

Aug. 21, 1951

R. A. SHIELDS
SLEEPING CAR

2,564,730

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4 Sheets-Sheet 3

Fig. 5.

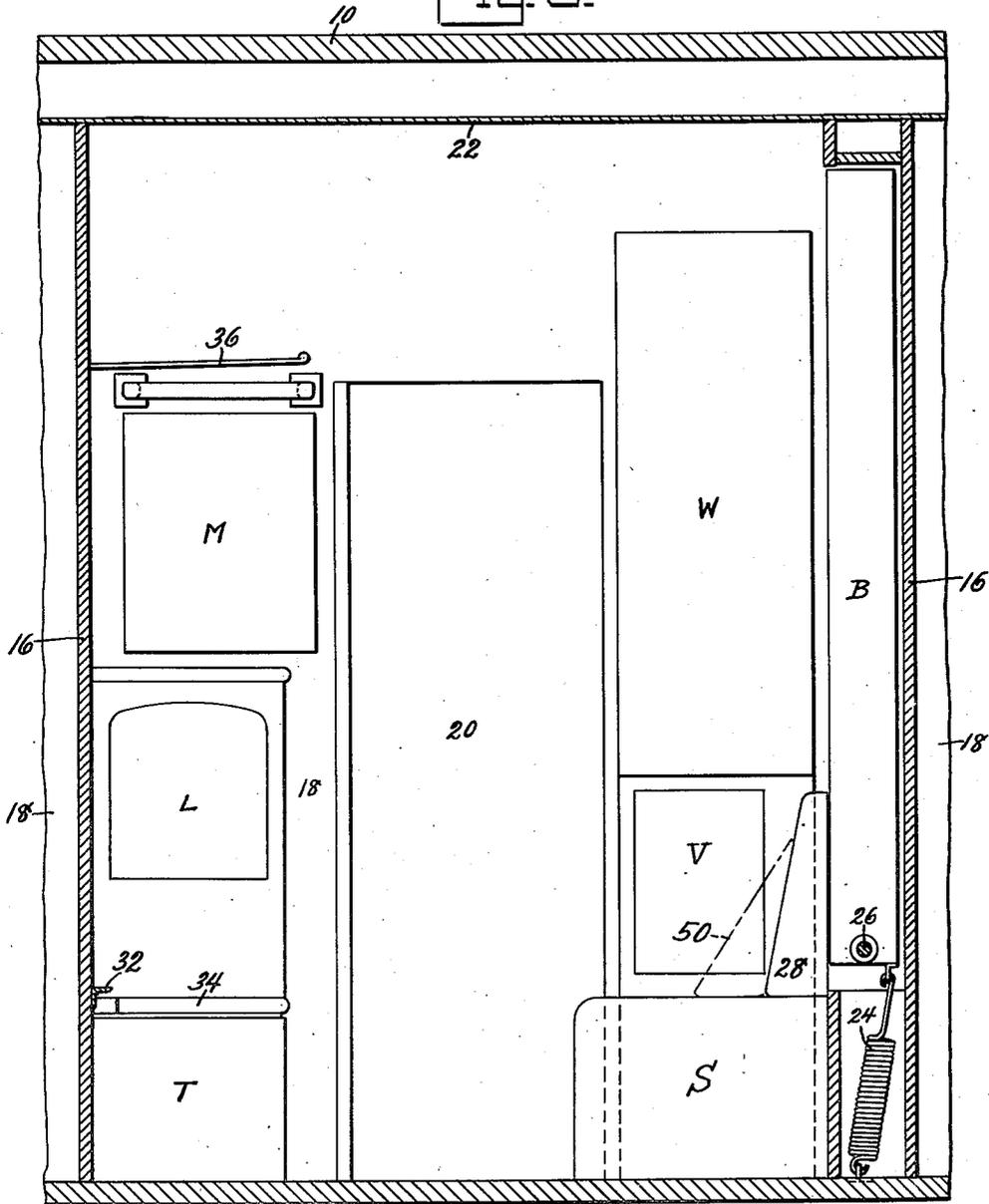
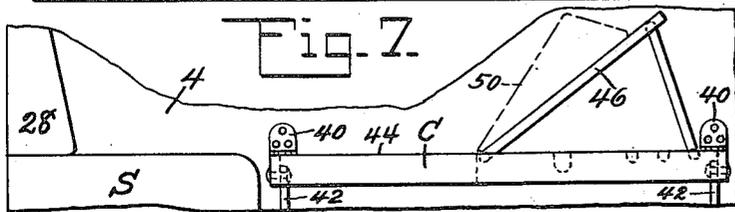


Fig. 7.



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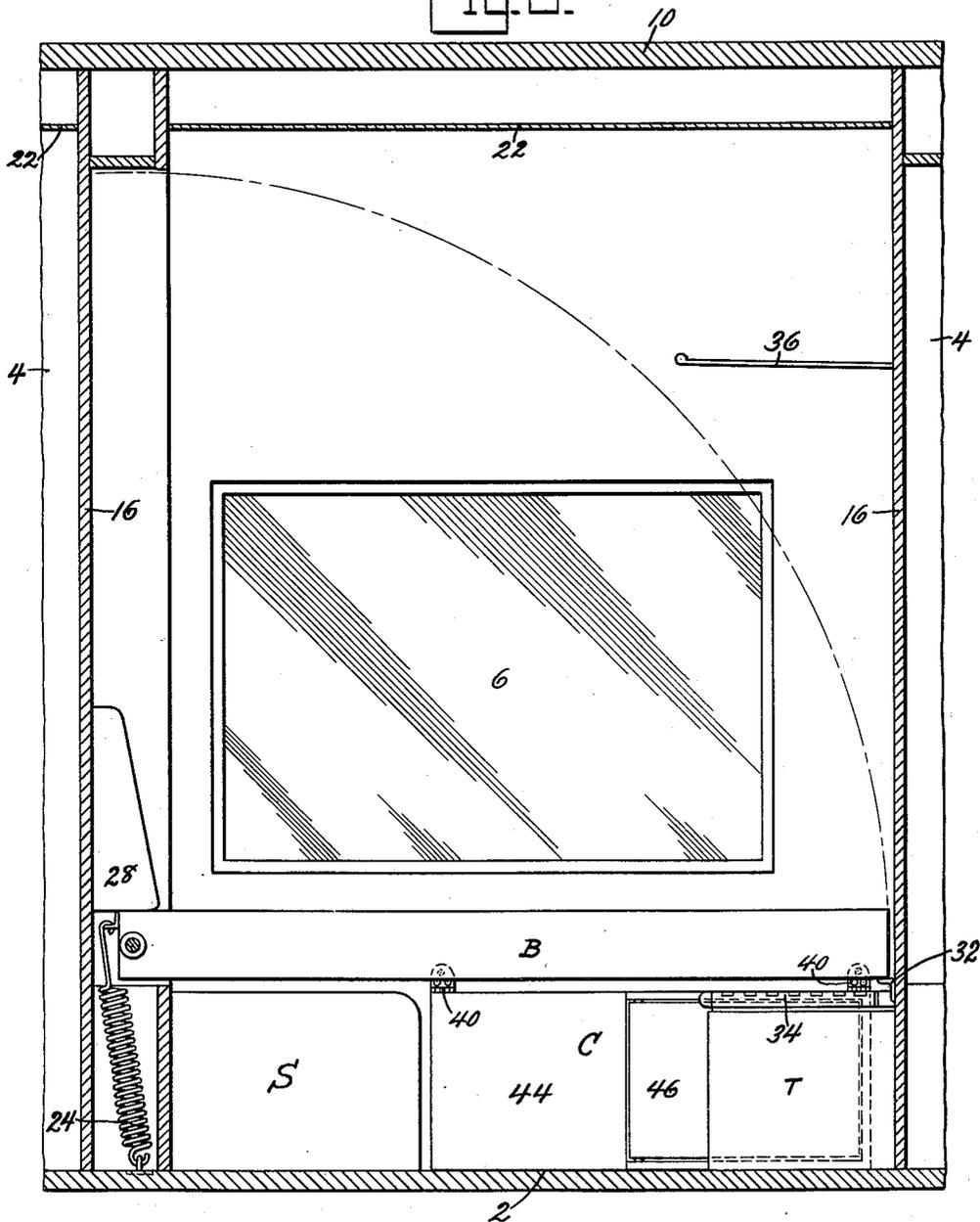
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Fig. 6.



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SLEEPING CAR

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13 Claims. (Cl. 105—315)

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This invention relates to sleeping cars in general and in particular to sleeping cars having a plurality of single occupancy rooms permanently built therein.

Sleeping cars have previously been built with single occupancy rooms but these have been wasteful of space, allowing but 19 or 21 rooms per car of 85 ft. over buffers. Furthermore, these single occupancy rooms have been rather uncomfortable during daytime travel and this is particularly true where the cars are not turned around at their destination and the passenger must ride backwards. Recently continuous runs of more than 3000 miles have been scheduled and the average person confined on a train for such a long period will become extremely bored and fatigued due to nervous strain. This average passenger on a long run will spend less than seven hours in bed. Accordingly, it is an object of this invention to provide as much comfort as possible for the passenger during the waking hours which constitute the major portion of the day.

A further object of the invention is the provision of a railway car having single occupancy rooms each having an upholstered couch therein permitting the passenger to lie down during the daytime.

A still further object of the invention is the provision of a folding couch in single occupancy rooms so arranged with respect to the toilet facilities as to render the same all available for use even when the couch is in raised position.

Yet another object of the invention is the provision of a railway car having single occupancy rooms built therein and with the day and night accommodations so arranged as to give the maximum number of rooms per car.

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

Fig. 1 is a sectional view taken through the car and showing the rooms in plan;

Fig. 2 is an enlarged sectional view of a single room;

Fig. 3 is a sectional view taken substantially on line 3—3 of Fig. 2 and showing the wall opposite the seat;

Fig. 4 is a sectional view taken substantially on line 4—4 of Fig. 2 and showing the bed and seat end of the room;

Fig. 5 is a sectional view taken substantially on line 5—5 of Fig. 2 and looking toward the aisle wall;

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Fig. 6 is a sectional view taken substantially on line 6—6 of Fig. 2 and looking toward the side wall of the car, and

Fig. 7 is a detail elevational view of the couch.

Referring now to the drawings in detail, it will be seen that the car is formed with a floor 2, side walls 4, in which windows 6 are placed. The side walls are joined together by end walls 8 which, together with the side walls, support the roof structure 10 to form the shell of the car. The end walls are provided with openings 12 giving access to the central car aisle 14. The interior of the car on either side of the aisle is divided into single occupancy rooms by short transverse partitions 16 extending from the side walls inwardly to the aisle walls 18. These aisle walls are provided with a plurality of doors 20 preferably of the sliding type giving access from the aisle into the room. The individual rooms are closed on top by decorative ceiling 22 so placed as to give sufficient space between the ceiling and roof structure for air ducts, wiring and other equipment necessary to furnish the rooms with necessary light, heat and ventilation. In order to make the car as light as possible and conserve space the transverse partitions 16 and aisle walls 18 will be made as thin as possible and will not accommodate wiring or plumbing as has been customary in previous constructions.

In the car as shown by Fig. 1 each room is identical and has arranged therein the necessary facilities to give complete passenger comfort either by day or by night. These facilities include a seat S, bed B, wardrobe W and a cabinet for valuables V, all arranged to one side of the door opening. On the opposite side of the door opening is arranged a cabinet for toilet articles or medicine M, a folding wash basin or lavatory L, toilet T and a folding couch C, which latter is pivoted to the outer side wall of the car. The seat S is built out sufficiently from one of the transverse partitions 16 to permit springs 24 to be housed therebehind and these springs are connected to the car structure and to the bed B adjacent its pivot 26. The seat back 28 is preferably attached to the bed and will fold down on top of the seat cushions in the well known manner. If desired, however, this seat back may be made removable from the bed so that it can be hooked to the transverse partition 16 after the bed has been lowered, thus giving protection to the passenger's head in case of accident or collision. The wardrobe W and cabinet for valuables V are located on the aisle wall adjacent the folding bed but of a width sufficient to clear the bed,

as clearly shown in Fig. 4. The door giving access to the valuables cabinet V can not be opened when the bed is down, thus preventing any theft of articles while a person is asleep. The folding bed B is held in its raised position by any suitable locks controlled by an operating handle 30. The bed is, of course, of the ready made type so that the occupant of the room when desiring to use the bed merely operates the locks through handle 30 and pulls the bed to its down-folded position as shown in Fig. 6. In this position the bed is supported by its pivot 26 adjacent the head end and by angle strip 32 fastened to the partition wall 16 adjacent the foot end of the bed. Any suitable hold-down locks may be provided or if desired the same locks which hold the bed in the raised position can engage keepers on the partition wall 16 at the foot of the bed to hold the bed in the down-folded position. It will be seen that the wardrobe is placed sufficiently high so that its door may be opened at all times except during the period when the bed is being actually raised or lowered. While the bed and seat may be built into the car structure, it is desirable that they be prefabricated as a unit and inserted into the car structure. The same is true of the wardrobe and valuables cabinet which can readily be prefabricated and merely attached to the aisle wall.

At the opposite end of the room from the folding bed is located the toilet T of the enclosed type having a hinged cover 34 adapted to fold up to render the hopper available. Above the toilet is located the folding wash basin or lavatory L normally retained in its up-folded or inoperative position but capable of being folded down into its operative position for washing purposes. Immediately above the folding wash basin or lavatory is located the toiletries cabinet M adapted to hold soap, towels and a carafe, which latter preferably can be inserted into the cabinet through a small door in the aisle wall 18. Extending across the transverse wall 16 opposite from the folded bed is a luggage rack 36 placed sufficiently high and of such a width as to readily clear the down-folded bed as is indicated in Fig. 6. It will be obvious that when the bed is in its down-folded position the toilet and lavatory will not be available for use but will be available at all other times. It is preferred that the toilet, lavatory and toiletries cabinet M be prefabricated as a complete unit for installation into the skeleton room. However, in some cases it may be desirable to build these items into the room separately.

The couch C, previously referred to, is hinged at 40 to the car side wall and adapted to be swung upwardly to its raised position as shown in Fig. 3. Mounted on the back or under side of the couch are legs or other supporting structure 42 adapted to swing downwardly and support the couch in its operative position in a plane substantially flush with the toilet seat lid and seat cushion top surface. This couch is preferably upholstered in some readily washable material and is made with one part 44 rigid and the other part 46 inclinable relative to the part 44 in a manner similar to hospital beds so that a person may recline on the couch adjacent the window in order to enjoy the scenery or a book. This reclining portion 46 of the couch is most valuable when the car is traveling with the seat towards the head end of the train. In order to give similar comfort when the train is traveling with the seats facing forward a wedge pillow 50 is provided, which pillow may be stored in the wardrobe when not in use or can be

used at night to further protect the occupant's head from striking the transverse partition 16 at the head of the bed. Whether the wedge pillow is used or not, it will be obvious that a person seated on the seat S can rest his legs on the couch and assume a reclining position.

From the preceding it will be seen that a single occupancy room has been provided with all necessary facilities for the passenger's comfort and safety. The occupant of the room will have full choice of sitting in an upright position on the seat S, reclining partially on the seat by use of the wedge pillow 50, or assuming a more comfortable position by raising the couch so as to support the legs. If it is desired to take a nap this can readily be done by stretching out on the couch and seat. Equal comfort is given where the train is traveling in its reverse direction, that is, with the seats toward the head end of the train. Due to the width of the couch all of the facilities in the room are available for use. It will be seen that the provision of this couch will be of particular value to a mother and child traveling together in what would normally be a single occupancy room, since the child could be put to sleep on the seat S, while the mother could occupy the comfortable couch C with its reclining portion 46. The couch also provides an admirable support for suitcases during dressing periods and while still leaving the seat S available for use.

While the car and its individual rooms have been described more or less in detail, it is obvious that slight modifications and rearrangements of parts, other than those shown and described, may be made without departing from the scope of the following claims defining my invention.

What is claimed is:

1. In a railway car having rooms built therein on either side of a central aisle with each room bounded by a pair of transverse walls joined to a side wall and to an aisle wall, the combination with each room of a bed swingable longitudinally of the room from an inoperative vertical position adjacent one transverse wall to an operative horizontal position wherein it extends substantially from one transverse wall to the other, a seat in the room adjacent the bed when in its inoperative vertical position, toilet facilities adjacent the aisle wall and the other transverse wall, and a couch hinged adjacent the side wall and swingable to an operative horizontal position wherein its upper surface is substantially level with the seating surface of said seat.

2. In a railway car having rooms built therein on either side of a central aisle with each room bounded by a pair of transverse walls joined to a side wall and to an aisle wall, the combination with each room of a bed swingable longitudinally of the room from an inoperative vertical position adjacent one transverse wall to an operative horizontal position wherein it extends substantially from one transverse wall to the other, a seat in the room adjacent the bed when in its inoperative vertical position, toilet facilities adjacent the aisle wall and the other transverse wall, and a couch hinged adjacent the side wall and swingable to an operative horizontal position wherein its upper surface is substantially level with the seating surface of said seat, said couch when in operative position extending substantially from said seat to the opposite transverse wall and from the side wall to said toilet facilities.

3. In a railway car having rooms built therein

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on either side of a central aisle with each room bounded by a pair of transverse walls joined to a side wall and to an aisle wall, the combination with each room of a bed swingable longitudinally of the room from an inoperative vertical position adjacent one transverse wall to an operative horizontal position wherein it extends substantially from one transverse wall to the other, a seat in the room adjacent the vertically disposed inoperative bed, toilet facilities adjacent the aisle wall and the other transverse wall, and a couch hinged adjacent the side wall and swingable transversely to the room to an operative position wherein its upper surface is substantially level with the seating surface of said seat, said couch when in operative position having a portion thereof movable to a reclining position sloping toward said seat.

4. A railway car having a room therein with a floor area substantially equal to the area of a standard single bed, bed and toilet facilities in said room and movable from an inoperative out-of-sight position to an operative position in which the bed occupies substantially the entire floor area, and an upholstered couch in said room and movable from an inoperative position to an operative position accessible for use only when said bed is in its inoperative position.

5. A railway car having a room therein with a floor area substantially equal to the area of a standard single bed, bed and toilet facilities in said room and movable from an inoperative out-of-sight position to an operative position in which the bed occupies substantially the entire floor area, and an upholstered couch in said room and movable from an inoperative position to an operative position accessible for use only when said bed is in its inoperative position, said couch having a portion thereof reclinable relative to the remainder thereof when the couch is in the operative position to thereby form a back rest for a person reclining on said couch.

6. A railway car with a room therein bounded in part by a side wall of the car having a window therein of a length slightly less than the height of an average person and adapted to illuminate said room during daylight hours and in part by transverse walls adjacent the edges of the window, a seat in the room extending along one transverse wall and laterally inward from the side wall adjacent one side edge of the window, a couch shorter than the average person and hinged beneath said window to the side wall of the car and movable from a vertical inoperative position adjacent the side wall to a horizontal operative position substantially coextensive with the window and with its upper surface substantially flush with the upper surface of said seat and cooperating therewith to provide a couch of sufficient length to permit the average person to recline thereon.

7. A railway car with a room therein bounded in part by a side wall of the car having a window therein of a length slightly less than the height of an average person and adapted to illuminate said room during daylight hours and in part by transverse walls adjacent the edges of the window, a seat in the room extending along one transverse wall and laterally inward from the side wall adjacent one side edge of the window, a short couch portion hinged beneath said window to the side wall of the car and movable from a vertical inoperative position adjacent the side wall to a horizontal operative position substantially coextensive with the window and with its

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upper surface substantially flush with the upper surface of said seat and cooperating therewith to provide a full length couch extending between the transverse walls, said short couch portion having a part thereof reclinable relative to the remainder of the couch and sloping toward said seat from the side edge of the window opposite said seat.

8. A railway car having a room therein, a bed in the room swingable downwardly longitudinally of the car from a substantially vertical inoperative to a substantially horizontal operative position occupying substantially all the floor area of a room, a couch swingable transversely of the car about a longitudinally extending axis from an inoperative position adjacent the car side wall to a substantially horizontal operative position accessible for use when said bed is in its inoperative position.

9. A railway car having a room therein, a bed in the room swingable downwardly longitudinally of the car from a substantially vertical inoperative to a substantially horizontal operative position occupying substantially the entire floor area of the room, a couch swingable transversely of the car about a longitudinally extending axis from an inoperative position adjacent the car side wall to a substantially horizontal operative position accessible for use when said bed is in its inoperative position, and toilet facilities in said room accessible for use at all times except when said bed is in its operative position.

10. A railway car having a room therein, a bed in the room available for night use and when in use occupying substantially all the floor area of the room, a seat for day use and having a back secured to the bed, and a short couch in the room swingable from an inoperative to an operative position cooperating with said seat to provide substantially full length reclining facilities for day use.

11. A railway car having a room therein, a bed in the room available for night use and when in use occupying substantially all the floor area of the room, a seat for day use and having a back secured to the bed, and a short couch in the room swingable from an inoperative to an operative position cooperating with said seat to provide therewith reclining facilities for day use, said couch having a portion thereof remote from the seat inclinable toward the seat to provide a back rest whereby a person may recline on said couch and seat in a position facing said seat back.

12. A railway car having a window in the side wall thereof, a seat having a seat back adjacent one side edge of the window, and a short couch having a top surface substantially flush with the seating surface of said seat and extending longitudinally of the car beneath said window, said short couch and seat cooperating to provide a couch of sufficient length as to permit the average person to recline thereon and said couch having a portion thereof inclinable relative to the remaining portion to provide a back rest adjacent the other side edge of the window and facing toward said seat back.

13. A railway car having a room therein bounded by longitudinal and transverse walls, a seat in said room adjacent one transverse wall and extending from one longitudinal wall to substantially the other longitudinal wall, an inclosed toilet bowl located in the corner formed by the other transverse wall and one of the longitudinal walls and having an upholstered lid fully cov-

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ering the same and providing a seating surface, and a couch in said room and extending from the front edge of said seat along one of the longitudinal walls substantially to the opposite transverse wall and alongside said enclosed toilet bowl, said couch having a top surface substantially flush with the seating surfaces of said seat and upholstered lid and cooperating therewith to provide surfaces upon which a person may recline.

ROBERT A. SHIELDS. 10

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