Oct. 6, 1925. 1,556,483

C. B. BROWN, JR

COMPARTMENT CAR

Original Filed March 10, 1921 4 Sheets-Sheet 1

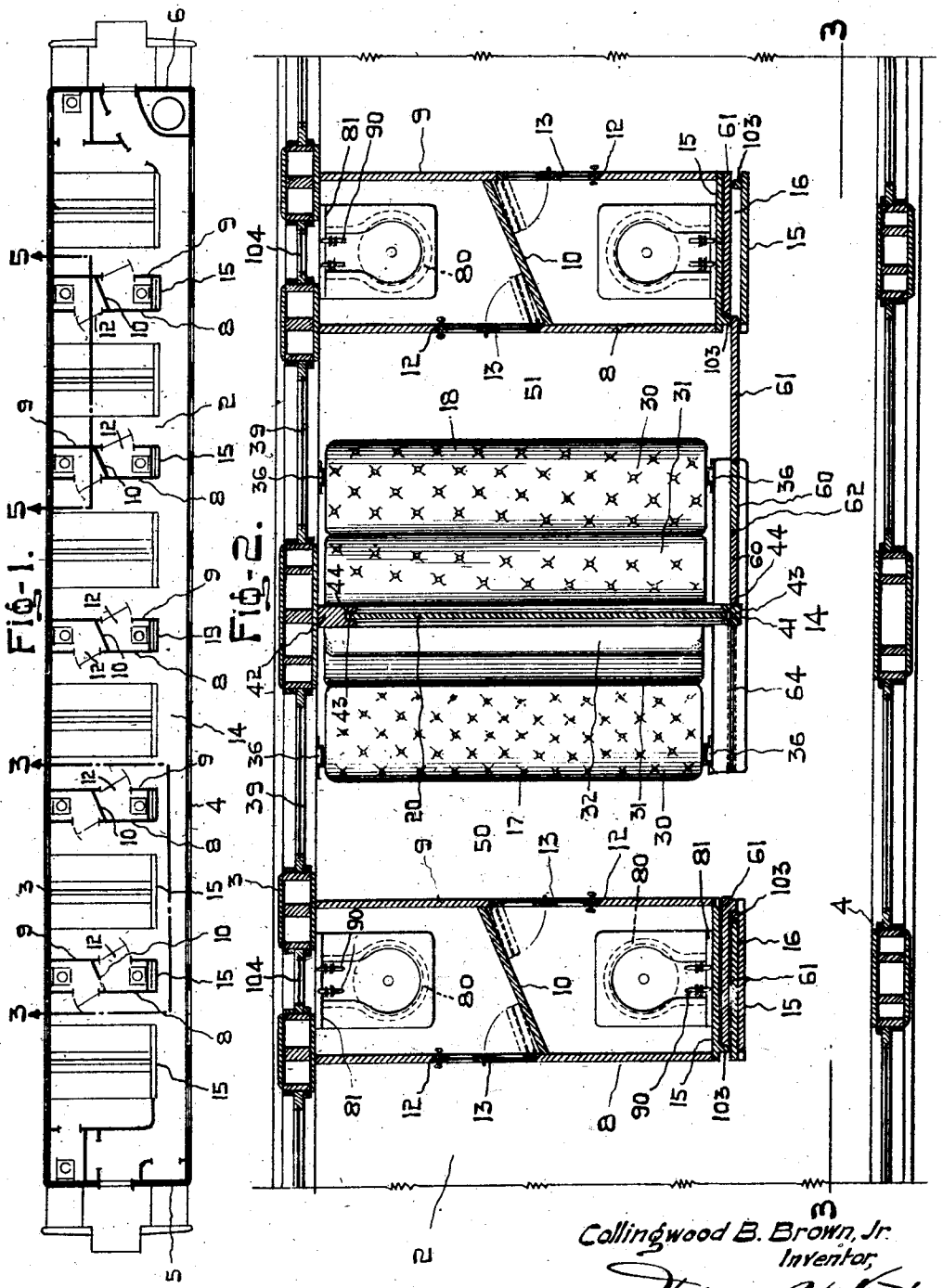


Fig-1.

Fig-2.

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COMPARTMENT CAR

Original Filed March 10, 1921 4 Sheets-Sheet 2

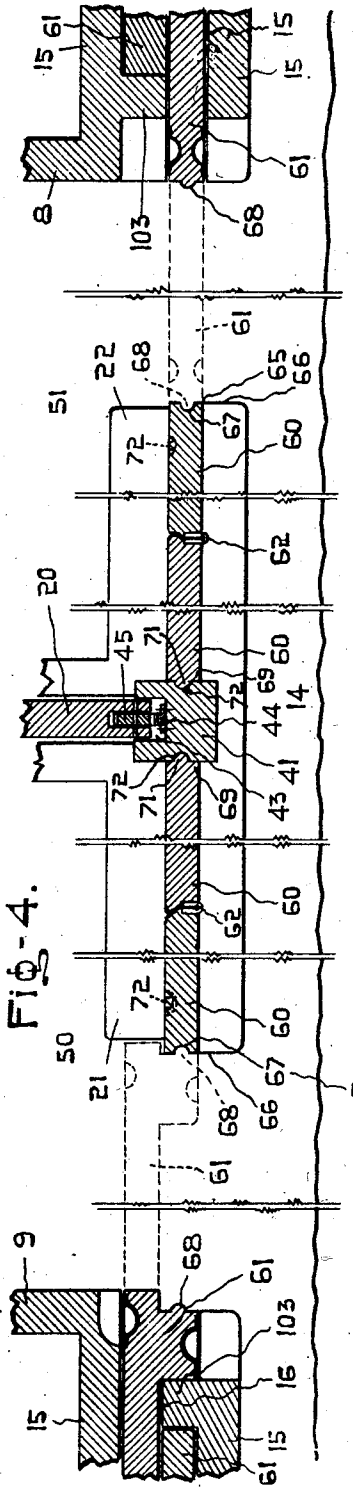


Fig. 4.

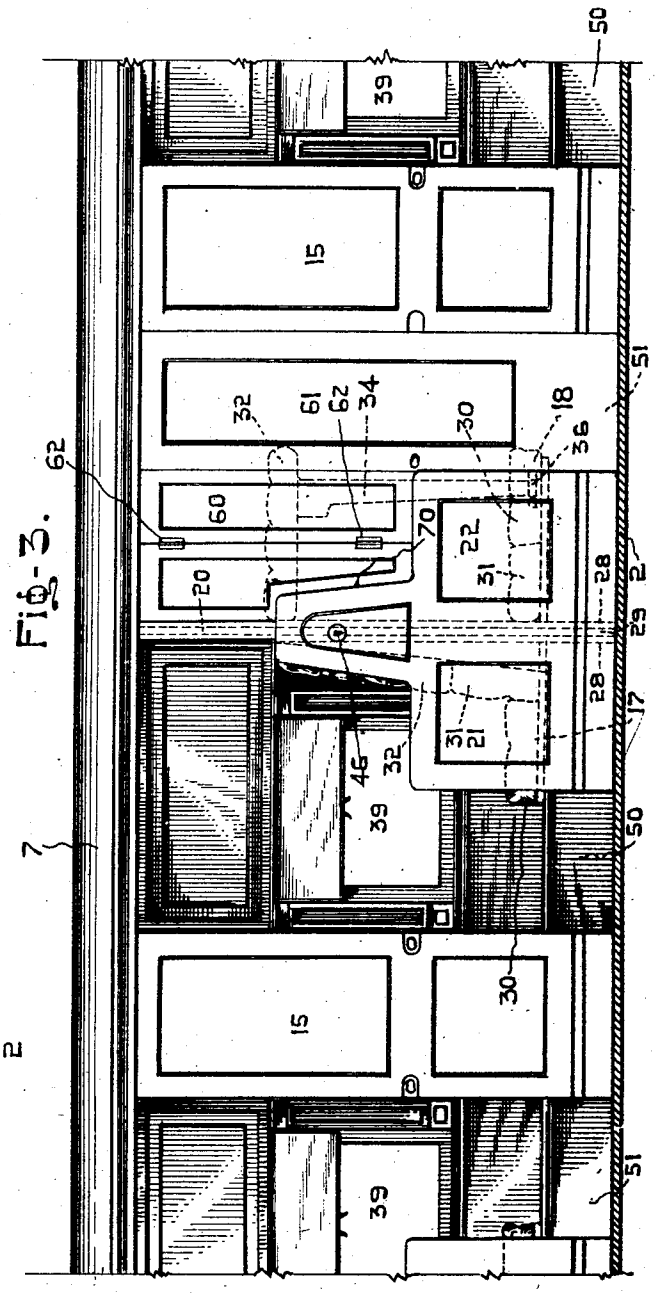


Fig. 3.

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COMPARTMENT CAR

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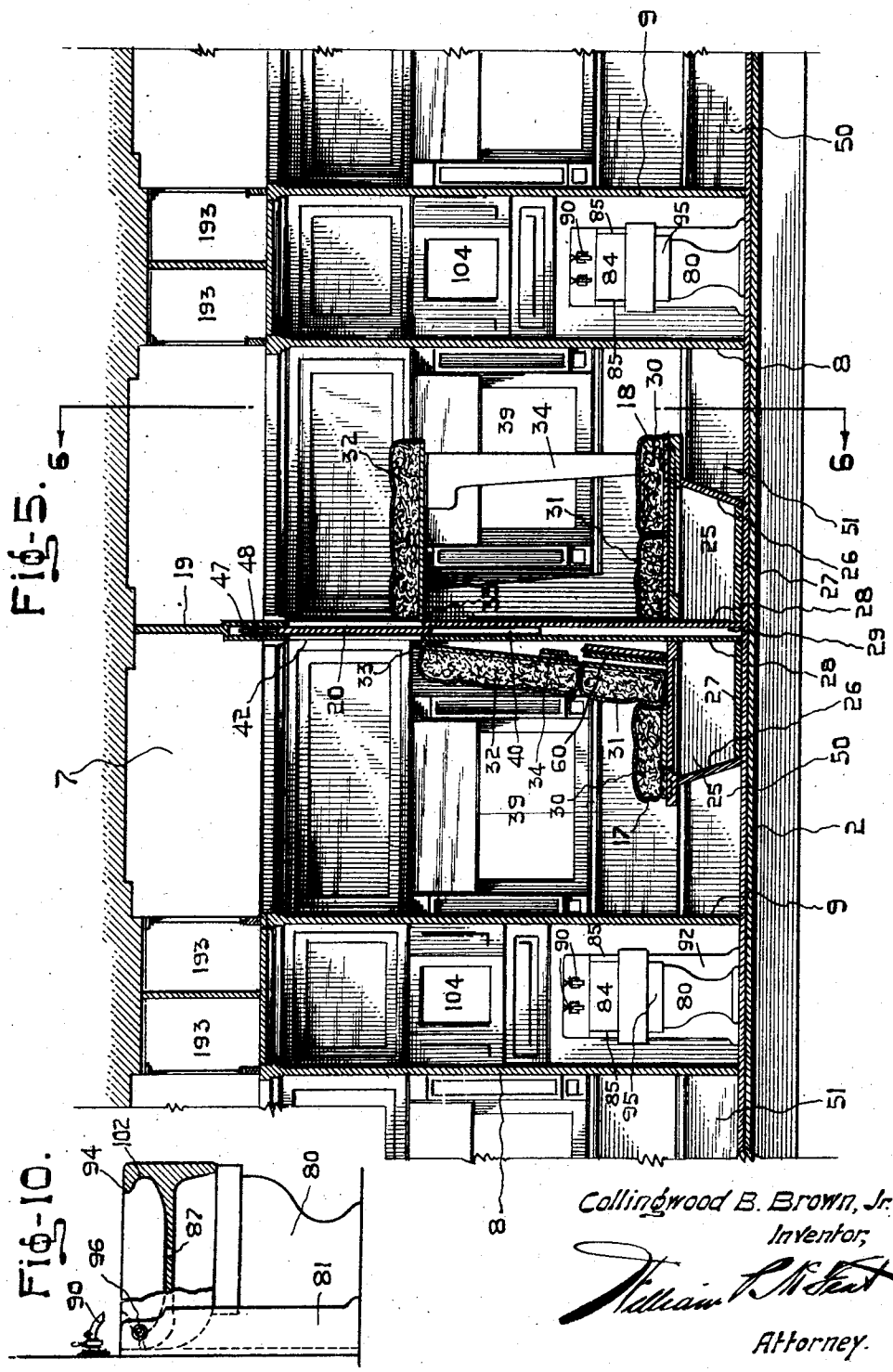


Fig. 5.

Fig. 10.

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C. B. BROWN, JR

COMPARTMENT CAR

Original Filed March 10, 1921 4 Sheets-Sheet 4

Fig. 7.

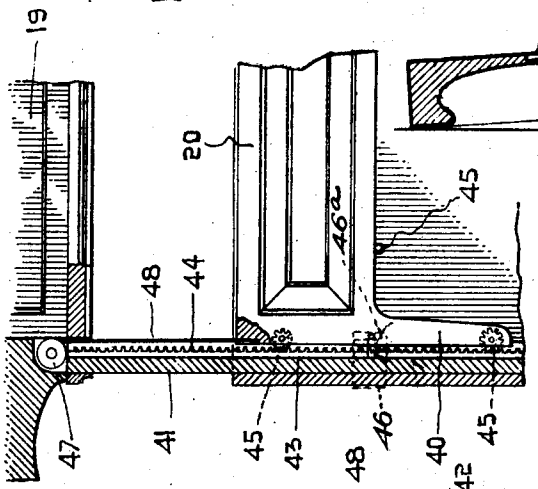


Fig. 8.

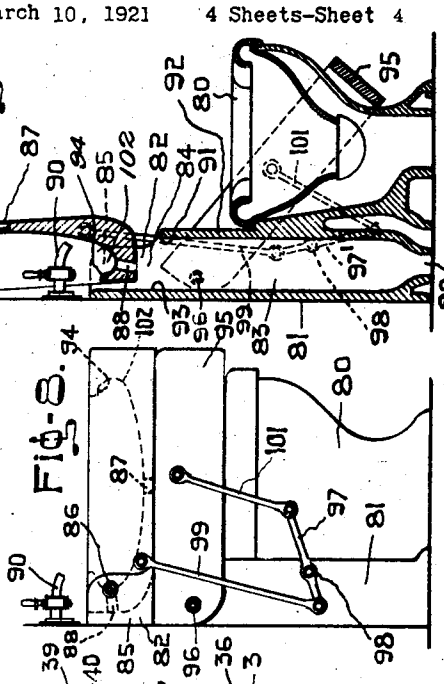
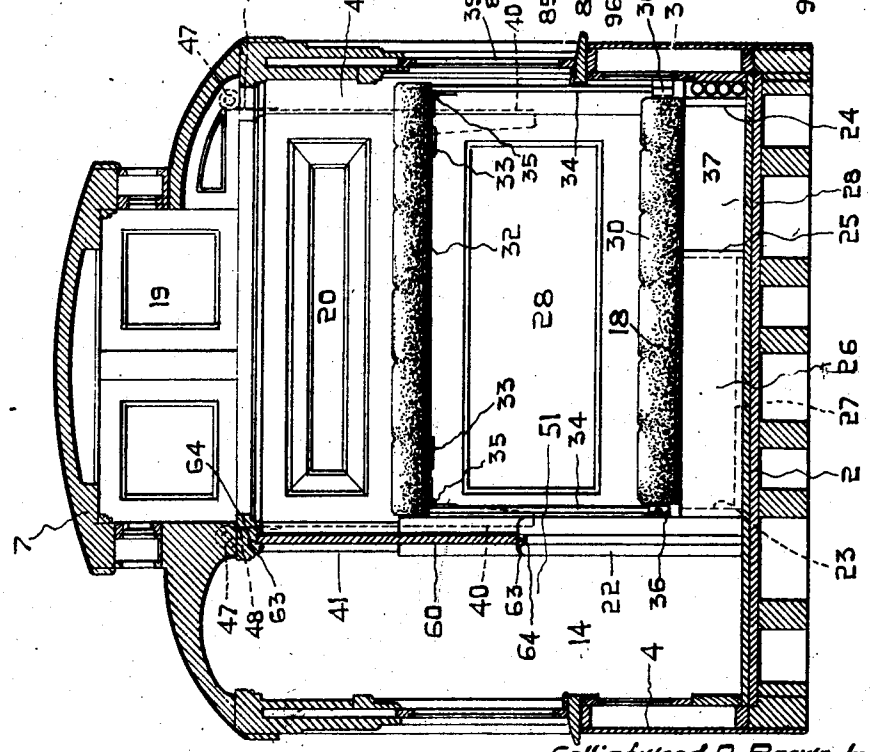


Fig. 6.



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Patented Oct. 6, 1925. 1,556,483

UNITED STATES PATENT OFFICE.

COLLINGWOOD B. BROWN, JR., OF MONTREAL, QUEBEC, CANADA.

COMPARTMENT CAR.

Appication filed March 10, 1921, Serial No. 451,142. Renewed June 26, 1925.

To all whom it may concern:

Be it known that I, COLLINGWOOD BRUCE BROWN, Jr., of the city of Montreal, Province of Quebec, Dominion of Canada, a subject of the King of Great Britain, have invented certain new and useful Improvements in Compartment Cars; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to passenger cars and has for its object to provide a car of this class equipped with seat-berths and means for presenting alcoves off a passageway and convertible into compartments. Further objects of the invention are to more effectively utilize the floor space so that when in use as a compartment car the berth capacity will be greater than that of the standard M. C. B. compartment cars now in use; to provide an individual toilet for each compartment occupying minimum floor space and concealed from view; to provide larger accommodation for luggage, and finally to permit of better ventilation with less possibility of the passengers being subjected to draughts.

To this end my invention consists of the particular construction, combination and arrangement of parts hereinafter described and illustrated and set forth in the claims.

For full comprehension, however, of my invention, reference must be had to the accompanying drawings in which similar reference characters indicate the same parts, and wherein:

Figure 1 is a diagrammatic plan view of a car constructed according to my invention;

Figure 2 is a fragmentary horizontal sectional view drawn to a larger scale and illustrating a pair of adjacent compartments;

Figure 3 is a longitudinal sectional view taken on line 3—3 Figure 2;

Figure 4 is a horizontal fragmentary sectional view illustrating the removable panels for closing the sides of the compartments fronting the corridor;

Figure 5 is a longitudinal sectional view taken on line 5—5 Figure 1;

Figure 6 is a transverse sectional view taken on line 6—6 Figure 5;

Figure 7 is a detail fragmentary sectional view partly in elevation of the panel separating the compartments of each pair; and

Figures 8, 9 and 10 are detail views of the combination toilet appliances.

The car illustrated in the accompanying drawings represents one embodiment of my invention.

The car body in the main is of usual construction and consists of the car floor 2, longitudinal side walls 3 and 4, end walls 5 and 6 and deck-structure 7. The interior is divided by pairs of transverse permanent partitions, the pairs being uniformly spaced throughout the length of the car. Each of the spaces between the pairs and between each end wall and the pair nearest thereto constitutes an alcove off of and normally in full open communication with the passageway 14 extending from end to end of the car along one side. Each of these alcoves is convertible into two compartments; and the space between the partitions 8 and 9 of each pair is relatively small and bisected by a substantially longitudinal partition 10 into a pair of transversely aligned toilets, one being provided for each compartment. Communication is effected between the toilets and their respective compartments through door openings 12 closed by collapsible doors 13. The partitions 8 and 9 extend from the car side 3 to a corridor or passageway 14 extending along the opposite side of the car throughout the length thereof, the inner partitions being united by longitudinal aligned pairs of partitions 15, each presenting a space 16 adapted to afford accommodation for sliding doors to be hereinafter described.

As hereinbefore mentioned, each of the alcoves is adapted to be converted into two compartments 50 and 51. Each of these alcoves contains a pair of seats 17 and 18 set back to back and extending from the car side 3 to a point in longitudinal alignment with the partitions 15. A fixed deck panel or partition 19 separates the portion of the alcove within the deck structure and a vertically sliding panel or partition 20 is adapted to close the space between this deck panel and the top of the seats. Each of the seats is convertible into upper and lower berths and although their detail construction may be varied each preferably consists of an end member 21 common to both seats and constituting the arms therefor and a hollow supporting base structure constituted by end walls 23 and 24 an intermediate wall 25, front transverse wall 26 extending between the inner end wall 23 and the wall 25, bottom 27 equal in length to wall 26, and rear wall 28 extending between the end members

21 and 22 the rear walls 28 of the seats being spaced apart as at 29 and each being extended upwardly to a point substantially level with the top of the window 39 lighting each compartment. A seat cushion 30 is supported upon the top of the base and its width is less than the width of the former to accommodate the lower cushion 31 of the back, the lower edge of which extends downwardly behind it and rests upon the base, the upper cushion of the back being indicated at 32 and hinged at its upper edge to the top of the wall 28 as at 33. This latter cushion is substantially equal in width to the combined widths of the cushion 31 and the cushion 30 in order that when converting the seat into a pair of berths the cushion 32 may be swung upwardly to horizontal position constituting the upper berth while the cushion 31 may be moved to horizontal position between the cushion 30 and the wall 28 forming the lower berth. The cushion 32 is adapted to be supported in its position as a berth by collapsible legs 34 hinged at their upper ends to the back of the cushion as at 35 the lower ends of the legs, when in supporting position, being seated in sockets 36 at the ends of the seat. The walls 23, 25, 26, 28 and bottom 27 constitute a box in which may be stored loose bed-clothes and the like, the space 37 between the box and the car side 3 having an open front affording sufficient accommodation for a steamer trunk.

The sliding panel 20 consists of an oblong member having legs 40 at its opposite ends extending downwardly into the space between the walls 28, the entire panel being movable downwardly into this space to establish communication between the adjacent compartments. The panel is guided in its vertical movement by the ends 21 of the seats and vertical posts 41 and 42 preferably of rectangular cross-section extending upwardly therefrom to the deck panel 19, the posts and seat ends presenting channels 43 in which are mounted fixed racks 44, pinions 45 mounted upon the ends of the panel being in intermeshing engagement with these racks. The legs 40 provide a more stable mounting for the panel particularly when in its closed or uppermost position the racks and pinions enable the panel to be raised and lowered with the greatest ease and in conjunction with the legs 40 prevent the panel jamming in its guides.

The panel is counter-balanced by a pair of spring balance drums 47 connected to the top thereof at its ends by tapes or chains 48 wound upon the drums, the latter being mounted in fixed position in the deck structure.

In order to lock the panel in its closed position a lock 46 which may be operated by the porter from the corridor is mounted in the seat end 21 and is adapted to engage a socket 41 in the adjacent part of the panel. The detail construction of the lock is not illustrated as any desired type may be employed.

Each alcove may be converted into a compartment or pair of compartments for travelling during the night independently of the neighboring alcove and the other seats or berths. To this end the side of each compartment adjoining the corridor constitutes the end 21 of each pair of seats, a removable panel 60 extending upwardly therefrom to the deck structure and a sliding door 61 adapted to close the space between the panel and seat and the adjacent partitions 15, the door when open being accommodated by the space 16 between the latter. The panel 60 consists of two sections hinged together as at 62, their abutting edges being of ogee curvature in cross-section to provide a tight joint.

In order to secure the panel in position the ends of the seats 21 and 22 and the deck structure immediately above are provided with grooves 63 of preferable T-cross-section which are adapted to receive correspondingly shaped tongues 64 on the top and bottom sides of the panel. The side 65 of the latter adjacent the door 61 is in vertical alignment with the side 66 of the seat end against which the door is adapted to abut when closed and both of such sides are grooved as at 67 to receive a tongue 68 on the abutting edge of the door. The opposite side 69 of the panel is notched as at 70 to conform to the seat and it is provided with a tongue 71 adapted to fit into a groove 72 in the seat and post 41. Spring catches of any desired construction may be employed to secure the panels in position. Although this construction and arrangement of parts is described as the preferred embodiment of my invention it is to be distinctly understood that sliding panels may be substituted for the panels 60 without departing from the spirit of my invention.

The porter may convert any half alcove into a compartment or any full alcove into a pair of compartments by pulling one or more of the doors 61 from between the partitions 15, the width of the space 16 between which and wherein the doors are housed, being sufficient to accommodate the doors of adjoining alcoves, the doors of which being housed by lapping one over the other, abutments 103 limiting their inward movement. One or more of the sliding panels 20 may then be raised thus isolating the compartment formed from each half alcove from the companion compartment formed from the other half alcove.

This construction and arrangement of parts makes optionable with the occupants of each compartment whether the latter shall be opened or kept closed during the day. When open access to the windows on both

sides of the car is obtained and the sociability of the latter is greatly enhanced.

Each of the toilets contains a combination closet and wash-basin consisting of a hopper 80 having a back portion 81, this back portion being of greater width than that of the hopper and extending above the top of the same as at 82. This back portion is chambered as at 83 and its upper end is provided with an opening 84 at the front thereof for presenting side walls 85 between which one end of the basin is hinged as at 86. This basin is of substantially rectangular form in plan view and is adapted to assume a substantially vertical position flat against the adjacent wall of the compartment and a horizontal position immediately above the hopper.

When in the horizontal position, the basin is adapted to empty into the hopper through a drip opening 87 and when in the vertical position it is adapted to empty into the chamber 83 in the back portion through a transversely elongated opening 88, the lower end of the chamber 83 having a discharge outlet 89 which may or may not communicate with the discharge from the hopper. The hot and cold water taps are indicated at 90 and do not move with the basin, being located in fixed position above the back portion and adapted to empty into the basin irrespective of its position. The latter is supported in its horizontal position by the upper end 91 of the front wall 92 of the back portion, the hinged end of the basin being adapted to bear flat against the rear wall 93.

In order to prevent any water within the basin being splashed about when the latter is moved from horizontal to vertical position, the mouth of the latter is curved inwardly as at 94 to present an auxiliary bowl 102. An apron 95 of substantially U-form is adapted to enclose the space between the hopper and basin when the latter is in horizontal position. The arms of this apron are hinged as at 96 to the back portion and an operative connection is provided between the basin and apron whereby the latter is caused to swing down to a position straddling the hopper when the basin is in vertical position and to assume a position enclosing the space between the basin and hopper when the basin is in horizontal position. This operative connection consists of a pair of rocker arms 97 and 97′ located on opposite sides of the hopper. Each rocker arm is fulcrumed as at 98 intermediate its length upon the back portion and having one end connected to the basin through a link 99 and the opposite end to the apron through a second link 101.

The deck-story immediately above the pairs of toilets is divided into baggage spaces 193. The toilets adjoining the side wall 3 of the car are lighted by relatively small windows 104.

The apron 95 may constitute an integral part of the basin as indicated in Figure 10.

It is well known that the conductors of sleeping cars as well as compartment cars frequently must refuse requests for a compartment when compartment cars were not in the train, and at other times refuse requests for berths when all the berths in the ordinary sleeping car were occupied and a compartment car in the train had vacant space. It is also well known that when the drawing rooms of an ordinary sleeping car have been sold that no compartments can be provided in that car. The car above set forth on the other hand, is so constructed that for day travel the compartments may be converted into alcoves off the passageway by sliding the doors into the ends of the box-like partitions and removing the folding panels, and if desired by lowering the vertical sliding partitions or panels 20. A passenger sitting in one of these alcoves can with equal facility look out of the windows of the opposite sides of the car; and passengers in one alcove are free to move about the car and visit friends in other alcoves. And yet in the event of the occupant of half of one of the alcoves desiring privacy at any time during the day he may call the porter and have his half alcove readily converted into a compartment by closing up the vertical slidable partition or panel 20, setting the folding panel 60 in place and closing door 61. All the other alcoves of the car may remain in open unobstructed communication with the passageway and each other. During night travel, particularly in the heat of summer, all the alcoves may remain open or the occupant or occupants of any particular alcove or half alcove may have it converted into a compartment while the other passengers may have their berths made up and occupy them in the same manner as in ordinary sleeping cars without in any way disturbing passengers in the compartments and vice versa.

What I claim is as follows:

1. In a car of the type described the combination of pairs of compartments, the pairs being separated by pairs of spaced transverse partitions, a substantially longitudinal partition dividing the space between the partitions of each pair into a pair of transversely aligned toilet, door openings in said partitions effecting communication between the toilets and the compartments, doors for closing said openings and vertically sliding partitions separating the compartments of each pair whereby communication between the same may be established.

2. A car of the type described having a pair of compartments and means separating the compartments including a pair of transverse seats arranged back to back with a space therebetween, a vertical slidable

panel adapted to close the space above the top of the seats, said panel being accommodated within the space between the seats when in open position, and each end of said panel having a downward extension adapted to extend into said space when in closed position for the purpose set forth.

3. In a car of the type described the combination of pairs of compartments, the pairs being separated by pairs of spaced transverse partitions, a substantially longitudinal partition dividing the space between the partitions of each pair into a pair of transversely aligned toilets, door openings in said partitions effecting communication between the toilets and the compartments, doors for closing said openings and means separating the compartments of each pair, said means including a pair of convertible seat-berths arranged back to back with a space therebetween and a vertically slidable panel adapted to close the space above the tops of the seats, said panel being accommodated between said seats when in open position.

4. A car of the type described having a pair of compartments and means separating the same, said means including a sliding panel, guiding members presenting channels accommodating the ends of said panel, a rack in each of said channels, and pinions mounted on said panel and in intermeshing relation with said racks.

5. A car of the type described the interior of which is divided into a series of pairs of compartments, the pairs being separated by pairs of spaced transverse partitions, a substantially longitudinal partition dividing the space between the partitions of each pair into a pair of transversely aligned toilets, door openings in said partitions effecting communication between the toilets and the compartments, doors for closing said openings, and means separating the compartments of each pair, said means including a pair of convertible seats arranged back to back with a space therebetween and a vertically slidable panel adapted to close the space above the top of the seats, said panel being accommodated between said seats when in open position, guiding members presenting channels accommodating the ends of said panel, a rack in each of said channels, and pinions mounted on said panel and in intermeshing relation with said racks.

6. A car of the type described including the deck-story thereof and having a pair of compartments and means separating said compartments, said means including a pair of convertible seats arranged back to back and presenting a space therebetween, a fixed panel in vertical alignment with said space and extending across said deck-story, a vertically slidable panel adapted to close the space between said fixed panel and the top of said seats, said slidable panel being accommodated between said seats when in open position, spring balances mounted in position above said slidable panel and connected thereto, guiding members presenting channels receiving the ends of the last mentioned panel, racks in said channels and pinions mounted on said panel and in intermeshing relation with said racks.

7. A car of the type described including the deck-story thereof and having its interior divided into a series of pairs of compartments the pairs being separated by pairs of spaced transverse partitions, a substantially longitudinal partition dividing the space between the partitions of each pair into a pair of transversely aligned toilets, door openings in said partitions effecting communication between the toilets and the compartments, doors for closing said openings, and means for separating the compartments of each pair, said means including a pair of convertible seats arranged back to back and presenting a space therebetween, a fixed panel in vertical alignment with said space and extending across said deck-story, a vertically slidable panel adapted to close the space between said fixed panel and the top of said seats, said slidable panel being accommodated between said seats when in open position, spring balances mounted in position above said slidable panel and connected thereto, guiding members presenting channels receiving the ends of the last mentioned panel, racks in said channels and pinions mounted on said panel and in intermeshing relation with said racks.

8. A car of the type described including the deck structure thereof and having its interior divided into a series of pairs of compartments the pairs being separated by pairs of spaced transverse partitions, a longitudinal partition dividing the space between the partitions of each pair into a pair of transversely aligned toilets, door openings in said partitions effecting communication between the toilets and the compartments, doors for closing said openings, and means for separating the compartments of each pair, said means including a pair of convertible seats arranged back to back and presenting a space therebetween, a fixed panel in vertical alignment with said space and extending across said deck structure, a vertically slidable panel adapted to close the space between said fixed panel and the tops of said seats, said slidable panel being accommodated between said seats when in open position, spring balances mounted in position above said slidable panel and connected thereto, guiding members presenting channels receiving the ends of the last mentioned panel, racks in said channels and pinions mounted on said panel and in intermeshing relation with said racks, and a passageway extending throughout the length of

the car, the compartments adjoining the passageway and adapted to be thrown open forming alcoves of the passageway.

9. A car of the type described including the deck structure and having its interior divided into a passageway extending throughout the length thereof and a plurality of compartments adjoining said passageway, each of said compartments containing a convertible transverse seat and the side of the compartment adjoining said passageway including one end of said seat, a sliding door adapted to abut against said end when closed and a vertical removable panel having its ends mounted in the end of said seat and the deck structure and adapted to close the space therebetween.

10. A car of the type described including the deck-structure thereof and having its interior divided into a passageway extending throughout the length thereof and a plurality of compartments adjoining said passageway, each of said compartments containing a convertible transverse seat and the side of the compartment adjoining said passageway including one end of said seat, a sliding door adapted to abut against said end when closed and a vertical removable panel having its end mounted in the end of said seat and the deck-structure and adapted to close the space therebetween and means separating the adjoining compartments, said means including a transverse sliding panel, guiding members presenting channels accommodating the ends of said panel, a rack in each of said channels, and pinions mounted on said panel and in intermeshing relation with said racks.

11. A car of the type described including the deck-structure thereof and having its interior divided into a passageway extending throughout the length thereof and a plurality of compartments fronting said passageway, each of said compartments containing a convertible transverse seat and the side of the compartment adjoining said passageway including one end of said seat, a sliding door adapted to abut against said end when closed and a vertical removable panel having its ends mounted in the end of said seat and the deck-structure and adapted to close the space therebetween and means separating the adjoining compartments, said means including a pair of convertible seats arranged back to back and presenting a space therebetween, a fixed panel in vertical alignment with said space and extending across said deck structure, a vertically slidable panel adapted to close the space between said fixed panel and the tops of said seats, said slidable panel being accommodated between said seats when in open position, spring balances mounted in position above said slidable panel and connected thereto, guiding members presenting channels receiving the ends of the last-mentioned panel, racks in said channels and pinions mounted on said panel and in intermeshing relation with said racks.

12. A car of the type described including the deck structure thereof and having its interior divided into a series of pairs of compartments the pairs being separated by pairs of spaced transverse partitions, a longitudinal partition dividing the space between the partitions of each pair into a pair of transversely aligned toilets, door openings in said partitions effecting communication between the toilets and the compartments, doors for closing said openings, and means for separating the compartments of each pair, said means including a pair of convertible seats arranged back to back and presenting a space therebetween, a fixed panel in vertical alignment with said space and extending across said deck-structure, a vertically slidable panel adapted to close the space between said fixed panel and the tops of said seats, said slidable panel being accommodated between said seats when in open position, spring balances mounted in position above said slidable panel and connected thereto, guiding members presenting channels receiving the ends of the last mentioned panel, racks in said channels and pinions mounted on said panel and in intermeshing relation with said racks, a passageway extending throughout the length of the car, with the compartments adjoining thereon and containing the seats, the side of each compartment adjoining the passageway including one end of said seat, a sliding door adapted to abut against said end when closed and a vertical removable panel having its ends mounted in the end of said seat and the deck-structure and adapted to close the space therebetween.

13. A car of the type described including the deck structure thereof and having a passageway and a pair of compartments adjoining the same, a transverse seat in each compartment, the seats being arranged back to back and having an end member common to both, the sides of the compartments adjoining the passageway being constructed and arranged to be thrown open and each consisting of said end member, a removable panel adapted to have its ends mounted in the deck structure and said end member, and a sliding door adapted to abut against said member and panel when in closed position.

14. A car of the type described including the deck structure thereof and having a passageway and a pair of compartments adjoining the same, a transverse seat in each compartment, the seats being arranged back to back and having an end member common to both, the sides of the compartments adjoining the passageway being constructed

and arranged to be thrown open, and each consisting of said end member, a removable panel adapted to have its ends mounted in the deck structure and said end member, and a sliding door adapted to abut against said member and panel when in closed position, and means for locking the panels in closed position.

15. A car of the type described including the deck-structure thereof and having a passageway extending throughout its length at one side thereof and a pair of compartments adjoining said passageway, means separating the compartments including a pair of transverse convertible seats extending between the passageway and the opposite side of the car and arranged back to back with a space therebetween, the ends of said seats adjacent said passageway constituting a vertical member common to both, guiding posts extending upwardly from the ends of the seats to the deck structure each post presenting a channel, a fixed panel extending across said deck structure, and a vertical slidable panel adapted to close the space between the top of said seats and the said fixed panel, the ends of the said slidable panel extending into said channels, the panel being adapted to be accommodated between the backs of the seats when in open position, vertical racks mounted in said channels and extending downwardly between the seats, pinions mounted upon said slidable panel and in intermeshing relation with said racks; spring balances mounted upon the deck structure and connected to the top of said panel and means accessible to the passageway for locking the slidable panel in closed position, the sides of the compartments adjoining the passageway including the end member common to both seats, a pair of sliding doors and removable panels having their opposite ends slidably mounted in said end member and the deck structure with their vertical edges abutting the doors when closed and the posts extending upwardly from said member, the abutting faces of the panels, end member, deck structure and doors having grooves and tongues registering with said grooves, and means for locking the panels in position.

16. A car of the type described including the deck-structure thereof and having a passageway extending throughout its length at one side thereof and a pair of compartments adjoining said passageway, means separating the compartments including a pair of transverse convertible seats extending between the passageway and the opposite side of the car and arranged back to back with a space therebetween, the ends of said seats adjacent said passageway constituting a vertical member common to both, guiding posts extending upwardly from the ends of the seats to the deck structure each post presenting a channel, a fixed panel extending across said deck structure, and a vertical slidable panel adapted to close the space between the top of said seats and the said fixed panel, the ends of the said slidable panel extending into said channels, the panel being adapted to be accommodated between the backs of the seats when in open position, vertical racks mounted in said channels and extending downwardly between the seats, pinions mounted upon said slidable panel and in intermeshing relation with said racks; spring balances mounted upon the deck structure and connected to the top of said panel and means accessible to the passageway for locking the slidable panel in closed position.

17. A car of the type described having a pair of compartments and means separating the same and adapted to permit communication therebetween; said means including a sliding panel having ends of increased depth; guiding members presenting channels accommodating said ends; racks within said channels and pinions mounted upon the ends of the panel and in intermeshing relation with said racks.

18. A car of the type described having a pair of compartments and means separating the same and adapted to permit comunication therebetween; said means including a sliding panel having ends of increased depth; guiding members presenting channels accommodating said ends; racks within said channels and pinions mounted upon the ends of the panel and in intermeshing relation with said racks, and spring balances mounted in fixed position above said panel and connected thereto.

19. A car of the type described the interior of which is divided into a passageway extending throughout the length of the car immediately adjacent one side wall thereof and a plurality of adjoining compartments disposed throughout the length of the car and extending between the passageway and the opposite side wall of the car, said compartments being arranged in pairs and the pairs being separated by pairs of toilets aligned transversely relatively to the car length, the compartments of each pair being divided by a pair of convertible berth seats arranged back to back and extending from the passageway to the opposite side wall of the car and a vertically slidable partition adapted to close the space between the top of the seats when in its uppermost position and adapted when in its lowermost position to be positioned between the backs of the seats the latter being slightly spaced apart for this purpose; means for facilitating vertical movement of the partition, said last mentioned means consisting of a downwardly extending leg at each end of the partition, the seats of each pair having an end member

adjoining the passageway and forming a fixed part of the sides of their respective compartments adjoining said passageway, the remaining portion of each of said sides consisting of a removable panel adapted to be located in vertical position upon said end member and closing the space therebetween and the overhead structure of the car and a door adapted when open to be positioned in transverse alignment with the adjacent toilet and adapted when in closed position to close the space between such toilet and the end member and its removable panel.

20. In a car of the passenger type, a longitudinal passageway located adjacent one side and a plurality of transverse alcoves in full open communication with the passageway, seat-berths in the alcoves and extending transversely to the car, and means for converting the alcoves into compartments.

21. In a car of the passenger type, a longitudinal passageway located adjacent one side, a plurality of compartments each of which extends from the passageway to the opposite side of the car, the side of each compartment adjacent the passageway being removable for the purpose of converting the compartment into an alcove in full open communication with the passageway.

22. In a car of the passenger type, a longitudinal passageway located adjacent one side, a plurality of compartments each of which extends from the passageway to the opposite side of the car, the side of each compartment adjacent the passageway being removable for the purpose of converting the compartment into an alcove in full open communication with the passageway, and means dividing adjacent compartments from each other, said means being movable for the purpose of opening the compartments into one.

23. A car of the type described the interior of which is divided into a series of alcoves separated by pairs of spaced transverse partitions the space between which contains a pair of transversely aligned toilets, door openings in said partitions effecting communication between the alcoves and toilets, doors for closing said openings, a pair of convertible seats arranged back to back with a space therebetween and located in each alcove, and a vertically slidable panel adapted to close the space above the top of the seats, said panel being accommodated between said seats when in open position.

24. A car of the type described including the deck-story thereof and having a pair of compartments and means separating said compartment, said means including a pair of convertible seats arranged back to back and presenting a space therebetween, a fixed panel in vertical alignment with said space and extending across said deck-story, a vertically slidable panel adapted to close the space between said fixed panel and the top of said seats and said slidable panel being accommodated between said seats when in open position.

25. A car of the type described including the deck-story thereof and having its interior divided into a series of alcoves separated by pairs of spaced transverse partitions, transversely aligned toilets within the spaces, door openings in said partitions effecting communication between the toilets and the compartments, doors for closing said openings, and means for separating the compartments of each pair, said means including a pair of convertible seats arranged back to back and presenting a space therebetween, a fixed panel in vertical alignment with said space and extending across said deck-story, a vertically slidable panel adapted to close the space between said fixed panel and the top of said seats, said slidable panel being accommodated between said seats when in open position, spring balances mounted in position above said slidable panel and connected thereto.

26. A car of the type described including the deck structure thereof and having its interior divided into a series of pairs of compartments the pairs being separated by pairs of spaced transverse partitions, a longitudinal partition dividing the space between the partitions of each pair into a pair of transversely aligned toilets, door openings in said partitions effecting communication between the toilets and the compartments, doors for closing said openings, and means for separating the compartments of each pair, said means including a pair of convertible seats arranged back to back and presenting a space therebetween, a fixed panel in vertical alignment with said space and extending across said deck structure, a vertically slidable panel adapted to close the space between said fixed panel and the tops of said seats, said slidable panel being accommodated between said seats when in open position, spring balances mounted in position above said slidable panel and connected thereto, guiding members presenting channels receiving the ends of the last mentioned panel, and a passageway extending throughout the length of the car, the compartments adjoining the passageway and adapted to be thrown open forming alcoves off the passageway.

27. A car of the type described including the deck-structure thereof and having its interior divided into a passageway extending throughout the length thereof and a plurality of compartments adjoining said passageway, each of said compartments containing a convertible transverse seat and

the side of the compartment adjoining said passageway including one end of said seat, a sliding door adapted to abut against said end when closed and a vertical removable panel having its ends mounted in the end of said seat and the deck structure and adapted to close the space therebetween and means separating the adjoining compartments, said means including a transverse sliding panel.

28. A car of the type described including the deck-structure thereof and having its interior divided into a passageway extending throughout the length thereof and a plurality of compartments fronting said passageway, each of said compartments containing a convertible transverse seat and the side of the compartment adjoining said passageway including one end of said seat, a sliding door adapted to abut against said end when closed and a vertical removable panel having its ends mounted in the end of said seat and the deck-structure and adapted to close the space therebetween and means separating the adjoining compartments, said means including a pair of convertible seats arranged back to back and presenting a space therebetween, a fixed panel in vertical alignment with said space and extending across said deck structure, a vertically slidable panel adapted to close the space between said fixed panel and the tops of said seats, said slidable panel being accommodated between said seats when in open position, spring balances mounted in position above said slidable panel and connected thereto, and guiding members presenting channels receiving the ends of the last-mentioned panel.

29. A car of the type described including the deck structure thereof and having its interior divided into a series of pairs of compartments the pairs being separated by pairs of spaced transverse partitions, a longitudinal partition dividing the space between the partitions of each pair into a pair of transversely aligned toilets, door openings in said partitions effecting communication between the toilets and the compartments, doors for closing said openings, and means for separating the compartments of each pair, said means including a pair of convertible seats arranged back to back and presenting a space therebetween, a fixed panel in vertical alignment with said space and extending across said deck-structure, a vertically slidable panel adapted to close the space between said fixed panel and the tops of said seats, said slidable panel being accommodated between said seats when in open position, spring balances mounted in position above said slidable panel and connected thereto, guiding members presenting channels receiving the ends of the last mentioned panel, racks in said channels and pinions mounted on said panel and in intermeshing relation with said racks, a passageway extending throughout the length of the car, with the compartments adjoining thereon and containing the seats, the side of each compartment adjoining the passageway including one end of said seat, a sliding door adapted to abut against said end when closed and a vertical removable panel having its ends mounted in the end of said seat and the deck-structure and adapted to close the space therebetween.

30. A car of the type described including the deck-structure thereof and having a passageway extending throughout its length at one side thereof and a pair of compartments adjoining said passageway, means separating the compartments including a pair of transverse convertible seats extending between the passageway and the opposite side of the car and arranged back to back with a space therebetween, the ends of said seats adjacent said passageway constituting a vertical member common to both, guiding posts extending upwardly from the ends of the seats to the deck structure, each post presenting a channel, a fixed panel extending across said deck structure, and a vertical slidable panel adapted to close the space between the top of said seats and the said fixed panel, the ends of the said slidable panel extending into said channels, the panel being adapted to be accommodated between the backs of the seats when in open position, spring balances mounted upon the deck structure and connected to the top of said panel and means accessible to the passageway for locking the slidable panel in closed position, the sides of the compartments adjoining the passageway including the end member common to both seats, a pair of sliding doors and removable panels having their opposite ends slidably mounted in said end member and the deck structure with their vertical edges abutting the doors when closed and the posts extending upwardly from said member, the abutting faces of the panels, end members, deck structure and doors having grooves and tongues registering with said grooves, and means for locking the panels in position.

31. A car of the type described including the deck structure thereof and having a passageway extending throughout its length at one side thereof and a pair of compartments adjoining said passageway, means separating the compartments including a pair of transverse convertible seats extending between the passageway and the opposite side of the car and arranged back to back with a space therebetween, the ends of said seats adjacent said passageway constituting a vertical member common to both, guiding posts extending upwardly from the ends of the seats to the structure each post

presenting a channel, a fixed panel extending across said deck structure, and a vertical slidable panel adapted to close the space between the top of said seats and the said fixed panel, the ends of the said slidable panel extending into said channels, the panel being adapted to be accommodated between the backs of the seats when in open position, vertical racks mounted in said channels upon said slidable panel and in intermeshing relation with said racks; spring balances mounted upon the deck structure and connected to the top of said panel and means accessible to the passageway for locking the slidable panel in closed position.

32. A car of the type described having a pair of compartments and means separating the same and adapted to permit communication therebetween; said means including a slidable panel having ends of increased depth; guiding members presenting channels accommodating said ends; racks within said channels.

33. A car of the type described having a pair of compartments and means separating the same and adapted to permit communication therebetween; said means including a sliding panel having ends of increased depth; guiding members presenting channels accommodating said ends; and spring balances mounted in fixed position above said panel and connected thereto.

In testimony whereof I have signed my name to this specification.

COLLINGWOOD B. BROWN, JR.