F. E. STEBBINS.

COMPARTMENT CAR.

APPLICATION FILED JULY 29, 1912. RENEWED NOV. 25, 1916.

1,231,806. Patented July 3, 1917.

3 SHEETS—SHEET 1.

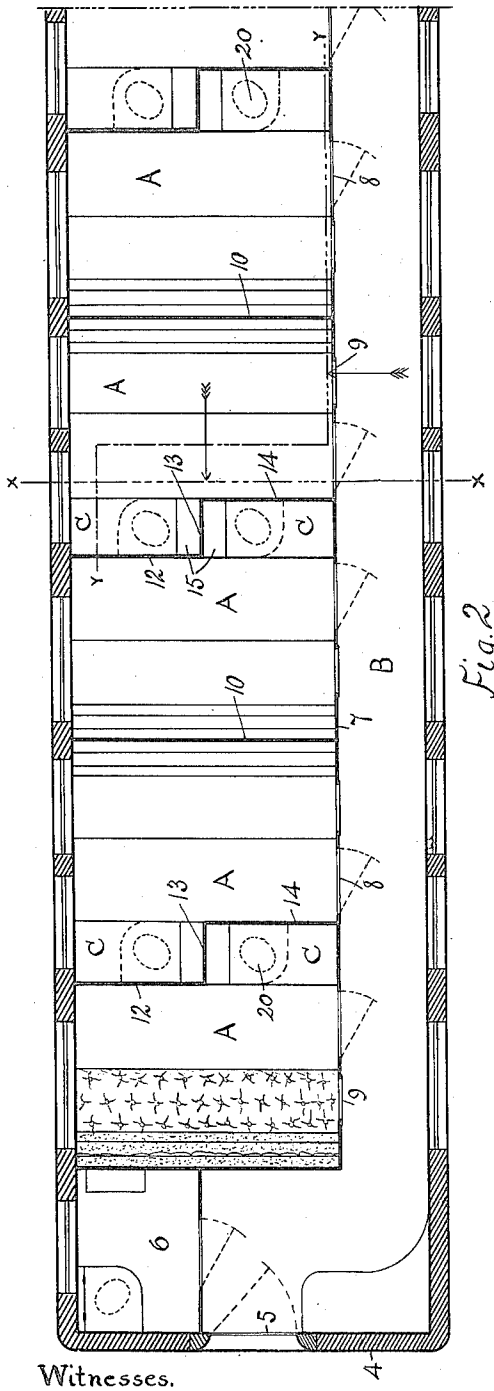


Fig. 2

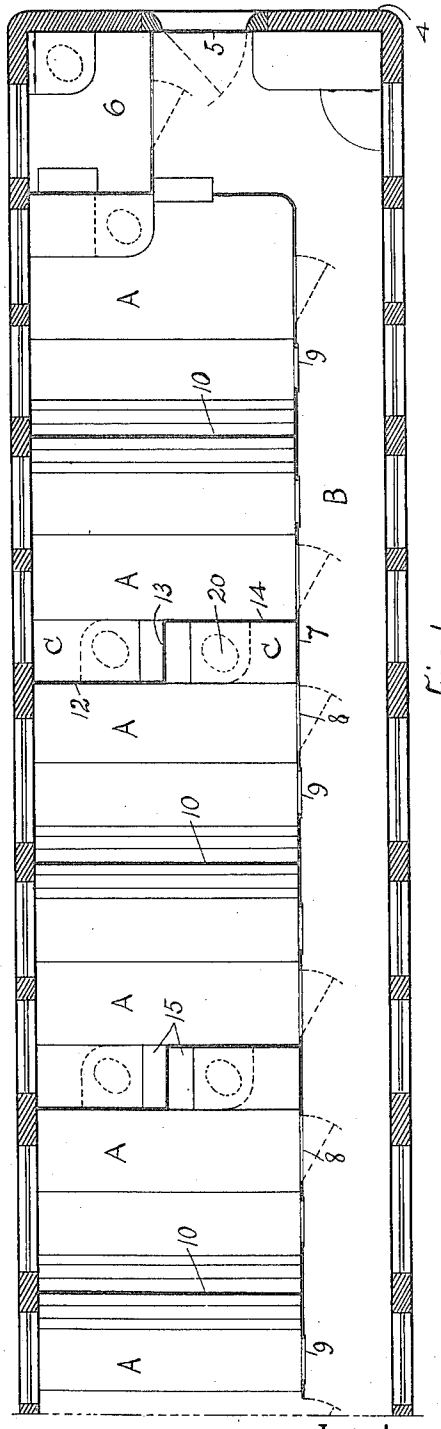


Fig. 1

Witnesses.

Ralph Wormelle

R. C. Wright

Inventor.

F. E. Stebbins

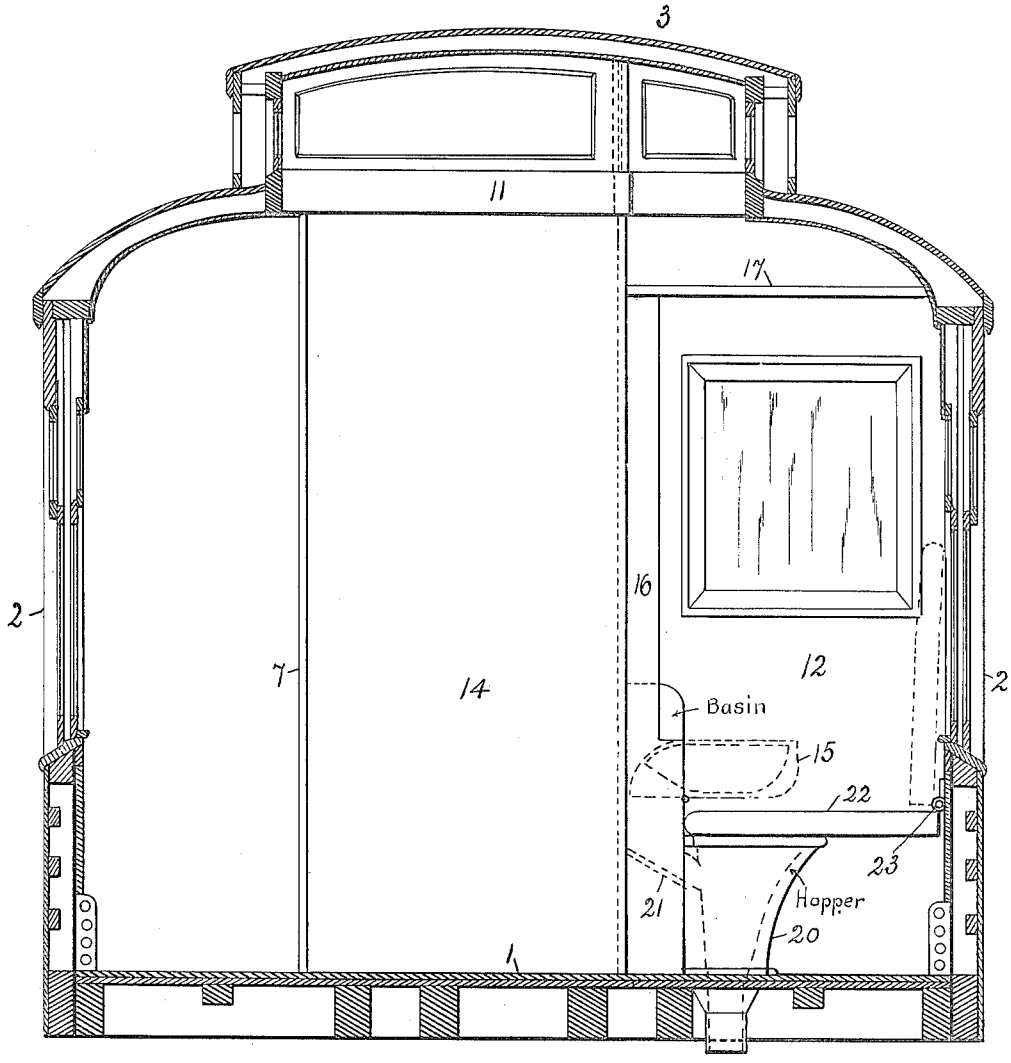
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3 SHEETS—SHEET 2.



Section on Line X-X

Fig. 3

Witnesses.

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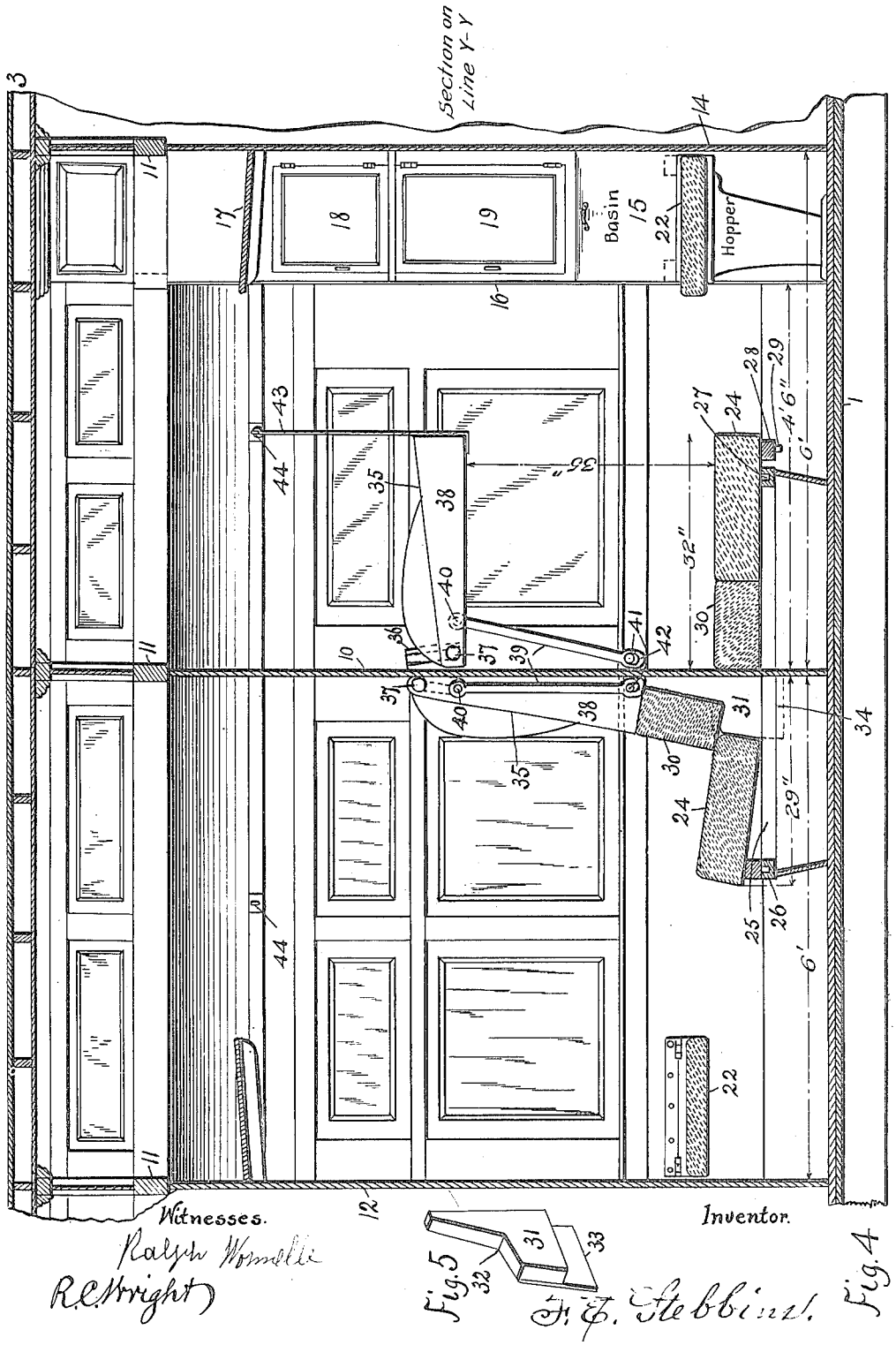


Fig. 4

Fig. 5

UNITED STATES PATENT OFFICE.

FRANK E. STEBBINS, OF WASHINGTON, DISTRICT OF COLUMBIA.

COMPARTMENT-CAR.

1,231,806. Specification of Letters Patent. Patented July 3, 1917.

Application filed July 29, 1912, Serial No. 712,047. Renewed November 25, 1916. Serial No. 133,466.

To all whom it may concern:

Be it known that I, FRANK E. STEBBINS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Compartment-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is the production of a car having the interior space divided by partitions to form compartments and a longitudinal passageway, and in such a manner that the limited available space in a car of a definite length shall be utilized more effectively than heretofore and a greater number of compartments be provided, each having preferably suitable toilet appliances, and movable upholsterings which by day shall constitute a perfect seat and back and which may be moved to form an upper berth and a lower berth for sleeping purposes at night.

My invention consists in dividing the interior space of a car, or part thereof, into compartments by a longitudinal partition, cross partitions, and by partitions each of which is comprised of two parts not in the same vertical plane, one abutting the longitudinal partition and the other abutting the car wall and the adjacent ends of said parts united by a third part, forming compartments each wider at one end than at the other.

It further consists in a seat, and a back divided longitudinally, the upper part of the back being adapted to form an upper berth and the lower part of the back with the seat adapted to form a lower berth, each of said berths extending across or crosswise of the car, said seat and back each having one end abutting one car wall, and a passageway between their opposite ends and the other car wall.

Finally, the invention consists in certain novelties of construction and combinations and arrangements of parts relating to the toilet appliances, supplemental seat, and other details, as hereinafter set forth and claimed.

The accompanying drawings illustrate an example of the physical embodiment of the invention constructed according to the best mode of procedure I have so far devised.

Figures 1 and 2 are horizontal sectional views of a car, said sections passing through the windows and above the seat backs.

Fig. 3 is a cross section of the car on line x—x of Fig. 2.

Fig. 4 is a longitudinal vertical section taken on the irregular line y—y of Fig. 2.

Fig. 5 is a perspective view of a support for the lower part of the back upholstering.

Referring to the figures, the numeral 1 designates the floor of the car; 2, the side walls; 3, the raised deck; and 4 the end walls. The frame of the car may be of any desirable construction as relates to material, the shape of the roof, and the location of doors. The spacings of the windows are determined by the relative locations of the compartments.

At the ends of the car are doors 5, and toilet rooms 6, each at a corner of the car and adjacent a door. The intermediate space is divided into a series of compartments A, in this instance eleven in number, and a longitudinal passageway B adjacent one of the side walls, but each half of the passageway may be located at opposite sides of the car and united at the middle thereof. The longitudinal vertical partition 7 defines and bounds the ends of all the compartments A and supports doors 8 which shut off the compartments from the passageway, one door being provided for each compartment. Sliding panels 9, one at the end of each seat in a compartment, also may be provided to allow the passengers to look through the windows next to the passageway. Two types of partitions separate the compartments, extending crosswise of the car, one from another or from others. Partitions 10 are located at right angles to the wall and floor of the car and extend from the wall to the partition 7 and from the floor to the roof or to arch rails 11, the spaces above the rails being closed by panels which extend to the roof. The other type of partition is of an irregular shape and comprises three parts; first, the part 12 extending inwardly from the wall about one-half the length of a compartment; secondly, the part 13 preferably located at right angles to the part 12, though it may be on a curved line and approximately one and one-half feet in width; and, thirdly, a part 14 extending from part 13 to the longitudinal partition 7, as shown. The disposition of the three parts of the partition forms an alcove C in each compart-

ment except the one at the end of the series. At opposite sides of part 13 of the partition and within the alcoves of adjacent compartments are located hinged and folding wash basins 15 which close to vertical positions back of vertical panels 16 extending from the floor to cross shelves or baskets 17, as illustrated. Above the basins are wall pockets 18 and 19 for towels, etc., closed by doors. A hopper 20 is located below and in front of each basin, and water discharged from the basin is deflected by a partition 21 to the interior of the hopper and thence through the floor by a discharge outlet. Above the hoppers are upholstered seats 22 having hinges 23 which unite one end of a seat to the wall or to the partition 7 so the seat can be turned up out of the way, as shown by dotted lines in Fig. 3.

Each compartment is provided with seat and back upholsterings of a length equal to the length of a compartment and which can be transformed into berths for night use. Number 24 designates the seat or seat cushion about twenty inches in width; 25, end rails secured to the car wall and to the partition; 26, the front rail having recesses 27 therein; 28, a cleat secured to the front under surface of the seat or seat cushion to raise the front edge approximately two inches; 29, pins projecting from the cleat and adapted to enter the recesses 27 in the front rail; 30, the lower back upholstering approximately in this particular instance twelve inches in width; 31, two removable supports for the lower back upholstering to hold it in an inclined position, one support being located at the wall and one at the longitudinal partition; 32, a notch in each support of a shape to hold the lower back upholstering in the proper position to sustain the lumbar region of the occupant's back; 33, an extension of the support adapted to enter a slot 34 in connection with an end rail and maintain the support in place; 35, the upper back upholstering about thirty two inches in width and of the same length as a compartment; 36, slotted plates, one secured to the wall and the other secured to the partition 7 and at the same height as the other plate; 37, journals secured to the end pieces 38 of the frame supporting the upper back upholstering, said journals having their free ends movably located within the slots of the two plates 36, as shown in Fig. 4 at the right; 39, fulcrum bars at the opposite ends of the upper back upholstering, the upper end of each bar being pivoted by a journal 40 to an end piece 38, and the lower ends of the two bars pivoted by journals 41 to the side wall and to the longitudinal partition 7 bounding the passageway; 42, a slot at the lower end of a fulcrum bar; 43, cords or similar means for supporting the upper back upholstering in a horizontal position, said cords engaging hooks at the wall or partition; and 44 designates such hooks for receiving rings or hooks at the ends of the supporting means.

As the end rail 25, slotted plate 36, fulcrum bar 39 and the journals and the support 31 located at the partition 7 are identical with those at the wall, they have not been shown by the drawings.

The left hand compartment, Fig. 4, shows the relative locations of the seat or seat cushion, lower back upholstering, and upper back upholstering as arranged to form a theoretical perfect seat by day. It will be observed that the slots 42 at the lower ends of the fulcrum bars allow the upper back upholstering to rest upon the top edge of the lower back upholstering with sufficient weight to close the space between their adjacent meeting edges and thus maintain a continuous, uniform and even surface for the support of the occupant's back. Obviously, with this disposition of the parts the journals at the upper edge of the upper back upholstering do not rest at the bottoms of the slots in the plates. To transform the upholsterings into upper and lower berths, the front edge of the seat or seat cushion is raised and the entire cushion pulled forwardly and dropped to a horizontal position upon the rails; the lower back upholstering is then turned over upon the cushion, the supports 31, 31 removed and the upholstering turned backwardly to a horizontal position at the rear of the seat or seat cushion, thus forming a lower berth foundation of a predetermined width. Journals may be located at the rear corners of the cushion or other analogous means which will limit the outward movement of the cushion. By widening the lower back upholstering a lower berth of three feet or more in width can be formed.

The upper back upholstering is finally swung upwardly upon the fulcrum bars, while the journals travel downwardly within the slotted plates, bringing the upper berth to a distance of approximately thirty five inches from the lower berth, where it is easily accessible.

To use the toilet appliances the hinged seat 22 in any alcove C is turned up as shown in dotted lines in Fig. 3.

From the foregoing description taken in connection with the drawings it is clear that I have produced a car which possesses the characteristics set forth as the purpose of the invention. Obviously, parts of the improvements may be used exclusive of other parts. The fulcrum bars may in some cases be omitted, and part only of the toilet appliances be embodied in connection with the alcove spaces. Analogous means may be employed for raising the outer edge of the seat or seat cushion by day and for supporting

the lower part of the back upholstering in an inclined position.

What I claim is:

1. A car having within its interior longitudinal and cross partitions forming a side passageway and compartments between a car wall and the passageway, some of the cross partitions being at right angles to the passageway and others of an irregular shape so each of a plurality of said compartments will be wider at one end than at the other, said wider ends being open and forming parts of the compartments, toilet appliances in said wider ends, and a convertible seat and berth in each compartment opposite an irregular shaped partition and the toilet appliances.

2. A car having within its interior longitudinal and cross partitions forming a side passageway and compartments between a car wall and the passageway, each of a plurality of said compartments having an open alcove C with a seat for a passenger therein, and a seat and back upholsterings of the length of the compartment located opposite the alcove and adapted to be transformed into a lower berth and an upper berth.

3. A car having within its interior longitudinal and cross partitions forming a side passageway and compartments between a car wall and the passageway, each of a plurality of said compartments having an open alcove C with a wash basin therein, and means for forming a lower berth and an upper berth opposite the alcove.

4. A car having within its interior longitudinal and cross partitions forming a passageway and compartments between a car wall and the passageway, each of a plurality of said compartments having an open alcove C with a folding wash basin therein, and means for forming a lower berth and an upper berth opposite the alcove and both berths extending crosswise of the car.

5. A car having within its interior longitudinal and cross partitions forming a side passageway and compartments between a car wall and the passageway, each of a plurality of said compartments having an open alcove C with a wash basin and hopper therein, and seat and back upholsterings located opposite the alcove and extending crosswise of the car, said upholsterings being adapted to be transformed into a lower berth and an upper berth.

6. A car having within its interior longitudinal and cross partitions forming a side passageway and compartments between a car wall and the passageway, each of a plurality of said compartments having an open alcove C with a wash basin and a seat for a passenger in the alcove, and means for forming an upper berth and a lower berth opposite to the alcove and said seat therein.

7. A car having within its interior longitudinal and cross partitions forming a side passageway and compartments between a car wall and the passageway, each of a plurality of said compartments having an alcove C with a folding wash basin, a movable seat and a hopper beneath the seat within the alcove, and means for forming a lower berth and an upper berth at the cross partition opposite the alcove.

8. A car having within its interior longitudinal and cross partitions forming a passageway and two compartments A A, the partition separating the two compartments being comprised of parts 12 and 14 and the intermediate part substantially at right angles to and joining parts 12 and 14 forming in each compartment an alcove C, a wash basin being located in each alcove and against the said intermediate part, and movable seat and back upholsterings in each compartment and at the partition opposite an alcove adapted to be transformed into an upper berth and a lower berth.

9. A car having within its interior longitudinal and cross partitions forming a passageway and two compartments A A, the partition separating the two compartments being comprised of parts 12 and 14 and the intermediate part 13 joining parts 12 and 14 forming in each compartment an alcove C, a folding wash basin 15 being located in the alcoves, a seat being located between part 13 of the intermediate partition, seats in the alcoves, a seat being located between a basin and wall and a basin and the partition, and means for forming a lower berth and an upper berth in each compartment opposite the alcove and wash basin.

10. A car having within its interior longitudinal and cross partitions forming a passageway and two compartments A A, the partition separating the two compartments being comprised of parts 12 and 14 and the intermediate part joining parts 12 and 14, thus forming in each compartment an open alcove C, and a cross seat and back upholsterings adapted to be transformed to form a lower berth and an upper berth in each compartment opposite an alcove.

11. The combination in a car having a side passage adjacent a wall, of a partition, an upholstered seat, and back upholstering each extending from the side passage to the opposite wall; said back upholstering being formed in two longitudinally divided parts, the upper part being pivoted so as to turn to a horizontal position to form an upper berth, and the lower part being movable and adapted to form with the seat a lower berth extending crosswise of the car.

12. The combination in a car having a side passage adjacent a wall, of a partition, an upholstered seat, and back upholstering each extending from the side passage to the opposite wall; said seat being provided with

means, as a cleat, to raise the outer edge and being movable so it can be drawn forward to occupy a horizontal position, and said back upholstering being longitudinally divided and the lower part thereof adapted to be dropped back of the seat to form with said seat a lower berth.

13. The combination in a car having a side passage adjacent a wall, of a partition, an upholstered seat, and back upholstering each extending from the side passage to the opposite wall; said back upholstering being longitudinally divided into two parts, and means being provided for supporting the upper part thereof so that it can be turned up and bodily dropped to a horizontal position below the line of the top edge of said part when in a substantially vertical position, and said lower part and seat upholstering forming when moved into the same horizontal plane a berth extending crosswise of the car.

14. The combination in a car having a side passage adjacent a wall, of a partition, an upholstered seat, and back upholstering each extending from the side passage to the opposite wall; said back upholstering being longitudinally divided, and the upper part provided at its top with journals movably seated within slotted plates, whereby when the upholstering is turned to a horizontal position it will bodily drop downwardly.

15. The combination in a car having a side passage adjacent a wall, of a partition, an upholstered seat, and back upholstering each extending from the side passage to the opposite wall; said back upholstering being longitudinally divided and the upper part pivotally and movably supported at its upper edge so that when turned to a horizontal position it will bodily drop downwardly; and said lower part and the seat upholstering normally occupying inclined positions being adapted to be shifted and form a lower berth extending crosswise of the car.

16. The combination in a car having a side passage adjacent a wall, of a partition, an upholstered seat, and back upholstering each extending from the side passage to the opposite wall; said back upholstering being longitudinally divided and its upper part provided with movable pivotal connections, and fulcrum bars pivotally connected with said upper part.

17. The combination in a car having a side passage adjacent a wall, of a partition, an upholstered seat, and back upholstering each extending from the side passage to the opposite wall; said back upholstering being longitudinally divided and its upper part provided with movable pivotal connections, and fulcrum bars with slots at their lower ends pivotally connected to said upper part and to the wall and partition, in substance as set forth.

18. The combination in a car having a side passage adjacent a wall, of a partition, an upholstered seat, and back upholstering each extending from the side passage to the opposite wall; said back upholstering being formed in two longitudinally divided parts, the upper part adapted to form an upper berth, and means being present for supporting the lower part in an inclined position between the upper part and the upholstered seat by day; said lower part and upholstered seat being movable to form a lower berth extending crosswise of the car by night.

19. The combination in a car having a side passage adjacent a wall, of a partition, an upholstered seat, and back upholstering each extending from the side passage to the opposite wall; said back upholstering being formed in two longitudinally divided parts, and movable supports, as 31, being present for supporting the lower part in an inclined position by day; said upper part being adapted to be turned to a horizontal position and form an upper berth extending crosswise of the car.

20. The combination in a car having a side passage adjacent a wall, of a partition, an upholstered seat, and back upholstering each extending from the side passage to the opposite wall; said back upholstering being formed in two longitudinally divided parts, the seat upholstering supported in a rearwardly inclined position, and means being present for supporting the lower part of the back upholstering in an inclined position between the upper part and the seat upholstering, whereby said lower part will engage and support the lumbar region of the occupant's back.

21. A car having within its interior a longitudinal partition and cross partitions dividing the main space into a side passageway and a plurality of compartments, some compartments being wider at the end adjacent to the car wall and others wider at the end adjacent the longitudinal partition than at the opposite ends to form open alcove spaces, toilet appliances in the open alcove spaces, and a convertible seat and berth opposite an alcove space within each compartment.

In testimony whereof I affix my signature, in the presence of two witnesses.

FRANK E. STEBBINS.

Witnesses:

WALTER M. FERRIS,

C. M. FORREST.