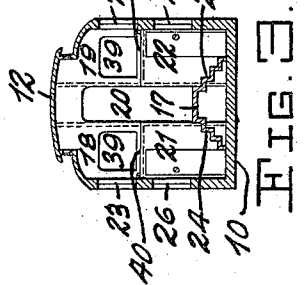
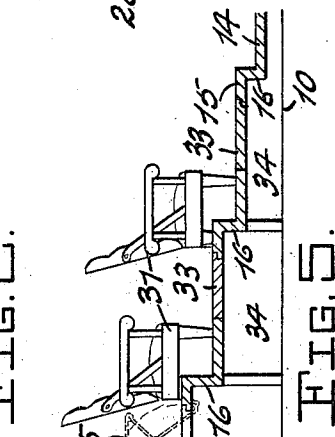
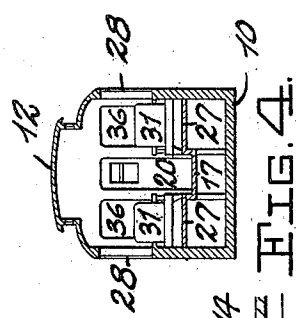
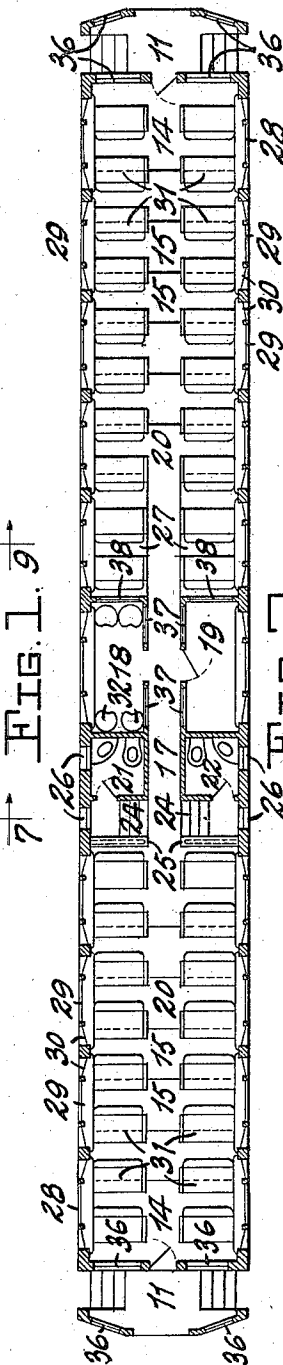
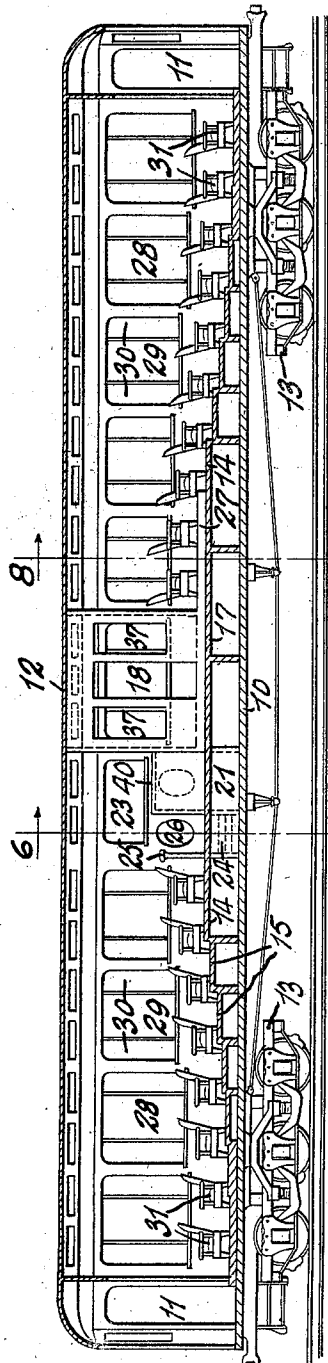


R. M. RODDEN.  
 OBSERVATION CAR.  
 APPLICATION FILED JUNE 18, 1909.

997,704.

Patented July 11, 1911.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

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## OBSERVATION-CAR.

997,704.

Specification of Letters Patent. Patented July 11, 1911.

Application filed June 13, 1909. Serial No. 503,251.

To all whom it may concern:

Be it known that I, RICHARD MONTGOMERY RODDEN, of the city of Montreal, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Observation-Cars of which the following is a full, clear, and exact description.

This invention relates to improvements in observation car construction, and the main object is to provide a car in which each passenger will have a clear and unobstructed view of the surrounding scenery in all directions from any seat in the car.

A further object is to provide a car so constructed that the passengers sitting in the rear of each other will have a clear view over the heads of those sitting in front of them.

A still further object is to provide a car with the smoking and private compartments in the center of the car and so constructed and arranged that such compartments will not obstruct the view of the other passengers.

A still further object is to provide accommodation for hand baggage so that the aisle and foot space between the seats may be kept free from obstruction.

To accomplish these objects, I provide a car body preferably vestibuled, having the floor raised at intervals from the ends of the car to a level central portion, the steps being preferably of gradually increasing height as they approach the center of the car. Trap doors are formed in the steps of this false floor between the seats through which baggage may be lowered into the space between the true and false floors of the car. The sides and ends of the car frame are constructed almost entirely of glass, and the windows are of the bay type so that a passenger may look forward or backward in a line practically parallel with the car.

In the drawings which illustrate my invention:—Figure 1 is a vertical, longitudinal sectional view through the center of the car. Fig. 2 is a sectional plan view of the car showing the arrangement of the windows, lavatories, etc. Fig. 3 is a vertical transverse section on the line 6—7 of Fig. 1. Fig. 4 is a similar view on the line 8—9 of Fig. 1. Fig. 5 is an enlarged detail view showing the construction of the false floor.

Referring to the drawings, 10 designates the horizontal or true floor, 11 the vestibules, 12 the roof, and 13 the trucks supporting the car, all of the ordinary pattern. A false floor 14 is formed above the true floor in a series of steps commencing at each end of the car and extending toward the center thereof. The treads 15 of these steps are of substantially equal width throughout, but the risers 16 preferably increase in height as the steps approach the center of the car. The central portion 17 of this false floor is level, and in the center of the car is located the smoking compartment 18 and a private compartment 19, on opposite sides of the central aisle 20. Lavatories 21 and 22 are located at one end of each of the compartments 18 and 19 across the aisles from each other. The lavatories for purposes of concealment and to allow the placing of a window over same, are lowered below the level of the false floor and are reached by short flights of steps 24, extending transversely of the car. The side of the steps 24 away from the lavatories, is guarded by a rail or half partition 25. Small windows 26 are suitably located to light the steps 24 and the lavatories. The space corresponding to the lavatories at the opposite ends of the compartments 18 and 19 is occupied by seats, and to prevent these seats being on a level, small platforms 27 are formed on each side of the aisle 20 on which these seats are placed. The windows 28 of necessity decrease in height as they approach the center of the car in order that the sills may always be a suitable distance from the level of the seats. These windows are formed in three vertical panels, the center panel 29 being wider than the two side panels 30 which are of equal width. The center panel 29 is placed as closely as possible to the outer surface of the car, while the side panels 30 extend inwardly at an angle therefrom to the usual point for inserting the car windows. It will be seen that these windows are in the form of a bay and will allow a much wider angle of vision than the ordinary windows.

The seats 31 may be of the usual pattern of reversible seats, as shown, or may be replaced by fixed or revolving chairs as is found most desirable. A number of movable or revolving chairs 32 may be placed in the smoking compartment and the private compartment, and in fact the revolv-

ing type of chair may be used with advantage throughout the car, as it enables passengers to turn in any direction with great ease. The seats 31 will normally be arranged to face from the center toward the ends of the car, as shown, and are preferably located at the edges of the steps so that no two adjacent seats on the same side of the aisle will be on the same level. The steps may, however, be increased in width in order to accommodate the seats in pairs, thus allowing them to be reversed to face either way, according to the inclination of the occupant.

A plurality of trap doors 33 are formed in the false floor between the seats, as shown in Fig. 5, and communicate with the spaces between the true and false floors. These spaces may be divided into compartments 34 in order that the baggage of passengers may be placed therein without obstructing the aisles. If so desired, a flexible gate such as that indicated in dotted lines 35 in Fig. 5, may be secured to the under side of the door 33, so that the opening of the trap door will raise the gate and prevent unwary passengers from stepping through the opening.

The ends of the car are provided with windows 36 so as not to obstruct the view from either end of the car. The smoking and private compartments are provided on the outside with the usual bay windows 29 and 30, and on the inside with windows 37, while at each end of the smoking and private compartments, windows or glass partitions 38 and 39 are provided so that no part of the car will obstruct the view from any direction.

It will be understood that the top or ceiling 40 of the lavatories, is below the level of the eye and a view may be had above the ceiling 40 through the windows 23 and through the windows or glass partitions of the central compartments.

The advantages of this construction will be readily apparent as an observation car of this type will permit a clear and unobstructed view from all points without any annoyance from smoke or dust. Freedom of movement in the car and the comfort of passengers will be greatly increased by the absence of baggage in the aisles and between the seats.

Having thus described my invention, what I claim is:—

1. In a car of the class described, a plu-

rality of seats arranged on a floor sloping upwardly from both ends of the car to the center thereof.

2. In a car of the class described, a floor formed of a plurality of steps ascending from the ends of the car to a level central portion.

3. In a car of the class described, a floor composed of a plurality of transverse steps ascending from the ends of the car toward the center thereof, a level central portion connecting said steps, and seats arranged on the steps.

4. In a car of the class described, a floor composed of a plurality of transverse steps ascending from the ends of the car toward the center thereof, a level central portion connecting said steps, a plurality of inclosures on said level portion of the floor, and seats arranged on the steps.

5. In an observation car, a floor composed of a plurality of transverse steps of unequal height ascending from the ends of the car toward the center thereof, a level central portion connecting said steps, a plurality of glass inclosures on said level portion of the floor, seats arranged on the steps, and doors in the floor between the seats.

6. In an observation car, a floor composed of a plurality of transverse steps of unequal height ascending from the ends of the car toward the center thereof, a level central portion connecting said steps, a plurality of glass inclosures on said level portion of the floor, seats arranged on the steps, doors in the floor between the seats, and a plurality of bay windows in the sides of the car decreasing in height as the floor ascends.

7. An observation car of the character described having the sides, ends and partitions thereof formed of glass, and adjustable seats arranged on a floor sloping upwardly from both ends to the car to the center thereof.

8. An observation car, of the character described having the seats arranged on a floor sloping upwardly from both ends of the car to the central portion thereof, and the lavatories and private compartments located centrally of the car.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

R. MONTGOMERY RODDEN.

Witnesses:

STUART R. W. ALLEN,  
E. R. MCKENZIE.