April 18, 1950 W. E. BURNETT 2,504,645

SEAT AND BED STRUCTURE

Filed Nov. 5, 1948 2 Sheets-Sheet 1

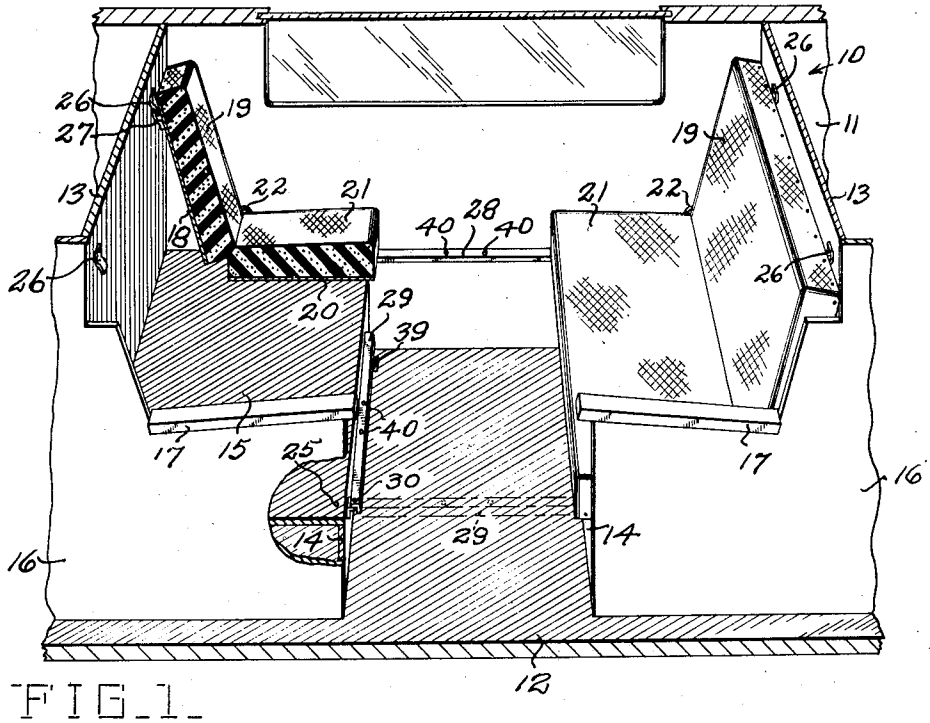
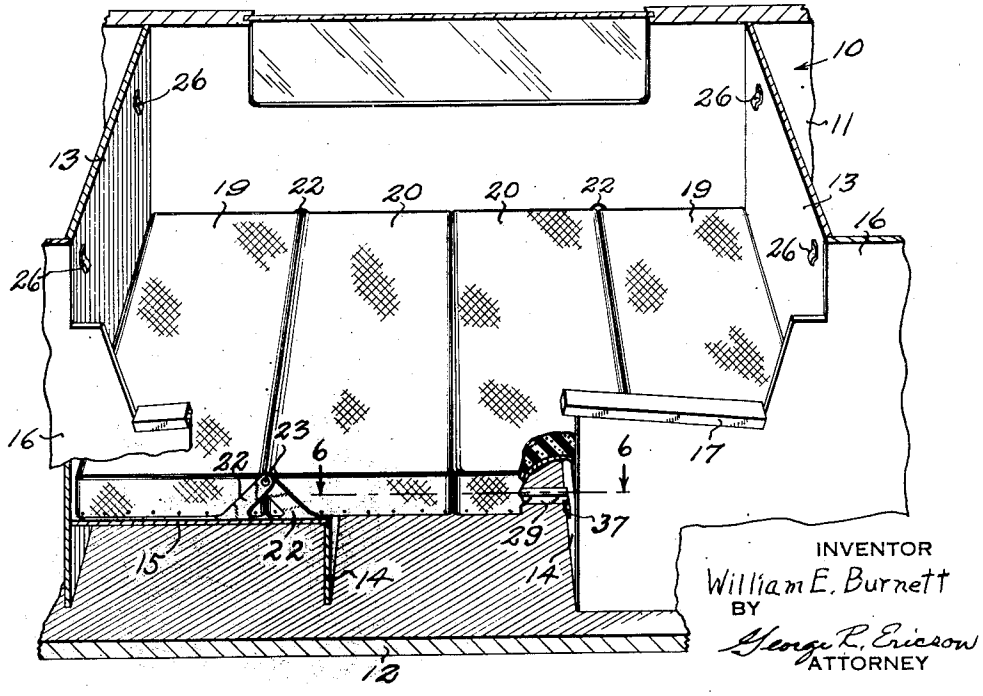


FIG_1_

FIG_2_



INVENTOR
William E. Burnett
BY
George R. Ericson
ATTORNEY

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SEAT AND BED STRUCTURE

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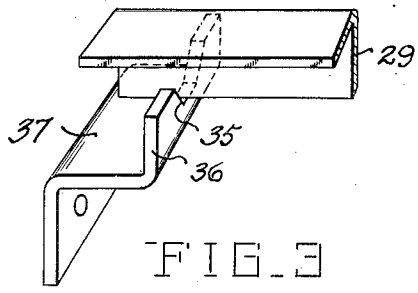


FIG. 3

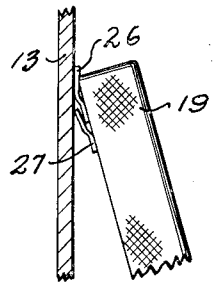


FIG. 4

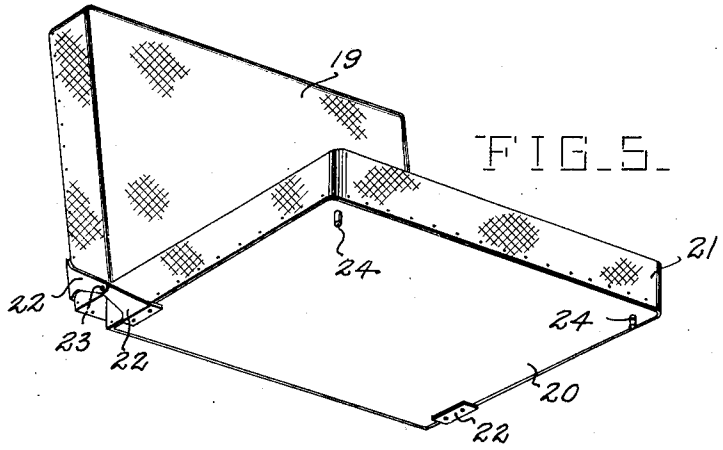
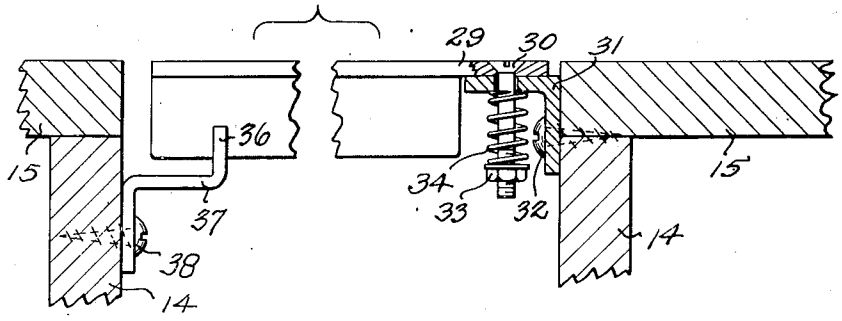


FIG. 5

FIG. 6



INVENTOR
William E. Burnett
BY
George R. Ericson
ATTORNEY

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UNITED STATES PATENT OFFICE

2,504,645

SEAT AND BED STRUCTURE

William E. Burnett, Arlington, Va., assignor to American Car and Foundry Company, New York, N. Y., a corporation of New Jersey

Application November 5, 1948, Serial No. 58,458

6 Claims. (Cl. 155—6)

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This invention relates to seat and bed structures and more particularly to structures adapted for use in railway cars and ships.

An object of the invention is to provide seat structures that can be easily and quickly adjusted for use as a bed.

Another object of the invention is to provide a supporting structure for seats when adjusted to form a bed that will be solidly mounted and readily adjusted to and from bed supporting position.

A further object of the invention is to provide novel supporting and anchoring means for oppositely disposed seat and back cushions when shifted into bed forming position.

These and other objects of the invention will be apparent to those skilled in the art from a study of the following description and accompanying drawings, in which:

Figure 1 is a fragmentary perspective view in a railroad car showing opposed seat structures.

Figure 2 is a view similar to Figure 1 with the back and seat cushion structures shown moved into bed forming position.

Figure 3 is a perspective view of one end of a supporting rail and its anchor bracket.

Figure 4 is a fragmentary sectional view showing one of the seat backs anchored to a seat frame back.

Figure 5 is a perspective view of one of the seat structures removed from its supporting structure.

Figure 6 is a view taken on line 6—6 of Figure 2 showing the adjustable supporting rail in operative position between the seat frames.

In the drawings, the numeral 10 indicates generally a railroad car having an outer wall 11 and floor 12. Arranged transversely in the car is a pair of oppositely disposed seat frame structures each consisting of back 13, leg board 14, seat board 15 and a side member 16 having an arm rest 17.

A cushion structure is provided for each of the seat frame structures and each consists of a back frame 18 carrying cushion 19 and a seat frame 20 carrying cushion 21. These frames 18 and 20 are connected together by a hinge structure at each side thereof consisting of leaves 22 secured to the frames and joined together by pins 23. When the cushion structures are to be used as seats, the seat sections rest on the seat boards 15 and are anchored by dowels 24 depending from the bottom thereof engaging in holes 25 in the seat board.

Clip means are provided for retaining the back cushion frames in passenger seating position

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against the frame back walls 13. Such clip means are of the friction type and each consists of clip member 26 on the frame back 13 and clip member 27 on the back of the cushion section frame 18. The free ends of such clips are bent outwardly and extend in opposite directions so that the upwardly extending free ends of cushion back clips 27 can slide under the downwardly extending free ends of the clips 26. The cushion sections can be removed from the seat frames by swinging the seat cushions upwardly to thereby allow the back cushions to be moved downwardly so that the interengageable clips will have clearance.

Provision is made whereby these cushion sections can be arranged to provide a bed extending longitudinally of the car. Stretcher supporting means in the form of angle iron rails 28 and 29 are provided to support the cushion structures intermediate the seat boards 15 of the oppositely disposed seat frames. Stretcher 28 extends longitudinally of the car between the seat frame legs and is suitably attached to the outer wall 11 of the car. Stretcher 29 is mounted so that it can be swung out of the way when not in use as a bed support. Stretcher 29 carries a downwardly extending bolt 30 that extends through an opening in angle iron bracket 31 secured to the front inner portion of one of the frame structures by screws 32. Nut 33 is screwed on the depending end of bolt 30 and a coil spring 34 surrounds the bolt shank between the nut and the top of angle bracket 31. Stretcher 29 is in this manner pivotally connected at one end to one of the seat frames and the spring 34 serves to act between the bolt and bracket to hold the stretcher so that it will not rattle. When the stretcher is extended to serve as a bed support, the free end lies in a notch 35 in an upstanding lip 36 on bracket 37. This bracket is secured by screws 38 to the front leg board of the seat frame opposite to that to which the stretcher 29 is pivotally mounted. There is enough play in the pivotal mounting so that the free end of the stretcher can be moved to clear the notch 35 when it is desired to engage or release it. Anchor means, in the form of a U-bracket 39, is suitably secured on the front leg of the seat frame to which stretcher 29 is pivoted for retaining the stretcher in parked position. Under this condition, the stretcher will lie parallel with and adjacent the front leg board of the seat frame.

Stretchers 28 and 29 are provided with holes 40 for the reception of dowels 24 when the cushion structures are moved to bed forming position.

The cushion structures are first removed from the seat frames and then folded to lie flat whereupon the seat cushions are moved toward each other and rest partly on stretchers 28 and 29 and partly on the seat boards. The cushion sections 19 will lie flat on the seat boards 15 with the free ends adjacent the seat backs 13. The dowels 24 are positioned in openings 40 in the stretchers to thereby anchor the seat cushions in bed forming position with the adjacent edges of cushions 21 in abutting relation.

It will be seen that this seat and bed structure comprises a minimum number of parts and is readily adjustable to seat or bed positions.

The invention may be modified in various respects as will occur to those skilled in the art and the exclusive use of all modifications as come within the scope of the appended claims is contemplated.

What is claimed is:

1. In a railway car having an outer wall, a floor, seat and bed structure comprising a pair of opposed seat frames each having a front leg board, a seat board and a back, a stretcher rail fixed to the outer car wall and extending longitudinally between the seat frames, a stretcher rail pivotally connected to one of the seat frames adjacent the inner end thereof and swingable to the other seat frame, means for anchoring the free end of the pivoted stretcher rail to the seat frame opposite from that to which it is pivotally connected, means for anchoring the pivoted rail against the leg board of the seat base to which it is pivotally connected, a cushion structure for each seat frame having a pivotally connected seat and a back, said cushion structures being adjustable to flat bed forming relation for mounting on said seat base and rails, dowels on the cushion structure seat, said seat boards and said rails having openings therein for reception of the dowels when the cushion structures are in seating position or in bed forming position, and clip means for anchoring said cushion backs to the adjacent frame backs.

2. In a railway car having an outer wall, a floor, seat and bed structure comprising a pair of opposed seat frames each having a front leg board, a seat board and a back, a stretcher rail fixed to the outer car wall and extending longitudinally between the seat frames, a stretcher rail pivotally connected to one of the seat frames adjacent the inner end thereof and swingable to the other seat frame, means for anchoring the free end of the pivoted stretcher rail to the seat frame opposite from that to which it is pivotally connected, means for anchoring the pivoted rail against the leg board of the seat base to which it is pivotally connected, and a cushion structure for each seat frame having a pivotally connected seat and a back, said cushion structures being adjustable to flat bed forming relation for mounting on said seat base and rails.

3. In a railway car having an outer wall, a floor, seat and bed structure comprising a pair of opposed seat frames each having a front leg board, a seat board and a back, a stretcher rail fixed to the outer car wall and extending longitudinally between the seat frames, an adjustable stretcher for the other ends of the seat frames, means for pivotally connecting the adjustable stretcher to one of the seat frames, anti-rattle means associated with the adjustable stretcher and pivot means, means for anchoring the free end of the pivoted stretcher rail to the seat frame opposite from that to which it is pivotally connected, means for anchoring the pivoted rail against the leg board of the seat base to which it is pivotally connected, and a cushion structure for each seat frame having a pivotally connected seat and a back, said cushion structures being adjustable to flat bed forming relation for mounting on said seat base and rails.

4. In a railway car having an outer wall, a floor, seat and bed structure comprising a pair of opposed seat frames each having a front leg board, a seat board and a back, a stretcher rail fixed to the outer car wall and extending longitudinally between the seat frames, a stretcher rail pivotally connected to one of the seat frames adjacent the inner end thereof and swingable to the other seat frame, means for anchoring the free end of the pivoted stretcher rail to the seat frame opposite from that to which it is pivotally connected, means for anchoring the pivoted rail against the leg board of the seat base to which it is pivotally connected, a cushion structure for each seat frame having a pivotally connected seat and a back, said cushion structures being adjustable to flat bed forming relation for mounting on said seat base and rails, and dowels on the cushion structure seat, said seat boards and said rails having openings therein for reception of the dowels when the cushion structures are in seating position or in bed forming position.

5. In a railway car having an outer wall, a floor, seat and bed structure comprising a pair of opposed seat frames each having a front leg board, a seat board and a back, a stretcher rail fixed to the outer car wall and extending longitudinally between the seat frames, an adjustable stretcher rail, means pivotally connecting the adjustable rail to one of the seat frames adjacent the inner end thereof, said adjustable rail being swingable to the other seat frame, means for anchoring the free end of the pivoted stretcher rail to the seat frame opposite from that to which it is pivotally connected, means for anchoring the pivoted rail against the leg board of the seat base to which it is pivotally connected, a cushion structure for each seat frame having a pivotally connected seat and a back, said cushion structures being adjustable to flat bed forming relation for mounting on said seat base and rails, dowels on the cushion structure seat, said seat boards and said rails having openings therein for reception of the dowels when the cushion structures are in seating position or in bed forming position, and clip means for anchoring said cushion backs to the adjacent frame backs.

6. In a railway car having an outer wall, a floor, seat and bed structure comprising a pair of opposed seat frames each having a front leg board, a seat board and a back, a stretcher rail fixed to the outer car wall and extending longitudinally between the seat frames, a stretcher rail pivotally connected to one of the seat frames adjacent the inner end thereof and swingable to the other seat frame, an anchor bracket for the free end of the pivoted stretcher rail mounted on the seat frame opposite that to which the stretcher is pivotally connected, an anchor bracket on the leg board of the seat base to which it is pivotally connected for receiving the free end of the pivoted rail when parked, a cushion structure for each seat framing having a pivotally connected seat and a back, said cushion structures being adjustable to flat bed forming relation for mounting on said seat base and rails, dowels on the cushion structure seat, said seat boards and said rails having openings therein for reception of the

dowels when the cushion structures are in seating position or in bed forming position, and clip means for anchoring said cushion backs to the adjacent frame backs.

WILLIAM E. BURNETT.

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