by universal joints 43 and 44 to pins 17 and 18 respectively. Panel 46 is connected to the flange extensions 47 and 48 by rivets 49 and 50.

In operation, the planar member which serves as the headboard is moved from the third position which is the upright vertical position to the horizontal second position by grasping handle 27 with the fingers of one hand and pulling upwardly as shown in the drawing of FIG. 4. Enlarged portion on rod 28 moves cranklever 29 and arm 24 in a counterclockwise direction so that rods 39 and 40 move toward the center of the bed. Since rods 39 and 40 do not move in an axial direction, the universal joints 43 and 44 prevent pins 17 and 18 from binding as they move axially toward the center of the bed. Once the pins have cleared the flange, the headboard is lowered to the horizontal position where the pins reenter openings 14.

If the headboard is being changed as the result of a patient's cardiac arrest, the handle is maintained in a retracted position until the pins pass openings 15 and the board is lowered until the pins enter opening 14 and the board is in a vertical depending position.

In some instances it may be desirable to eliminate openings 15 in the flanges so that the board will not stop at the horizontal position. Thus, by initially pulling on the handle and releasing the pins, the board will not stop until it is in a vertical depending position and the handle need not be engaged while the board is pivoting.

Details of a modified form of the invention are shown in FIGS. 1, 3, 7 and 8. The attachment consists briefly of an elongated planar member 3' having a length substan-

tially the width of the bed and attaching means connecting the planar member to an end of the bed frame for selectively elevating the member from a depending vertical first position to a horizontal second position.

The attaching means comprises a pair of left and right locking hinges one of which is shown and described. Referring to FIG. 8, a stationary member 52 is inserted into the hollow frame member 53 and attached by rivet 54. Openings 56 and 57 are formed in the member to register with pin 17'. A rotary member 58 is pivotally connected to the stationary member by pin 59 which serves as the pivotal axis for member 3'. The footboard member is attached to the rotary member by bolts 61 and 62.

The locking and attaching means carried by the planar member consists of pin retainer 19' connected to the rotary member as by welding. A spring 24' (not shown) biases the pin to the locking position.

The structure and operation for moving the pins to a nonengaging position is identical to the structure described for the headboard except that the handle direction is reversed for ease of operation. Referring to FIG. 7, the construction consists of a finger engageable handle 27' which is connected by rod 28' to crank lever 29' pivotally mounted on pin 31' journaled in bracket 32' connected to the planar member. Rod 28' is mounted for reciprocal sliding motion in brackets 33' and 34'. Enlarged member 37' engages the crank lever and limits motion of the rod in the opposite direction. Spring 38' retained between bracket 34' and the crank lever biases the assembly to the lock position. Extension rods 39' and 40' are pivotally connected to opposite ends of crank arm 42' and by universal joint 43' to pin 17'.

A cover 66 covers the moving parts of the mechanism on the headboard and a cover 67 covers the moving parts on the footboard.

We claim:

1. A multipurpose attachment for a bed having a frame the improvement comprising:

- (a) an elongated planar member having a length substantially the width of the bed;
- (b) attaching means comprising a pair of hinges connecting said planar member to an end of said bed frame for selectively elevating said member from a depending vertical first position to a horizontal second position and to an upright vertical third position; and
- (c) means positively locking said attaching means when in a first position and releasing said planar member for movement to a locking second position and to a locking third position, and comprising a flange connected to said bed frame having a plurality of spaced openings, and an axially slideable pin carried by said planar member for engagement with said openings in said flange at said first, second and third positions, and a manually engageable handle, a crank rotatably mounted on said planar member and connected to said handle; a second elongated rod pivotally connected to said crank, a universal joint connecting said second rod and said pin, and means biasing said pin to an engaged position with said flange.

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