

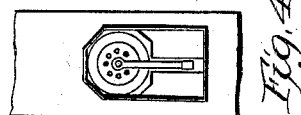
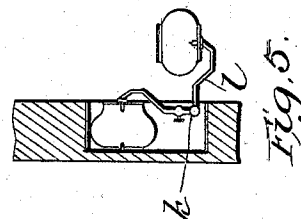
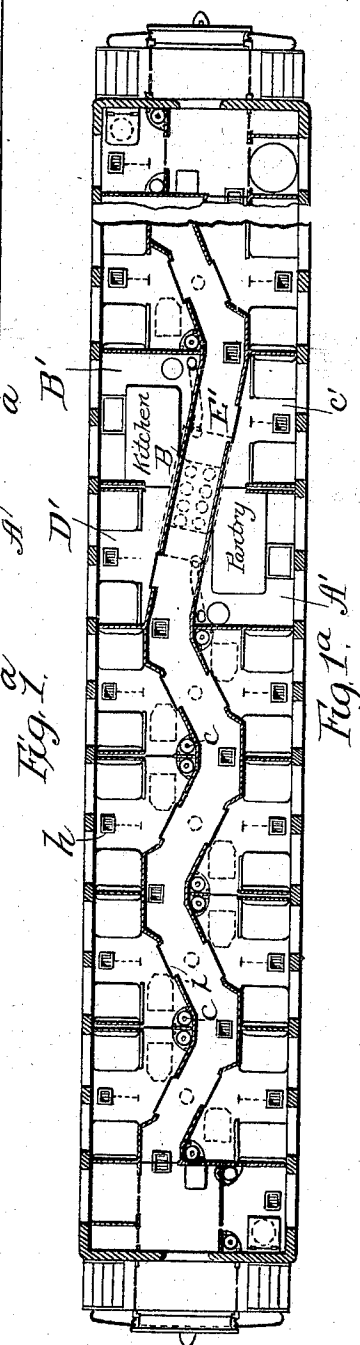
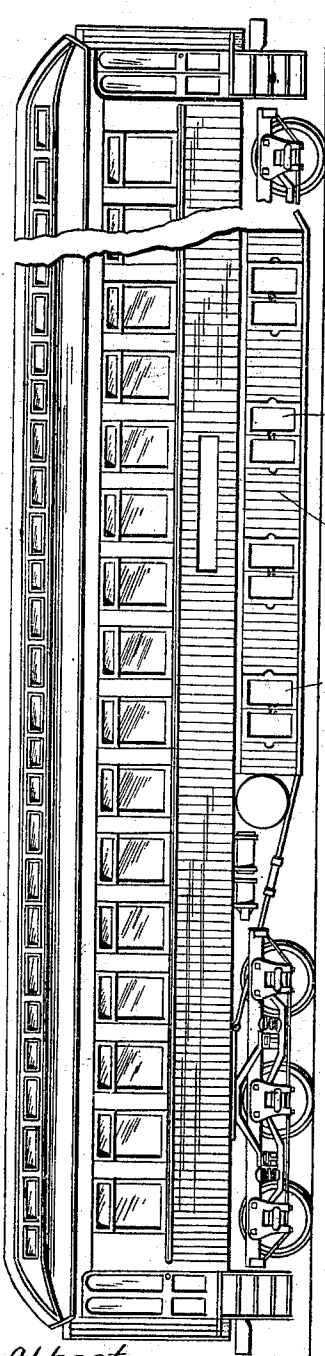
(No Model.)

5 Sheets—Sheet 1.

E. G. ALLEN.
RAILWAY CAR.

No. 513,471.

Patented Jan. 30, 1894.



Attest
Malvern Donaldson
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(No Model.)

5 Sheets—Sheet 2.

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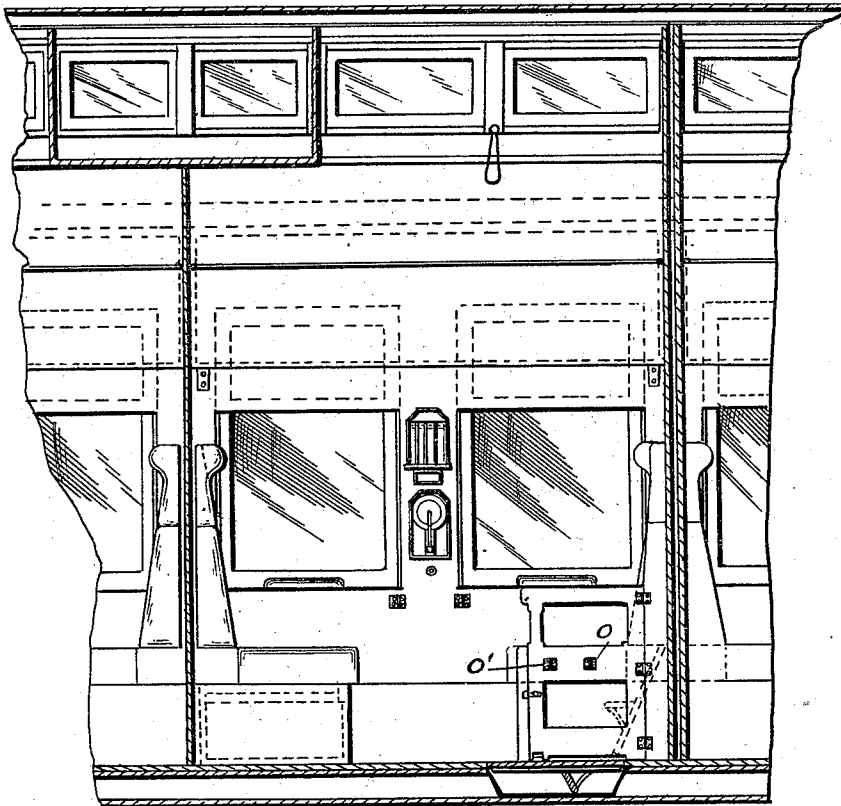


Fig. 2a.

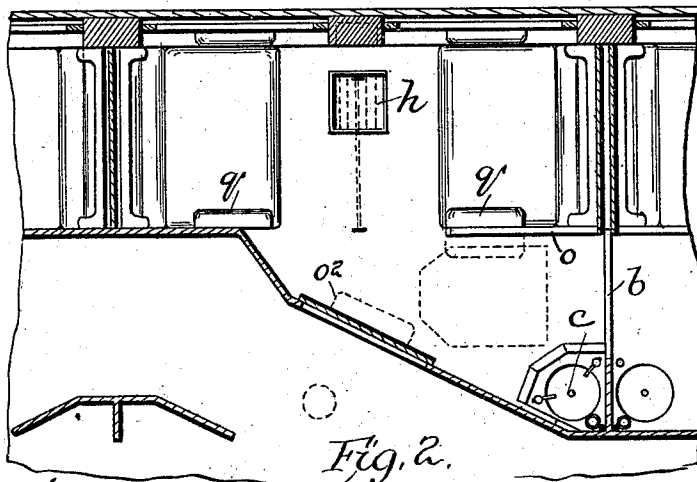


Fig. 2.

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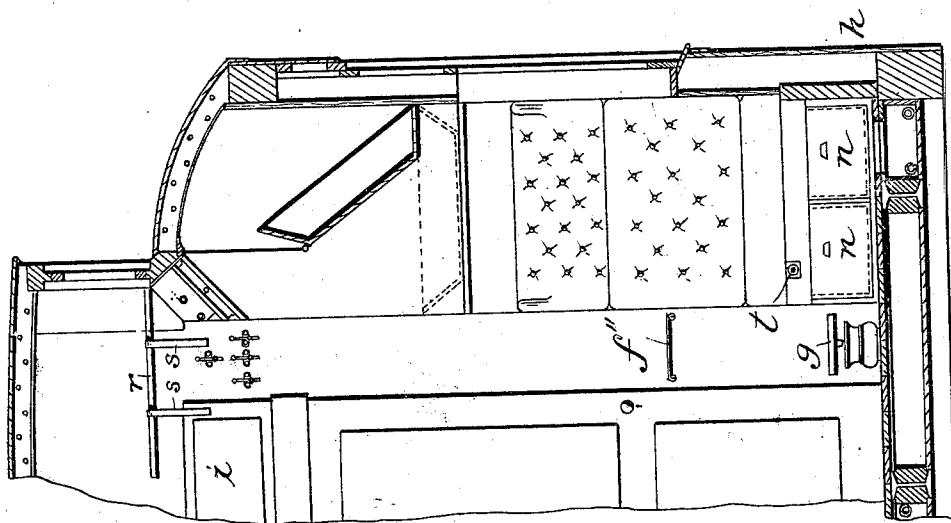
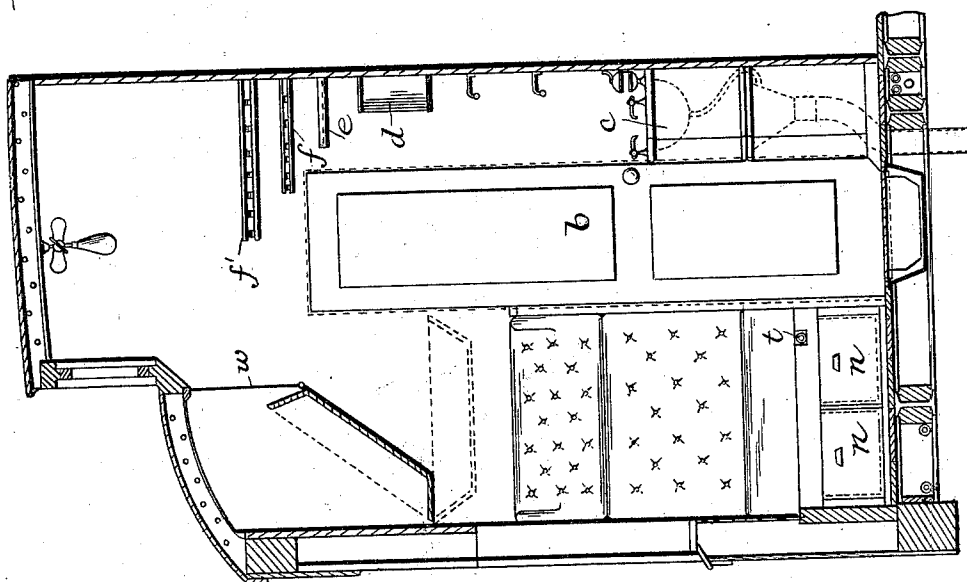


Fig. 3.



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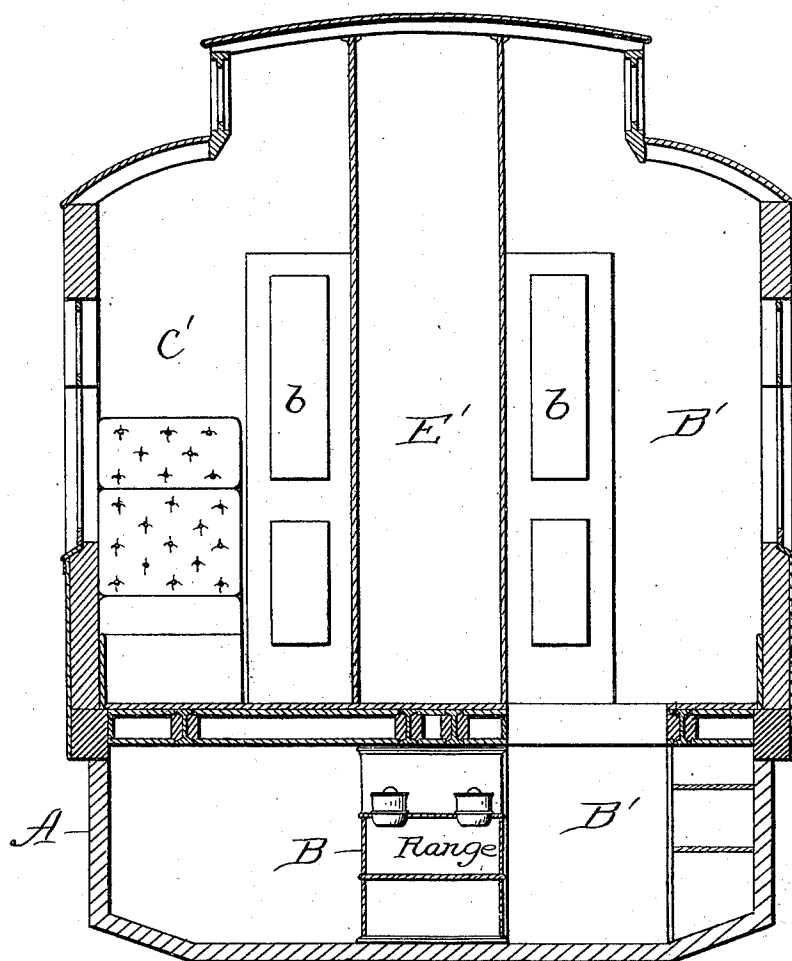
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Fig. 3a



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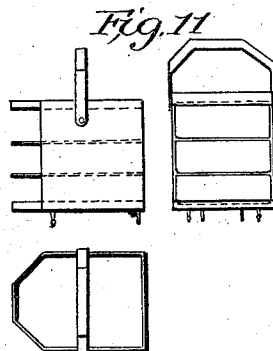
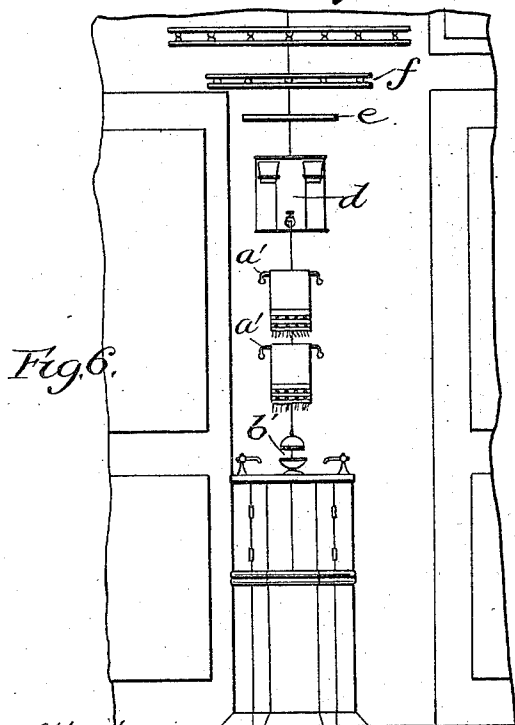
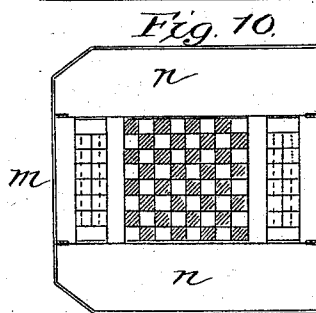
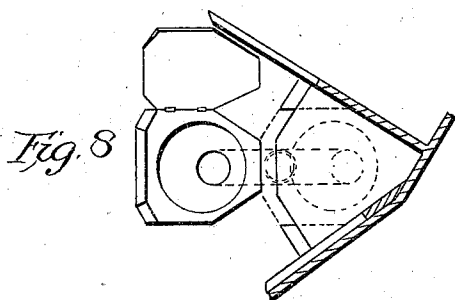
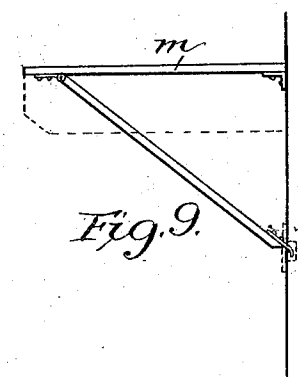
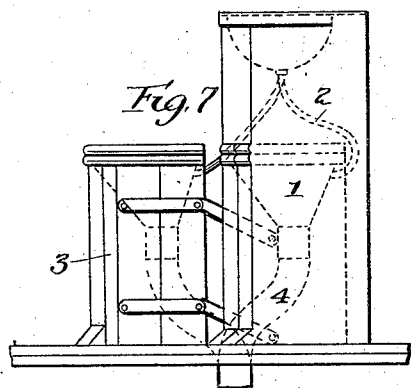
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Patented Jan. 30, 1894.



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UNITED STATES PATENT OFFICE.

ELBRIDGE G. ALLEN, OF BOSTON, MASSACHUSETTS.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 513,471, dated January 30, 1894.

Application filed January 9, 1893. Serial No. 457,792. (No model.)

To all whom it may concern:

Be it known that I, ELBRIDGE G. ALLEN, a citizen of the United States of America, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Hotel-Cars, of which the following is a specification.

The object of my present invention is to utilize in a railway car the compartment system illustrated in Letters Patent of the United States, granted to me on November 11, 1890, and February 3 and 10, 1891, and numbered respectively 440,295, 445,870 and 446,315, but to add very materially to the comfort and convenience of the occupants so as to render each compartment absolutely complete for use during the day and during the night, as a dining room, as a smoking room, as a parlor and in fact sufficient for occupation during a long or short trip, rendering it unnecessary for the occupant or occupants to leave the compartment for any purpose, and incidentally rendering unnecessary as will be apparent, the use of cars now necessary for independent purposes, such as baggage, smoking, dining, day and sleeping cars.

In carrying out my invention, I utilize the general form of compartment shown in Letters Patent No. 446,315 above referred to with some slight change in the shape of the partition as will be more fully hereinafter set forth, and it will be observed that by the use of a compartment I render unnecessary independent rooms, such as a smoking and wash room as the compartments constitute independent rooms shut off from the rest of the car, and provide absolute privacy and exclusion if desired from the other occupants. Within the compartment I provide a lavatory which is in connection with water pipes so as to supply hot and cold water to each compartment. A portable ice cooler is arranged above the lavatory and thus each compartment is supplied with ice water. Above the ice cooler are arranged a series of shelves of gradually increasing depth for the reception of such articles as brushes, combs and the like, and above these shelves I provide a larger shelf for the reception of a valise, or a like large article. A sufficient number of coat hooks may be arranged around the walls of the compartment for the support of such articles.

The walls upon the right and left of the lavatory run at an angle to each other and two sliding doors constitute a part of these walls, as hereinafter more fully described, and these doors support mirrors which being upon each side of the lavatory enable the person making his or her toilet to turn from one to the other by simply moving the head to observe every part of the head or body. I also provide an umbrella rack with a receptacle to catch the drippings which may discharge into a cuspidor, and beneath the seats I arrange drawers for the reception of baggage which enables the occupants to carry their garments with them in such condition as to be accessible for use en-route.

In using the compartment as a sleeper the seats and backs are utilized in substantially the same way as at present, but instead of the loose sticks for supporting the seats when brought together to occupy the space between them, I provide two slides, one upon each side located above the drawers, which I pull out to meet the slide upon the other side, and these serve with the inside sill beneath the window to firmly support and sustain the seats. Instead of having a mattress made up in the ordinary way I cover it with a plush surface and cover the pillows in a like manner and thus whenever it is desired the occupant of the compartment may in a very short time draw together the seats and place his plush covered mattress upon them and improvise in this way a very comfortable couch. The arm rests of the seats are removable, being provided with projecting lugs which fit in cleats on the arms and these arm rests are utilized to form a convenient means of gaining access to the upper berth, one of them being located on the side of the arm of one of the seats where cleats are provided to receive the lugs of the rests, and on a higher plane cleats are provided on the door, so that the person who is to occupy the upper berth steps from the floor to the first rest and from there to the second, and by grasping suitable straps depending from a cross bar extending across the upper part of the compartment the upper berth can be gained very readily. The upper berth is in tray form and when in its raised or closed position it does not fit tightly against the upper part of the car, as is the case in the ordi-

nary Pullman car, and which is very objectionable by reason of the fact that the bed clothes are shut in tightly and there is absolutely no ventilation, while in my improved structure a considerable space is left for the free passage of the air and this space is protected from cinders and dust by a curtain which is utilized at night as a shield or guard to protect the occupant of the upper berth from draught and from the cinders which may enter the ventilator, and it will thus be seen that the occupant of the lower berth may have as much air as he may desire without in any way causing inconvenience to the occupant in the upper berth.

Whenever it is found desirable, a table may be placed between the seats and supported in position by engaging the ordinary recesses or cleats in or against the side of the car and this table is made with a center piece with flaps which hinge upwardly folding upon the top of the table and after it is placed in position the flaps are turned outwardly and downwardly forming a complete table, and in the face I prefer to inlay checker and cribbage boards so that it may be used for the playing of checkers, chess, cribbage and other games. The folding leaves, not only provide for the compact storing of the table, but it also enables a maximum size of table to be used and allows the occupant of either seat to step out into the compartment by lifting the leaf. The side of one of the seats is also hinged so as to swing outwardly and thus add to the convenience of the occupant of this seat, in stepping out into the compartment either while the table is set or when the seats are made up in the form of a bed. The table is also used to serve meals and in order to add to the convenience of the system in this connection I provide a portable receptacle for transporting the articles of food as well as the dishes from the kitchen to the compartment. This consists of a sheet metal casing provided with a series of shelves open at the front only and having a bail as a handle with projecting lugs on the rear side of the casing which is adapted to cleats on the door, and when the receptacle is brought in it may be fitted to the cleats and thus held securely in position to be reached easily from the table or by the waiter serving without requiring a separate stand or support, and at the same time the articles are in a covered receptacle and free from dust and all danger of being upset either in transit or while supported on the door.

Above the alcove in which the gas jet is fitted is a second alcove in which I purpose arranging a series of books forming a part of a library carried by the car and a catalogue in each alcove will recite the title of each book and the alcove or compartment in which it may be found. The ordinary electric bell connections may call a porter at any time to make an exchange or secure the desired book if contained in another compartment.

It will be observed that by rendering unnecessary the need of separate rooms such as a smoking and wash room a great deal of space is utilized for additional compartments not possible in the cars as at present constructed. The car also contains a kitchen and pantry of novel arrangement all of which will be hereinafter more fully set forth.

In the accompanying drawings: Figure 1, is a side elevation of my improved hotel car. Fig. 1^a, represents a longitudinal horizontal section through a car constructed according to my invention. Fig. 2, is an enlarged sectional view of adjoining compartments showing the lavatory and closet with the sliding doors between the compartments and leading into the same. Fig. 2^a, is an elevation of a compartment with the walls in section. Fig. 3, is a cross section of the car partly broken away. Fig. 3^a is a sectional view of the car through the kitchen compartment and one of the smaller sleeping compartments. Figs. 4 and 5, are detail views of the pendent gas jet and alcove. Fig. 6, is an elevation of a corner of the compartment containing the lavatory. Figs. 7 and 8, show detail views of the closet. Figs. 9 and 10, are views of the table. Fig. 11, represents different views of the receptacle for the food and dishes.

The compartments in the present case are identical in location and configuration to those shown in Patent No. 446,315 with two exceptions, the first being that the partition as it leaves the side of the seat which it follows in the narrowest part of the compartment extends at a less angle than in the patent referred to which gives more space in the aisle and provides a convenient recess in which to allow for the passage of persons at this point. The other point of difference is in squaring the apex of the partition at the widest part of the compartment which likewise adds to the aisle space instead of rounding this point as in my former patent.

As the present car is intended as a hotel car I have provided a kitchen and pantry out of two of the compartments A', B' centrally of the car and the adjoining compartments C', D', are used for the help employed in the car. This occupies the space of four compartments as shown, and through these the aisle E' runs at an angle to the line of the car providing a large and a small compartment on each side and in reversed position. The two large compartments are used as kitchen and pantry and instead of being of the usual depth of the other compartments, the floors are on a level not with the car floor proper but drop to the bottom of an extension A. The range B, is located directly beneath the floor of the aisle as shown in Fig. 1^a, and access may be had from one compartment to the other over the range and between it and the floor of the aisle. The pantry and kitchen may be fitted up with the most improved appliances. The extension A, on either side of the kitchen and pantry compart-

ments serve to contain the supplies and baggage which may be inserted through doors *a*, *a* from the outside.

In the compartments the doors are preferably sliding as at *b*, and both may carry mirrors on their inner faces which are convenient by reason of the location of the lavatory *c*, arranged in the angle of the compartment. The ice cooler *d*, is arranged directly above the basin so that the drippings may fall into the same. Towel racks *a'*, and a soap dish *b'*, are also provided with holders for glasses on the cooler. Shelves *e*, *f*, are arranged for smaller articles these being of different depth and having depending curtains on the edge to keep off the dust and pockets may also be used to hold the articles. The top shelf *f'* is sufficiently large to hold a valise or like article. To one side of the door I arrange a rack *f''* for umbrellas and canes having a tray *g*, to catch the drippings which discharge through a tube into the cuspidor. The heat enters through a register *h*, in the floor and the light through a glass panel above the door from the light *i*, in the aisle. Additional heat and light are secured from a drop light or jointed arm *l*, pivoted to a gas pipe *k*, in a recess in the side of the car which is swung down into position when desired for use and secured in the recess when not in use, as shown in Figs. 4 and 5. In place of the globe a gas heater may be used. A table *m*, is used beneath the gas jet having folding wings *n*, adapted to allow for the lifting of the leaves or wings to permit the occupants of the seat to remove therefrom without the removal of the table. The side of the seat *o*, is hinged so as to swing outwardly and thus conveniently allow for the withdrawal of the occupant from the table or from the couch or bed when made up. When meals are served the food and dishes are brought into the compartments in the receptacle *p*, which is supported upon the door by lugs fitting between cleats on the door. The arm rests *q*, *q* are removable being held between cleats on the side of the arms and when removed at night are used as a means of gaining access to the upper berth, one being fitted to cleats on the side of the seat *o*, as shown at *o'*, and the other to the cleats on the door as at *o''*. A bar *r*, extends across the upper part of the compartment having depending straps *s*, *s*, which are readily grasped and hence there is none of the present annoyances and difficulties of getting into the upper berth. Slides *t*, *t*, help support the seats when drawn together to form the bed these being drawn out to meet each other. Beneath each seat are provided two drawers *u*, *u*, which contain baggage and keep articles entirely free from dust and dirt.

The upper berth when down rests upon rigid strips *v*, *v*, on the end walls of the compartment which form a firm support and when up do not tightly close but leave an open space for ventilation this being covered by a curtain *w*, extending the length of the berth

and at night this curtain forms a shield against a draft and cinders and thoroughly protects the occupant of this berth.

The closet and seat or stool combined is located beneath the lavatory basin and consists of a hopper 1, covered by a removable seat and inclosed by a casing 3. The discharge tube 2, from the basin enters the hopper below the mouth so as not to interfere with the seat and as this pipe is flexible it permits of the withdrawal of the seat from beneath the lavatory. The hopper is provided with the ordinary cup and handle for operating it and all the water from the lavatory passes through it. A discharge tube 4, connects the hopper to a thimble passing through the car floor this connection being also flexible.

The heating pipes which are in connection with the engine or other source of heat are as shown in Fig. 3, inclosed within an air tight box *h'*, and this box communicates with the compartment through the registers, and thus a combination of steam heat and hot air may be secured and in summer time the boxes *h'* may be in connection with any air forcing device to supply the compartments with cooled air. A bath tub may be located in the floor of the car as at *z'*, Fig. 2^a provided with a hinged lid. Each compartment may also be provided with an electric light and a fan for cooling the room.

I ventilate the space beneath the roof of the car as shown in Fig. 3, by perforating the rafters so that there is a circulation of air beneath the roof which materially lessens the heat in summer within the car.

What I claim is—

1. A railway car comprising a central passage and a series of compartments on each side thereof, one of said compartments having its floor depressed below the level of the car floor proper, substantially as described.

2. A railway car comprising a central passage and a series of compartments on each side thereof two of said compartments, one on each side of the passage, having their floors depressed below the level of the other compartments and communicating with each other beneath the passage way, substantially as described.

3. In a railway car, a group of four compartments with a passage way extending between them at an angle to the walls of the car, two of said compartments having depressed floors and arranged diagonally opposite each other, and the other two being also diagonally opposite each other but of smaller size, substantially as described.

4. In a railway car, a group of four compartments arranged in pairs on opposite sides of a passage way extending at angle to the walls of the car, two of said compartments having depressed floors and communicating with each other beneath the floor of the passage way and a stove located in the space beneath the passage, substantially as described.

5. In a railway car, a compartment on one side of the car, having a depressed floor, adapted for use as a kitchen and a smaller compartment opposite the same for use as a sleeping room having its floor on a level with the car floor proper and a passage running at an angle between the said compartments, substantially as described.

6. In a railway car, a zig-zag passage having compartments on each side thereof and a group of four compartments having the passage between them extending in a straight line but at an angle to the car wall, two of said compartments, diagonally opposite, having their floors depressed below the level of the car floor proper, substantially as described.

7. In a railway car, a compartment, a lower berth, an upper berth having a space between the upper edge thereof and the car ceiling when in its closed position, and a curtain supported at its upper edge from the top of the car and depending to cover the upper edge of the closed berth, substantially as described.

8. In a railway car, a compartment, seats adapted to form a lower berth, removable arm rests fitted thereto and supports for said arm rests arranged in different planes within the compartment whereby the said rests form a means of access to the upper berth, substantially as described.

9. In a railway car, a compartment, seats adapted to form a lower berth, removable arm rests fitted thereto, supports for said arm rests arranged in different planes and a rod supporting straps for gaining access to the upper berth, substantially as described.

10. In a railway car, compartments, seats therein facing each other one of said seats having a hinged end adapted to swing outwardly, substantially as described.

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

ELBRIDGE G. ALLEN.

Witnesses:

THOMAS W. HOOGS,
OSCAR M. CROCKER.