

1,011,952.

Patented Dec. 19, 1911.

6 SHEETS—SHEET 1.

FIG. 1

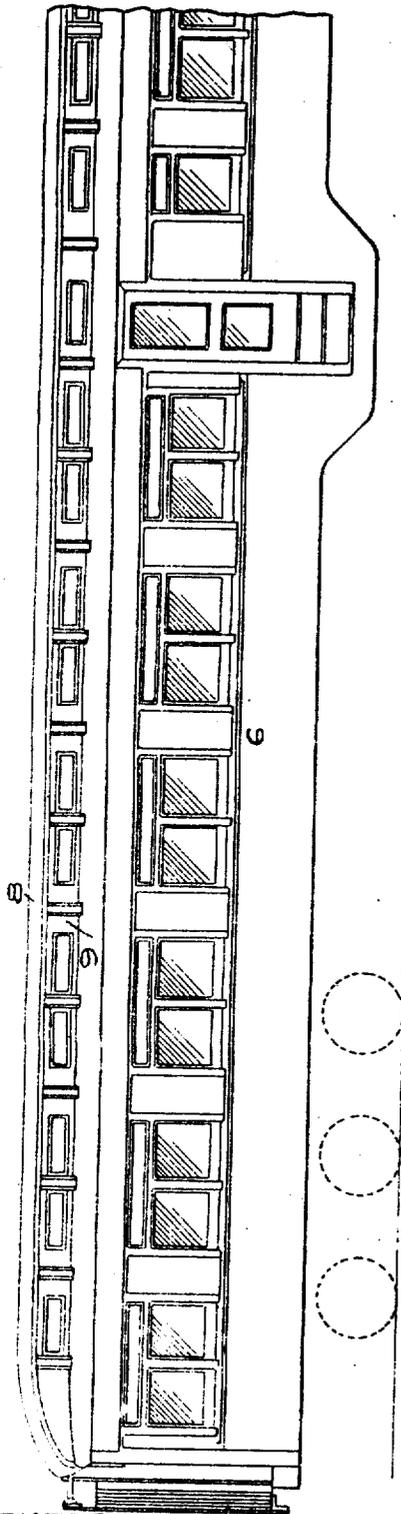
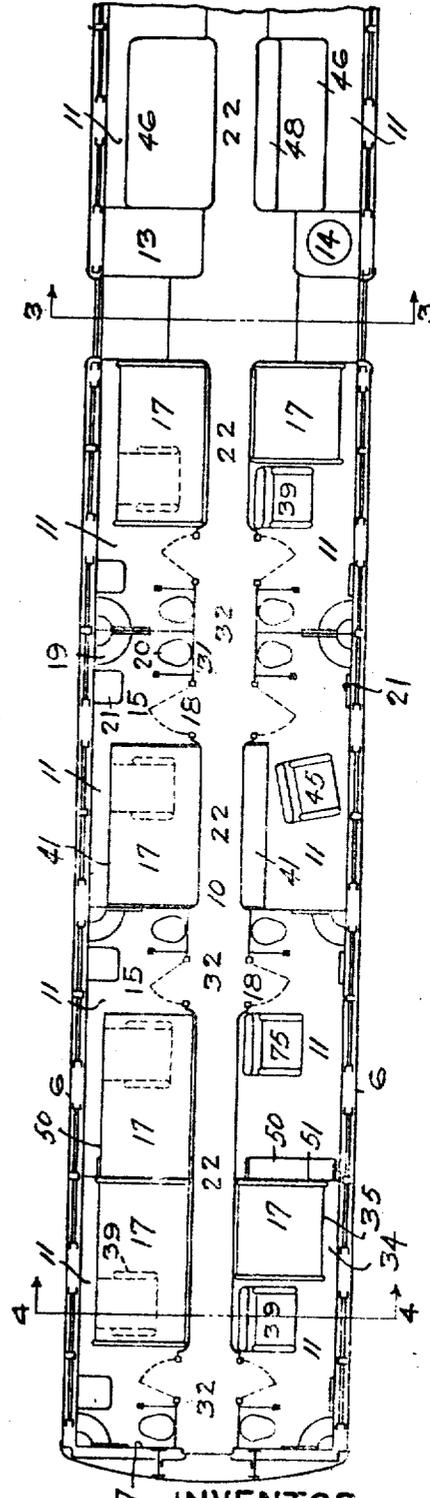


FIG. 2



WITNESSES.  
J. B. Keller  
Robert C. Fother

7 INVENTOR.  
John M. Hansen  
By King & Fother  
Attorneys

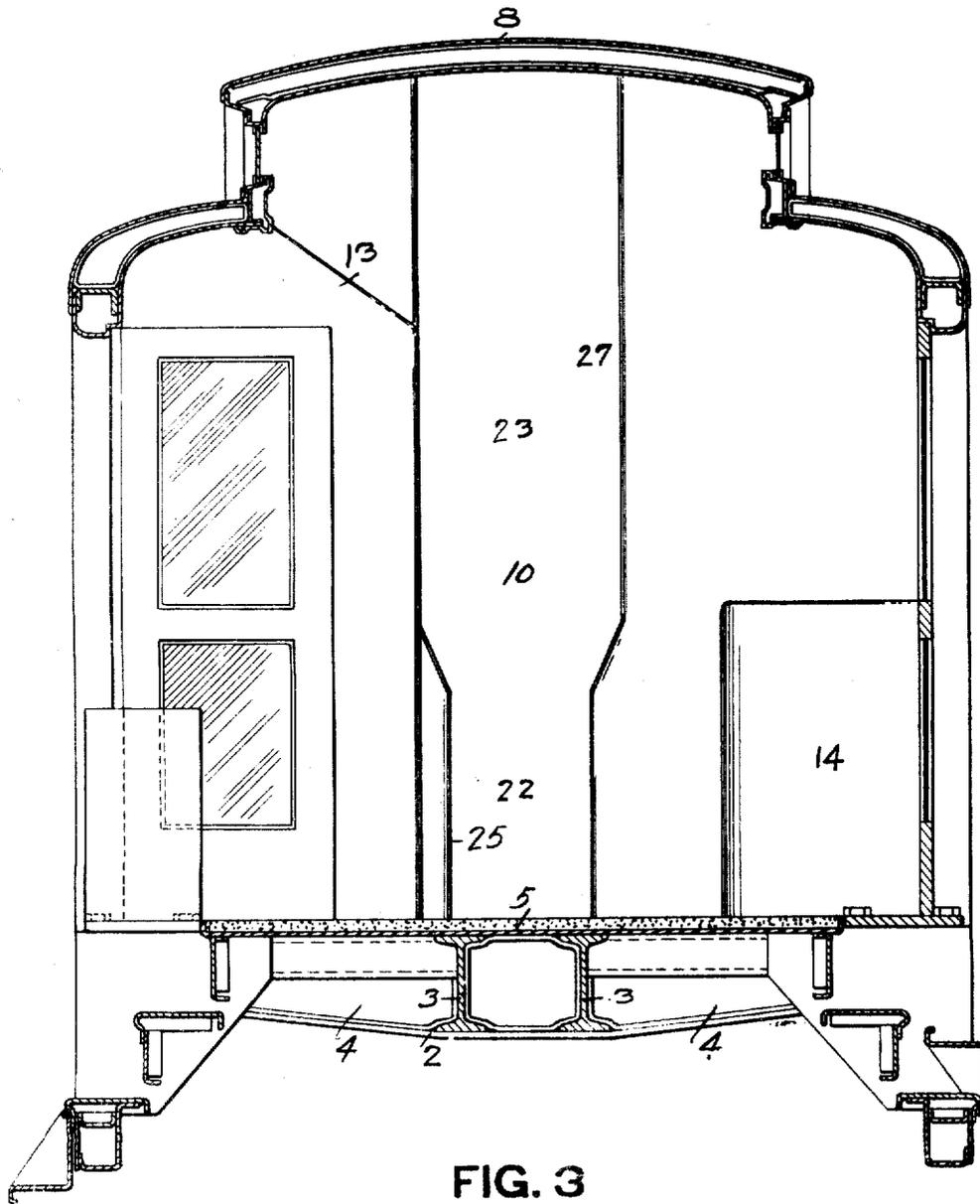


FIG. 3

WITNESSES.

*J. R. Keller*  
*Robert C. Foltner*

INVENTOR.

*John M. Hansen*  
*By Kay & Foltner*  
*Attorneys*

J. M. HANSEN.

SLEEPING CAR.

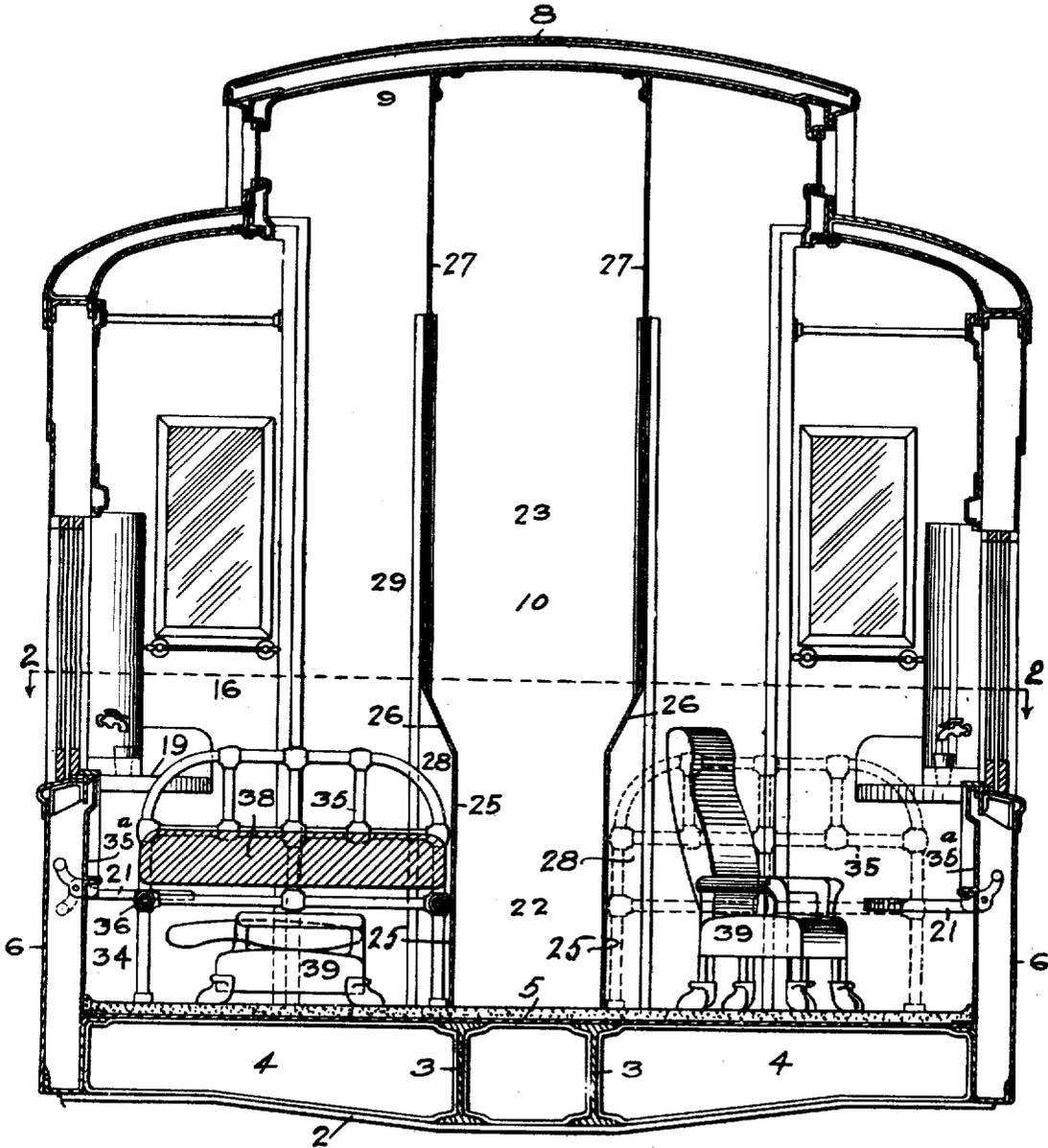
APPLICATION FILED MAR. 7, 1911.

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6 SHEETS—SHEET 3.

FIG. 4



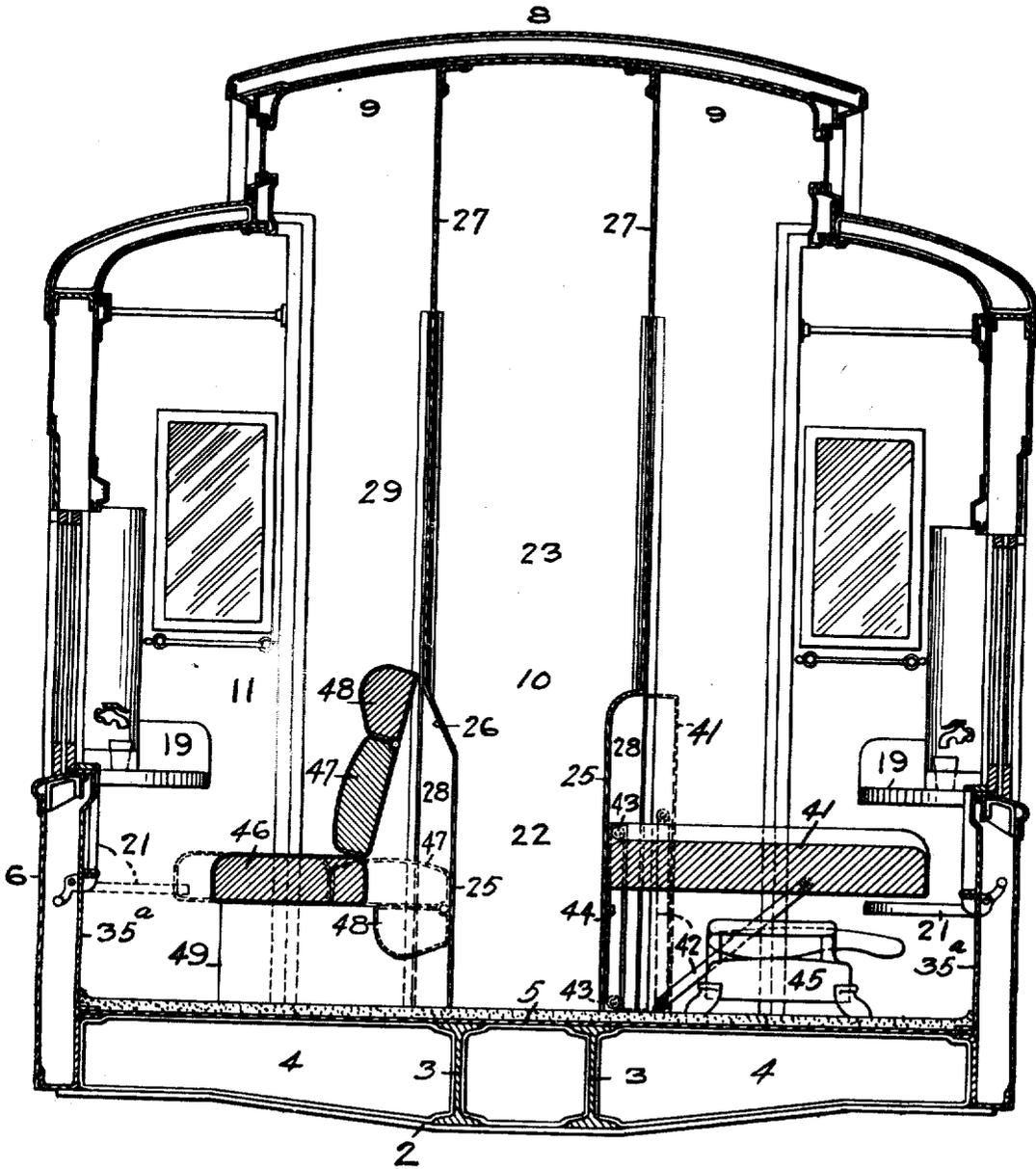
WITNESSES.

Robert C. Foster  
J. R. Keller

INVENTOR.

John M. Hansen  
By [Signature] & Foster  
Attorneys

FIG. 5



WITNESSES.

*J. R. Keller*  
*Robert C. Fother*

INVENTOR.

*John M. Hansen*  
*By Kay & Fother*  
*attorneys*

J. M. HANSEN.

SLEEPING CAR.

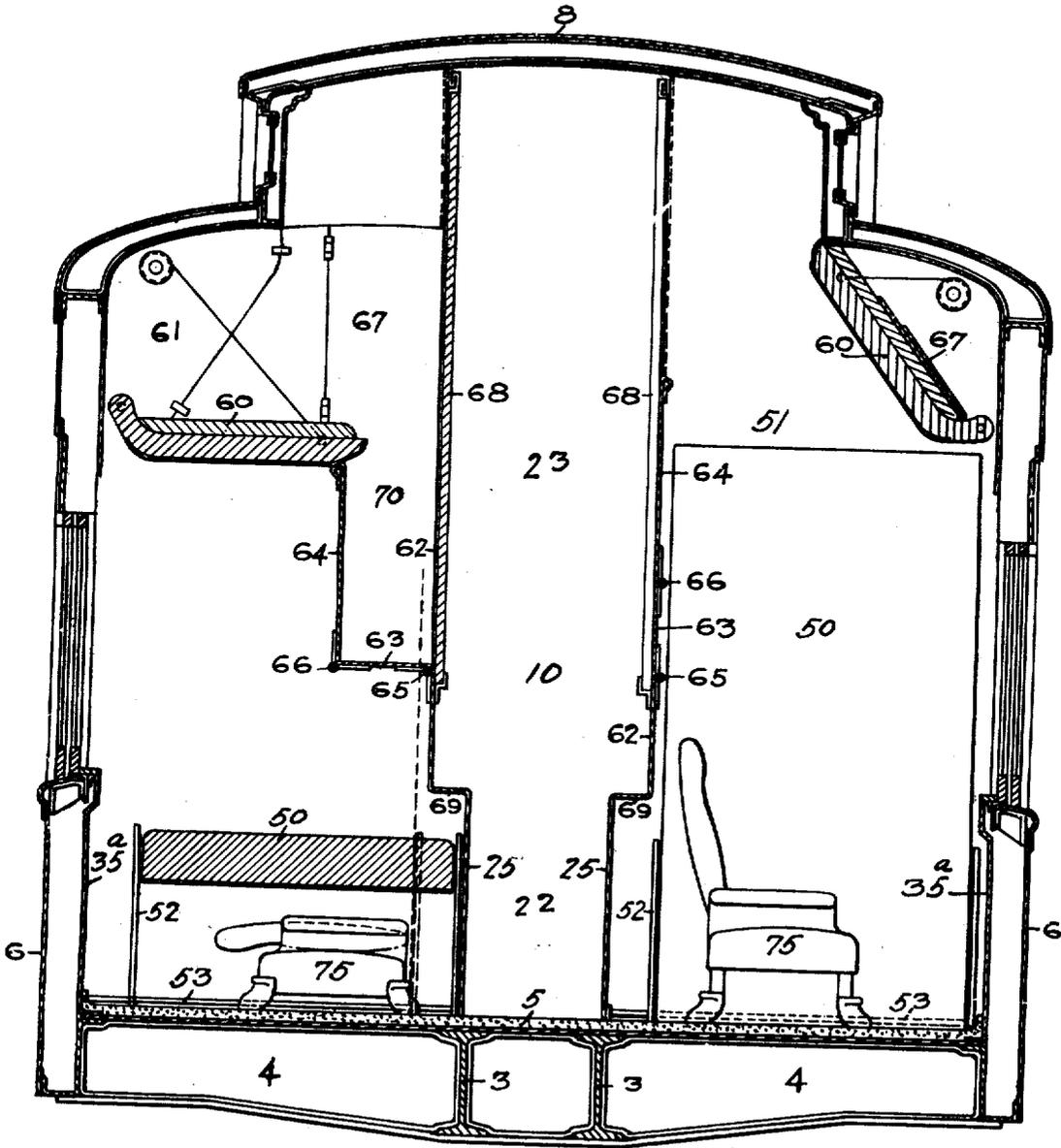
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6 SHEETS-SHEET 5.

FIG. 6



WITNESSES.

*J. R. Keller*  
*Robert C. Follen*

INVENTOR.

*John M. Hansen*  
*By Kay & Follen*  
*Attorneys*

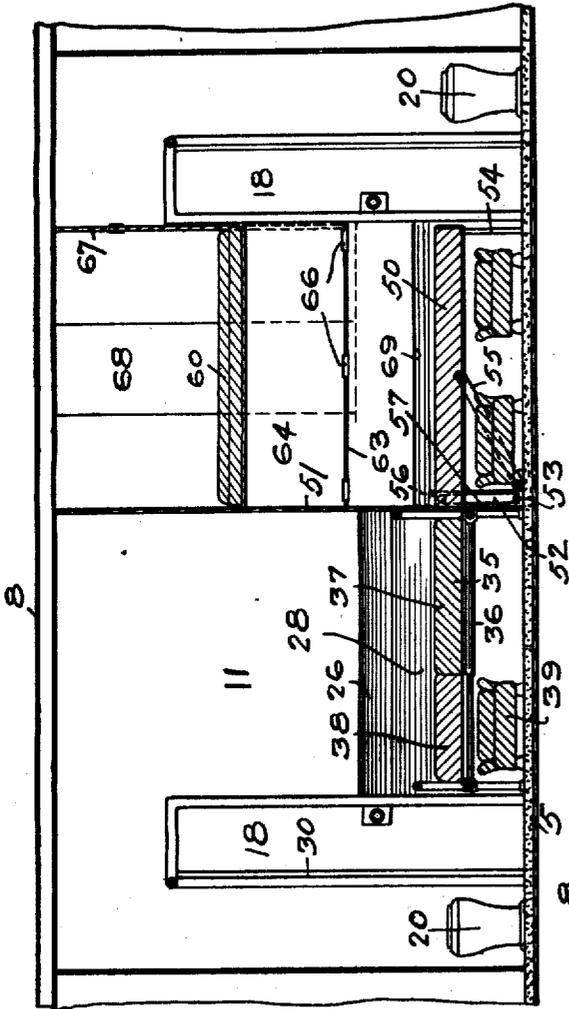


FIG. 8

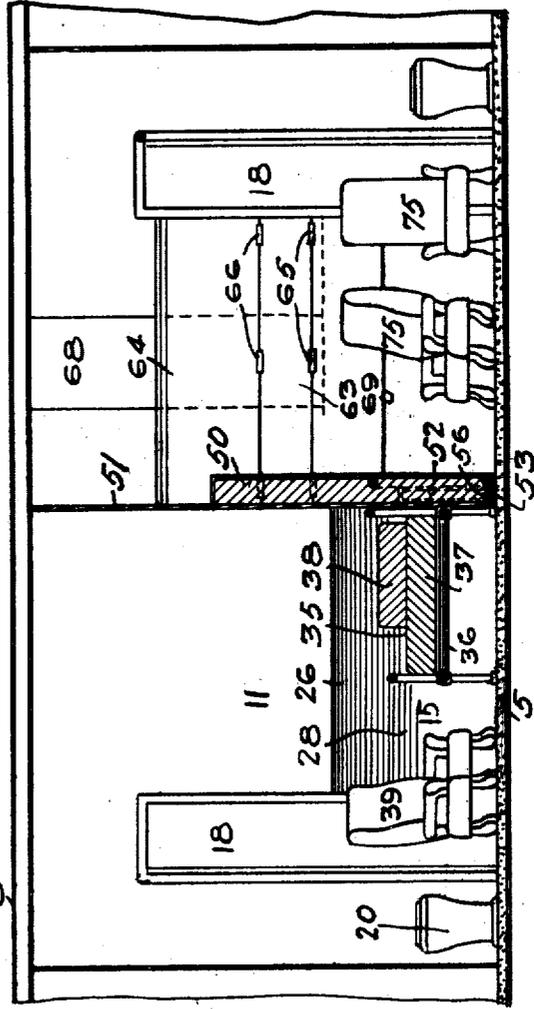


FIG. 7

WITNESSES.

*J. R. Keller*  
*Robert C. Fother*

INVENTOR.

*John M. Hansen*  
*By Kay & Fother*  
*Attorneys*

# UNITED STATES PATENT OFFICE.

JOHN M. HANSEN, OF PITTSBURGH, PENNSYLVANIA.

## SLEEPING-CAR.

1,011,952.

Specification of Letters Patent.

Patented Dec. 19, 1911.

Application filed March 7, 1911. Serial No. 612,808.

*To all whom it may concern:*

Be it known that I, JOHN M. HANSEN, a citizen of the United States, and resident of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Sleeping-Cars; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to sleeping cars.

It is a well known fact that the sleeping cars in general use are objectionable on account of the publicity of the occupants of berths or sections, having only a curtain separating the same from the center aisle, giving no space for dressing or undressing, and requiring the use of public lavatories. This has led to the provision of separate state rooms which have the required side aisles, and of course reduced the number of sections or number of sleeping apartments or beds possible to arrange in the car. The cars have also been provided with end platforms extending beyond the car body to give access to the car body through the end doors.

The object of my invention is to provide a practicable center aisle sleeping car having a large number of separate apartments on each side thereof, practically as many as in the ordinary side aisle sleeping car, and each apartment provided with its own lavatory and space for dressing.

Another object is to provide a wider space for the reception of the beds than in the ordinary center aisle car as now arranged with sections on both sides of the aisle.

In cars embodying my invention the sleeping car has an inclosed body extending to the end of the underframe and provided with end walls and a center aisle extending through the car having apartments on both sides of the aisle, and has end apartments extending to the end wall of the car; there being side entrance or entrances about midway of the car. The sleeping apartments are made longer than the bed, so providing a lavatory or dressing space at one end of each apartment. The lower portion of the aisle is made narrow to give a wider space in each apartment for the reception of the bed and the upper part of the aisle is widened out, so providing for a space in the apartment for the bed and a space at the side of the bed giving access thereto, while providing full aisle space in the upper part of the aisle for the travel of passengers.

The aisle, however, may be of the full width in the lower portion thereof opposite the portion of the apartment forming the lavatory.

The invention comprises certain other objects as fully hereinafter set forth and claimed.

In the accompanying drawings Figure 1 is a side view showing approximately two-thirds of a car embodying the invention; Fig. 2 is a horizontal section of the car on the line 2—2 Fig. 4; Fig. 3 is a cross section on the line 3—3 Fig. 2 through the entrance passage; Fig. 4 is a cross section on the line 4—4 Fig. 2; Fig. 5 is a cross section showing apartments containing different types of couches or beds; Fig. 6 is a like cross section illustrating the construction where an upper berth apartment is employed; Figs. 7 and 8 are longitudinal detail sections showing different state-rooms arranged for day and for night, respectively.

The invention is illustrated in a steel car having the underframe 2 as usual of center sills 3 with suitable cross members 4 on which the floor 5 is supported. The car sides 6 extend from end to end of car, the usual end platforms being dispensed with. The car is also provided with end walls 7 at or close to the ends of the underframe and the roof 8 is of any suitable construction, it being shown with the usual longitudinally running center roof cabin 9. The aisle 10 extends through the car from end to end, so providing for passage through the train. The car is provided with apartments 11 on each side of this aisle, the apartments shown extending to the ends of the car over what has heretofore been used as the platform space, the end walls 7 of the car forming the end walls for the end apartments. The car entrance doors are placed about midway of the length of the car as shown, and between two apartments, thus giving access to the car from both sides so that the occupants can pass from the mid portion of the car to the ends to reach the several apartments. Though the apartments as illustrated are of considerably greater length than that of the bed of the ordinary section in a sleeping car, by thus carrying them to the ends of the car underframe I am enabled to get about fourteen of such apartments in a sleeping car of ordinary length. I also provide space in the mid portion of the car for a linen room as at

13, and for a heater as at 14. I therefore provide as many compartments as there are sections, and apartments in the ordinary sleeping car, and am enabled to provide closed apartments, and, as hereafter shown, to provide space 15 in each apartment to be utilized as a lavatory and for dressing. Each apartment 11, as illustrated, contains a bed 17 of the ordinary length, approximately six feet, and beyond the same is the dressing space 15 about three feet square communicating with the aisle by the door 18, and containing the wash basin 19 and the toilet 20, as well as a folding seat 21 which can be utilized in dressing or during day travel. As shown in the several cross sectional views, the lower portion of the aisle 10 is made narrower opposite to the beds in the apartments as at 22 than the upper parts of the aisle opposite the said beds as at 23. This narrow portion generally extends up about two and one-half feet, the lower portion 25 of the inner wall of the apartment extending up about that distance and then said inner wall extending inwardly as at 26 in the form of an overhang to provide the full width of the aisle from the overhang point upwardly, from which point such wall extends vertically as at 27 up to the top of the car. The lower portion of the aisle is thus made of sufficient width for the legs of a person of ordinary height, while the upper portion provides full width for the body of such person, and I am thus enabled to increase the width of the apartment where the bed is located. For instance, I may in this way be able to increase the width of this part of the apartment about four inches, the bed itself fitting in this widened portion 28 which extends a sufficient height to receive the bed and then narrows in to the normal width of the apartment, as at 29, that is to the width of the lavatory end thereof. The inner wall 31 and the door 18 of such lavatory end are preferably in line with the upper part of the apartment wall above the bed, and the lower part of the aisle is thus made up of narrow portions 22 opposite the beds in the apartments and widened portions 32 opposite the lavatory ends of the apartments, while the upper parts of the aisles are the full width or of substantially the same width for the full length of the apartment. By thus narrowing the lower portions of the apartments opposite the bed, I am enabled therefore to increase the width of the lower portions of the apartments sufficiently to place the beds against the inner wall of the apartment extending into such widened portion 28, and this provides a space 34 between the bed and the outer car wall 35 sufficient to give access of the occupant to the bed.

As illustrated in the drawings, in the

preferred construction the overhang 26 of the aisle wall 31 is arranged sloping or at an incline. This portion of the wall may of course vary as desired. Where the apartment is arranged for only a single bed, for example, where a metal bed is used as illustrated to the left of Fig. 4, it is preferred to make this overhang on an incline to give as much space as practical in the apartment. In such case, for example, in cars arranged principally for short night trips, I may employ an ordinary metal bed within the apartment.

I have illustrated in the several figures different types and arrangements of couches which may be employed in the apartment. For instance in Fig. 4 and at the left of Fig. 2 and to the left of Figs. 7 and 8, I have illustrated an ordinary iron bed telescoping for part of its length to give space at the lavatory end of the apartment to provide for a chair where the apartment is occupied only by a single person, the bed 35 having its main longitudinal side frames 36 formed of telescoping tubes and provided with sectional mattresses 37, 38, so that at night the bed is drawn out to its full length extending over the folding chair 39 and leaving full space for dressing at the end of the apartment and during the day the one sectional mattress is lifted onto the other and the foot of the bed pushed toward the head so leaving space about in the middle of the apartment for the chair as shown to the right of Fig. 4, where the chair is shown as opened out, the former position of the bed being indicated in dotted lines.

Fig. 5 illustrates two other forms of beds or couches fitted in the apartment. To the right of said figure the bed or couch is mounted to fit under the overhang when the apartment is arranged for day travel, as shown in dotted lines therein, and is swung out from under said overhang into the apartment as shown in full lines, the bed being supported in the latter position by the folding brace 42 and by the studs 43 moving in the guide-way 44 contacting with the upper end of said guide-way when the bed is extended as shown in full lines. The chairs 45 in this case may be folded and placed under the bed as illustrated. To the left of said figure I have illustrated a folding couch which during the day forms a seat within the apartment. Its position is shown in full lines forming such seat, it being composed of three sections 46, 47, 48, supported on suitable frame-work 49 permanent within the apartment. To arrange to provide the bed within the apartment the section 46 is moved outwardly, the section 48 folded under the section 47, and the section 47 dropped into horizontal position as illustrated in dotted lines.

In Fig. 6 and to the right of Figs. 7 and

8 I have illustrated the apartment with a bed 50 folding up against the end or wall 51 of the apartment and adapted to be swung down into horizontal position within the apartment and then be moved laterally under the overhang. In such case the bed is carried within a laterally movable case 52 mounted for example to slide on the rod 53 after it is swung into lowered position, the bed in this position being braced in any suitable way, for example by a swinging support 54, at the foot of the bed and also, if necessary, by means of a swinging brace 55 and by a lug 56 moving in a slot 57 as above described in connection with the bed to the right of Fig. 5. In this figure I have also illustrated an upper berth construction by which I may arrange an upper berth apartment above the bed in the main apartment, the arrangement of the apartment being also shown by longitudinal section Fig. 8. This construction forms the subject matter of a separate application filed by me of even date, Serial No. 612,809. The upper berth 60 is swung in the ordinary way above the window, and during the day swings up to the roof as in the ordinary sleeping car construction, the end of the space for the same opposite the permanent end wall 51 of the apartment being closed by a suitable partition 61. Swinging up against the aisle wall 62 is a movable partition 63, 64, hinged at the base to the aisle wall as at 65, the two sections being connected by a hinge 66, and when the same is swung down to arrange for night travel the section 63 forming a standing platform while the section 64 extends up to and is connected in any suitable way to the berth 60, said section separating the main apartment from the upper berth apartment. To close the end of such apartment at the foot of the upper berth I employ a folding partition 67 fitting against this section or partition 63, 64, and against the stationary partition 61. To give access to this upper berth apartment I provide the door 68 forming part of the aisle wall 62, and I prefer to arrange the overhang 69 horizontal so that when the door 68 is opened the occupant can step upon the overhang 69 and then step onto the standing platform 63 to reach the upper berth. The space 70 between the wall 62 and the door 68 and the section 64 of the sectional partition provides a standing space for the occupant of the upper berth in dressing or undressing, and it may also be utilized for the support of the occupant's satchel or the like. When the arrangement as illustrated in Fig. 6 is used for day travel the berth is swung up against the roof, the movable partition 63, 64, raised and connected to the aisle wall 62, and the bed 50 swung up against the end wall 51 of the apartment. To arrange the same for night travel the

chairs 75 may be folded and the bed 50 swung down over the chairs and then moved laterally under the overhang 69, and the upper berth 60 is lowered and the sectional partition 63, 64, swung down from the aisle 70 partition and connected to the upper berth, and the folding partition 67 slid into place against the sectional partition 63, 64, and the stationary partition 61, so separating the upper berth apartment from the main apartment and leaving the dressing space 15 communicating with the main apartment as illustrated in Fig. 8. 75

In any of the above arrangements it will be seen that I take advantage of the space 80 provided by reducing the width of the aisle in the lower part thereof to increase the width of the lower part of the apartment where the bed is located so as to give access to the bed between the same and the window, so providing a full width bed and beyond the same a dressing space from 85 which the occupant can pass to the bed between the window and the bed. Whatever the character of the bed or couch employed I am thus enabled to provide a sufficient 90 dressing space of the full height of the apartment, even though I may employ a supplemental upper berth apartment such as illustrated, and where said upper berth 95 apartment is provided I am enabled to arrange the main apartment for day travel with practically the entire space thereof provided for such use, and instead of the ordinary stationary seats for day travel I 100 am enabled to employ comfortable movable chairs.

When the car is in use the traveler enters the car through one of the central side doors and can pass to his particular apartment 105 through the aisle to the right or the left, having only a relatively small distance to walk to reach the same. This I make possible by carrying the sleeping apartments to the ends of the car and utilizing the entire 110 car body for apartment purposes, and I am enabled to accomplish this while providing a central aisle and giving easier access to the car and its apartments than where it is provided with platforms at each end. While 115 providing as large a number of beds as employed in the ordinary sleeping car I am enabled also to arrange them as apartments and to provide the apartments with dressing space so that the occupant can be absolutely 120 private both in day travel and in dressing and undressing.

What I claim is:

1. A sleeping car having an underframe, and an inclosed body extending to the end 125 of the underframe, and apartments arranged on both sides of the aisle, with the end sleeping apartments extending to the end of the car underframe.
2. A sleeping car having an underframe, 130

and an inclosed body extending to the end of the underframe, a center aisle and apartments on both sides of the aisle, the end sleeping apartments extending to the end wall of the car.

3. A car having an underframe and an inclosed body with end walls at the end of the underframe, a center aisle extending through the car and sleeping apartments on both sides thereof, the end wall of the car forming the end walls of the end sleeping apartments, and the car having a side entrance, about midway thereof and between two of the sleeping apartments.

4. A sleeping car having an underframe, an inclosed body with end walls at the ends of the underframe, a center aisle, sleeping apartments on both sides of the aisle, said sleeping apartments being of greater length for their full height than the beds therein to provide lavatory spaces within the apartments.

5. A sleeping car having an underframe, an inclosed body with end walls at the ends of the underframe, a center aisle extending through the car, sleeping apartments on both sides of the aisle, said sleeping apartments being of greater length for their full height than the beds therein to provide lavatory spaces within the apartments, with doors from the aisles entering said lavatory spaces.

6. A sleeping car having an aisle, an apartment at the side thereof, and a wall between the aisle and the apartment, the lower portion of the aisle being formed narrower than the upper portion thereof.

7. A sleeping car having an aisle and an apartment at the side thereof separated therefrom by a wall, the lower portion of said wall being vertical and thence extending inwardly into the apartment to form a wider aisle above the same, and a bed within the apartment fitting under the overhang so formed.

8. A sleeping car having a center aisle, apartments on both sides thereof and partition walls between the aisle and apartments the lower portions of which are vertical and thence extend into the apartments to form an overhang in the apartment and thus provide greater aisle space.

9. A sleeping car having an aisle, an apartment separated therefrom by a wall the lower portion of which is vertical and thence extends inwardly into the apartment, the apartment having a bed fitting under such overhang, and having a space between such bed and the outer wall of the apartment.

10. A sleeping car having an aisle, an apartment at the side thereof of greater length than the bed within the apartment, the wall opposite the bed of the apartment being vertical and thence extending into the apartment forming an overhang, and a bed

fitting under the overhang, and the wall between the aisle and apartment beyond the bed being set in to narrow the apartment and increase the aisle space and provided with an entrance door.

11. A sleeping car having an aisle, and an apartment at the side thereof of greater length than the bed within the apartment, a dividing wall between the aisle and the apartment, the upper part of the apartment being of substantially the same width throughout and the lower portion of the dividing wall between the bed and the apartment projecting into the aisle to increase the width of the apartment at this point, and a bed fitting within the widened portion of the apartment so formed.

12. A sleeping car having a center aisle with apartments on both sides thereof of greater length than the beds in the apartments, and division walls between the apartments and aisle, entrance doors entering the apartment beyond the bed and the lower portions of the walls opposite the beds projecting into the aisle, so forming an aisle with narrow lower portions and wide upper portions separated from the apartments by partitions.

13. A sleeping car having a central aisle, apartments on both sides thereof of greater length than the beds therein, the bed of each apartment fitting against the inner wall thereof leaving an entrance to the bed between the same and the outer car wall.

14. A sleeping car having an aisle, an apartment at each side thereof of greater length than the bed, and separated therefrom by a wall, and having an entrance door from the aisle, and the lower part of the apartment receiving the bed being wider than the part of the apartment where the door is located.

15. A sleeping car having an aisle, and an apartment at the side of the aisle of greater length than the bed, the upper portion of the apartment being of the same width throughout and the lower part of the apartment opposite the bed being of greater width.

16. A sleeping car having an aisle, an apartment, and a wall between them, said wall extending vertically for a part of its height and thence inwardly toward the apartment and thence vertically to give greater space within the aisle.

17. A sleeping car having an aisle, an apartment at the side thereof, a partition between the same, the said partition extending vertically for part of its height and then upwardly inclined toward the apartment and thence vertically to give greater space within the aisle.

18. A sleeping car having an aisle, an apartment, and a wall between them, the wall opposite the bed of the apartment be-

ing vertical and then extending into the  
apartment to form an overhang, and a  
swinging bed folding under the overhang  
when not in use and adapted to swing out  
5 into the apartment when arranged for night  
travel, the inner portion of the bed then  
fitting under the overhang.

In testimony whereof, I the said JOHN M.  
HANSEN have hereunto set my hand.

JOHN M. HANSEN.

Witnesses:

ROBERT C. TOTTEN,  
JOHN F. WILL.