

July 24, 1951

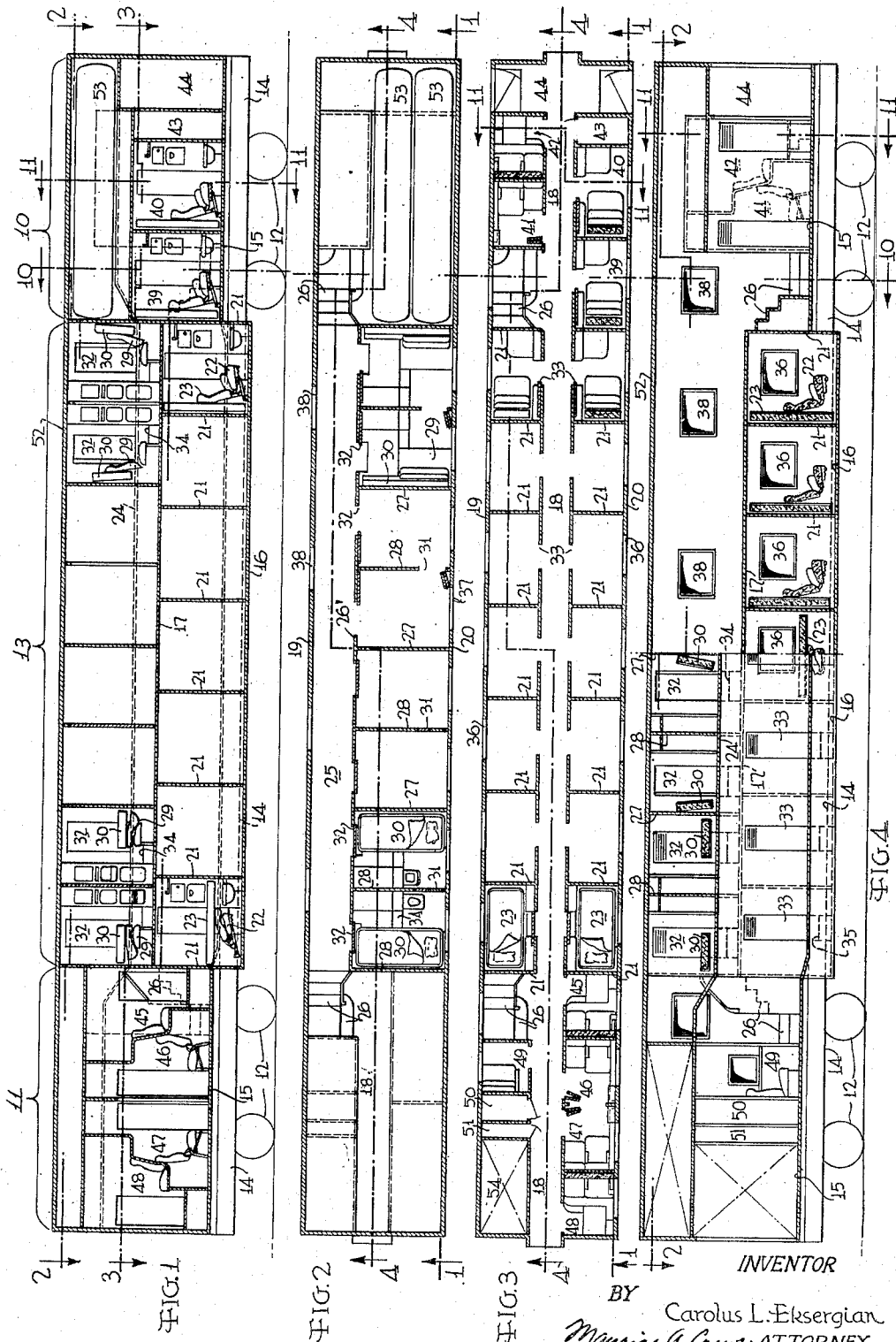
C. L. EKSERGIAN

2,561,653

DOUBLE-DECK RAILWAY SLEEPING CAR

Filed Sept. 11, 1948

3 Sheets-Sheet 1



INVENTOR
BY
Carolus L. Eksbergian
Maurice A. Cress ATTORNEY

July 24, 1951

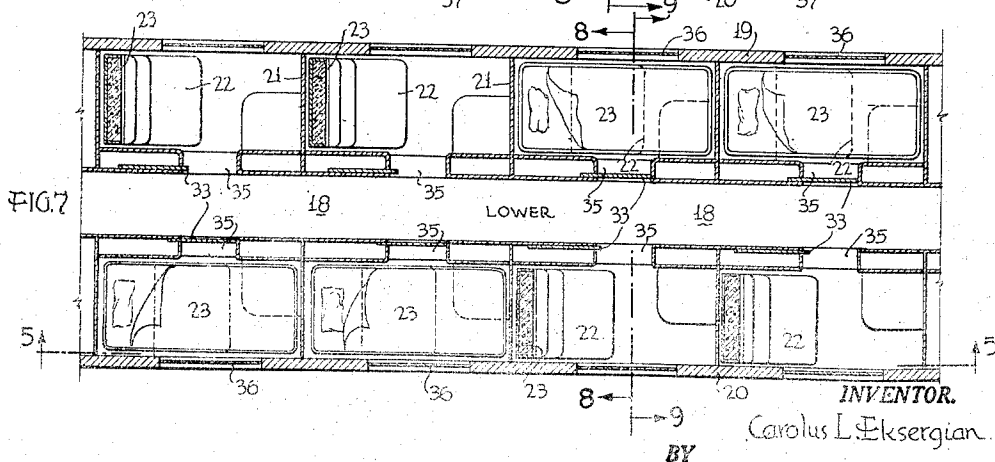
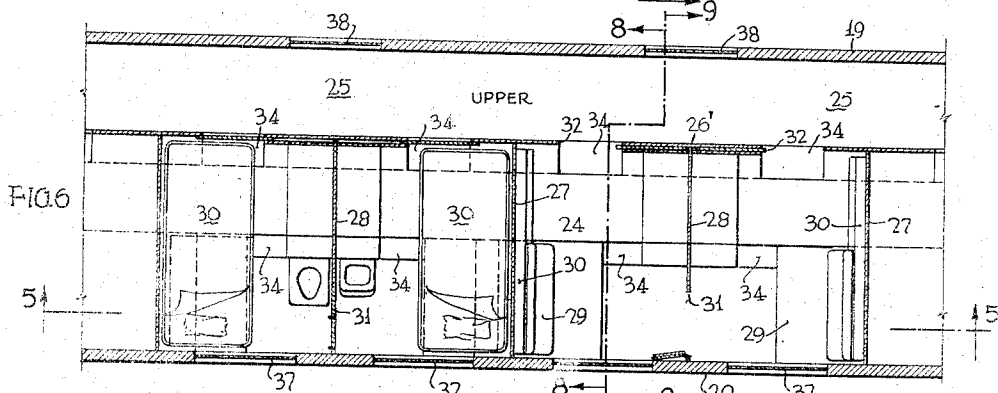
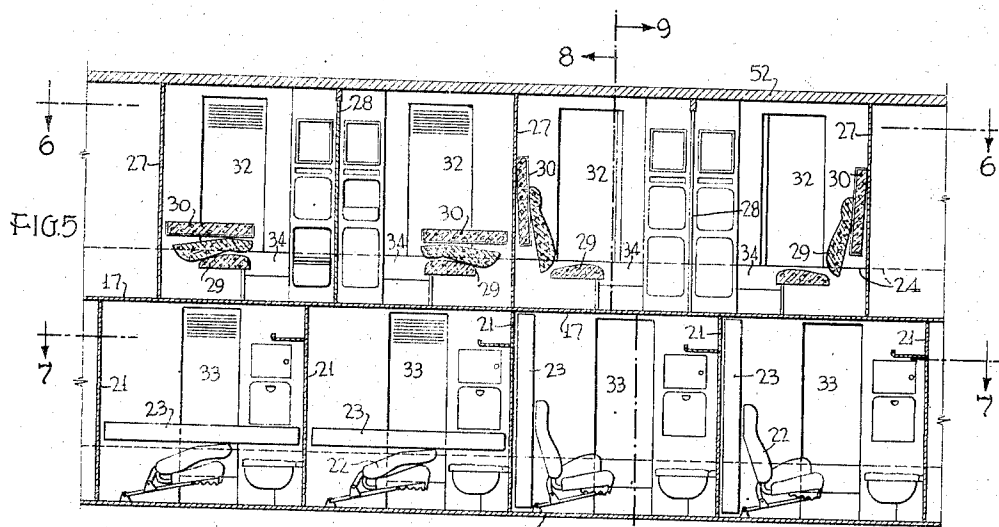
C. L. EKSERGIAN

2,561,653

DOUBLE-DECK RAILWAY SLEEPING CAR

Filed Sept. 11, 1948

3 Sheets-Sheet 2



INVENTOR.
Carolus L. Eksergian

BY

Maurice A. Caww
ATTORNEY

July 24, 1951

C. L. EKSERGIAN

2,561,653

DOUBLE-DECK RAILWAY SLEEPING CAR

Filed Sept. 11, 1948

3 Sheets-Sheet 3

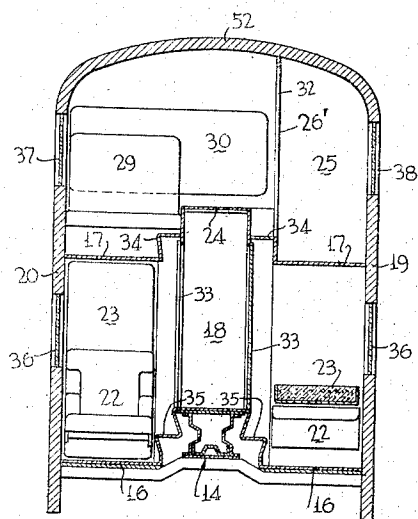


FIG. 8

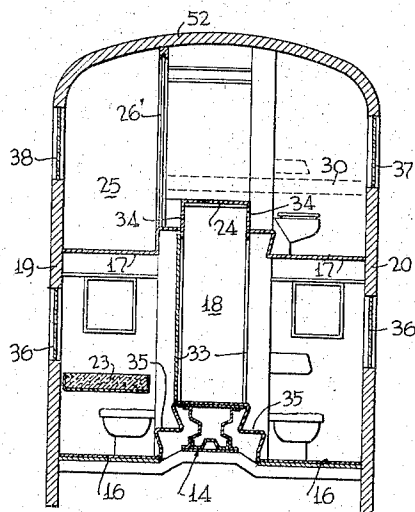


FIG. 9

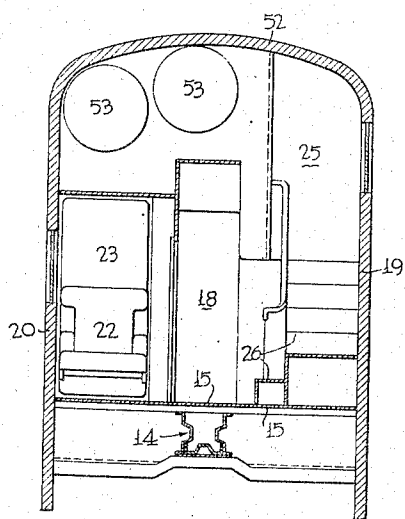


FIG. 10

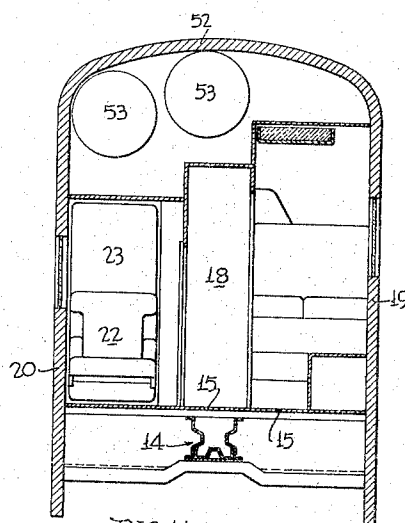


FIG. 11

INVENTOR.
Carolus L. Eksergian

BY

Maurice G. Cress

ATTORNEY

UNITED STATES PATENT OFFICE

2,561,653

DOUBLE-DECK RAILWAY SLEEPING CAR

Carolus L. Eksergian, Media, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

Application September 11, 1948, Serial No. 48,872

5 Claims. (Cl. 105—340)

1

The invention relates to railway sleeping cars and, more particularly, to such cars equipped with separate single-occupancy bedrooms.

A main object of the invention is to provide a railway car with a larger number than usual of single-occupancy bedrooms which are substantially equally desirable, and to do this with as little departure as possible from a usual car structure involving a through-running rectilinear center sill.

To this end, the central portion of the car, that is, the portion between the trucks, is provided on opposite sides of the center aisle, which is disposed directly over the center sill, with depressed lower deck floor areas affording sufficient height between these lower areas and the floor area of the upper deck to divide the space so provided into a plurality of longitudinally extending rooms on both sides of the center aisle, these rooms being equipped with a folding chair, a folding bed and other conveniences generally similar to those in the single-occupancy rooms shown in copending application Serial No. 583,259, filed March 17, 1945, now Patent No. 2,546,133 issued March 20, 1951.

To provide adequate head room in the center aisle, said aisle is extended upwardly by providing a raised floor portion in the central portion of an upper deck and on this upper deck there is provided a longitudinally extending side aisle. Between the inner wall of this side aisle and the opposite car wall are arranged a plurality of transversely extending rooms having folding beds extending, when in use position, transversely of the room and over the top of the center aisle. These rooms are also provided with all the conveniences of the usual bedroom, including a folding bed extending transversely when in horizontal use position, and a longitudinally facing seat extending between the raised portion of the deck extending over the center aisle and the car side wall. Steps are provided between the center aisle and the floors of the lower rooms, and similar steps are provided over the raised central portion of the upper deck to give ready access from the side aisle to the depressed floor areas of the upper rooms. With this arrangement, it is possible to provide in the normal length car, say 85 feet between bumpers, at least 22 comfortable single-occupancy rooms in this central portion of the car extending between the trucks, and this without the necessity of depressing the center sill in the center region and while maintaining the roof height within the track clearance outlines.

2

With this arrangement, the number of rooms may be additionally increased by disposing four additional single-occupancy rooms at each end of the car over the truck region. This leaves sufficient room at one of these ends for a vestibule and a storage locker, and at the other end for a porters' compartment and several storage lockers. In the space between the ceilings of the rooms at the end of the car and the roof may be provided the usual water tanks, air conditioning and other equipment, as is usual in cars of this class.

The foregoing object and other objects and advantages and the manner in which they are attained will be evident from the following detailed description when read in connection with the drawings forming a part of this specification.

In the drawings, which are more or less diagrammatic:

Figure 1 is a longitudinal sectional view through a car equipped in accordance with the invention, certain of the rooms only being shown with the equipment therein, and the vertical section being taken substantially along the line 1—1 of Figures 2 and 3;

Figure 2 is a sectional plan view of the car taken substantially along the line 2—2 of Figures 1 and 4;

Figure 3 is a similar view taken substantially along the line 3—3 of Figure 1;

Figure 4 is a longitudinal vertical sectional view taken substantially along the line 4—4 of Figures 2 and 3; in this view the upper rooms shown in section also show the beds therein, while the lower rooms shown in section show chairs and beds therein;

Figure 5 is a fragmentary longitudinal vertical sectional view through the central portion of the car and on an enlarged scale, the section being taken substantially along the line 5—5 of Figures 6 and 7; this view showing the rooms at the right made up for daytime occupancy and the rooms at the left made up for nighttime occupancy;

Figure 6 is a sectional plan view of the parts shown in Figure 5, the section being taken along the line 6—6 of Figure 5;

Figure 7 is a similar view taken substantially along the line 7—7 of Figure 5;

Figures 8 and 9 are transverse sectional views taken substantially along the lines 8—8 and 9—9 of Figures 5, 6 and 7 looking in each case in the direction indicated by the arrows at the ends of the section lines;

Figure 10 is a transverse sectional view on an

3

enlarged scale taken substantially along the lines 10—10, respectively, of Figures 1, 2, 3 and 4; and

Figure 11 is a transverse sectional view, on a scale similar to that of Figure 10, taken substantially along the lines 11—11 as indicated in Figures 1, 3 and 4.

Referring now to Figures 1 to 4, inclusive, there is shown more or less diagrammatically a full length sleeping car equipped with the invention. This car comprises end portions 10 and 11 disposed over the trucks, represented by the wheels 12, and an intermediate portion 13 extending between the trucks. The car has a usual rectilinear through-running center sill 14, and the floor 15 of the end portions 10 and 11 is disposed over the top of the center sill and extends from side to side of the car at this level. The intermediate portion 13 of the car is vertically deepened by dropping down the lower deck or floor 16 below the top of the center sill at both sides of the center sill, see Figures 8 and 9. The upper deck or floor 17 is at a height from the depressed portions of the floor 16 to provide standing-room height at both sides of the center aisle.

The space between the center aisle 18, whose floor is directly above the center sill and slightly below the level of the floor 15 of the end sections, and the side walls of the car, designated 19 and 20, respectively, is divided by transverse partitions 21 into a plurality of adjoining rooms. As shown, seven such rooms are provided at each side of the center aisle. These rooms are generally of the type shown in the above referred to application, having a folding chair designated by 22 and a folding bed designated by 23 and other accessories in each room.

In these figures of the drawing, certain of the rooms are shown made up for nighttime travel and others for daytime travel. Since the arrangement in all the rooms is the same, some of the rooms in these figures are shown without internal furnishings.

To obtain sufficient head room in the center aisle 18, its ceiling is provided by a central raised portion 24 extending above the general level of the floor of the upper deck 17.

As shown in Figures 2, 3, 8 and 9, the upper deck is provided with a side aisle 25 communicating through steps 26 with the floors 15 at the car ends. Between the wall 26' of the side aisle 25 and the opposite car wall 20, spaced transverse partitions 27 and 28 divide the space into a plurality of bedrooms, shown in Figures 1 and 2 to be eight in number. These bedrooms each have a folding chair 29 and a folding bed 30, the bed, when in horizontal use position, extending transversely of the room and of the car body, as shown in the pair of rooms made up for nighttime use at the left of Figure 2. These bedrooms are each furnished with the usual accessories, such as toilet, washbasin, etc., as clearly shown in Figures 5 and 6.

It will be noted from the showing in Figures 2, 5 and 6 that two adjacent bedrooms may be made intercommunicating through a doorway and door 31 in transverse wall 28. The doorways and doors, as 32, make each of the rooms intercommunicating with the side aisle. Similarly, the lower deck rooms are each made intercommunicating with the center aisle 18 through a doorway and door 33.

Since the floors of the rooms on both the upper and lower decks are depressed below the

4

aisle ceiling and below the center aisle floor, respectively, as clearly shown in Figures 8 and 9, steps 34 are provided, in the case of the upper rooms, to afford easy access to the main floor of the room from the side aisle and, in the case of the lower rooms, steps 35 permit ready passage between the center aisle and the room floor.

By having the center aisle 18 vertically overlap the side aisle 25, the vertical height of the car is kept within the clearance requirements, while at the same time adequate head room is afforded in both aisles and in the standing space of the rooms of the upper and lower decks.

Referring more particularly to Figures 5, 6, 7, 8 and 9, it will be seen that the seats in both the upper and lower rooms face longitudinally and that the seats in the lower rooms are foldable downwardly under the beds when the beds are moved to use position, as shown at the left of Figures 5 and 7. Similarly, the seat backs of the seats 29 in the upper rooms are foldable down over the seats, as shown at the left of Figure 5, when the beds 30 are moved from stowed position adjacent the transverse wall to use position extending transversely of the room and over the raised ceiling 24 of the center aisle 18.

It will be noted that each of the rooms on the lower deck is provided with a large window 36 and similarly each of the rooms on the upper deck is provided with a large window 37. Side wall 19 of the car along side aisle is also provided with windows 38.

This arrangement of rooms and aisles in the center car section 13 utilizes the space in the center section most economically and at the same time allows the maximum of comfort for the occupants. It constitutes the main feature of the invention. The arrangement at the ends 10 and 11 of the car may be varied widely and still be well adapted for use with the arrangement of the central section 13 shown and described.

On one side of the center aisle of end section 10 of the car, see Figures 1 to 4, are arranged a pair of adjacent rooms 39 and 40 similar to rooms on the lower deck 16 of the central section 13 and on the opposite side of the aisle, as shown in Figures 3 and 4, are arranged a pair of longitudinally overlapping rooms 41 and 42 similar to the rooms shown in copending application Serial No. 599,349, filed June 14, 1945, for "Sleeping Car," and now issued under date of June 5, 1951 as Patent No. 2,556,140. A locker space 43 and a vestibule 44 are also provided at this end of the car.

In the end portion 11, at one side of the center aisle may be arranged four rooms, designated by numerals 45, 46, 47 and 48, of the longitudinally overlapping type disclosed in the above referred to Patent No. 2,556,140, and on the other side of the aisle is a compartment 49 containing a porters' seat and lockers 50 and 51 and storage space 54.

Since it is necessary to raise the roof 52 of the car somewhat above normal height, in order to obtain adequate height in the central section, the roof of the end sections 10 and 11, which is of the same height as the roof of the middle section 13 of the car, is necessarily raised a substantial distance above the height necessary to secure adequate head room in any rooms provided on these end sections. In the end section 10, the space above the rooms, aisle and lockers

5

and above the vestibule 44 is utilized to carry water storage tanks 53 and other suitable equipment. The space between the ceiling of the rooms, aisle and compartments at the car end 11 also may be utilized to house, for example, the air conditioning equipment and other accessories.

With this arrangement, it will be seen that sleeping cars are provided having 24 single-occupancy sleeping rooms convertible for day and night use, which rooms have large free floor areas for washing and dressing and for use when the rooms are made up for daytime occupancy. An additional six single-occupancy rooms are provided in which the accommodations are somewhat more crowded and less floor space is available. These additional rooms are, however, substantially as fully equipped as the remaining rooms and are just as desirable from the standpoint of privacy. Altogether, the novel arrangement of the center section of the car makes it possible to provide on one car at least thirty fully-equipped, enclosed, single-occupancy bedrooms, all convertible for either daytime or nighttime travel.

While a specific embodiment of the invention has been described in detail herein, it will be understood that changes and modifications may be made without departing from the spirit and scope of the invention.

What is claimed is:

1. In a double-deck sleeping car supported by trucks adjacent its ends, at least the car portion extending between said trucks comprising a lower deck having a center aisle, rooms arranged on opposite sides of said center aisle, each having a folding bed therein arranged to extend longitudinally of the car substantially the full length of the room when moved to its horizontal use position, an upper deck, a side aisle on said upper deck, rooms arranged transversely of the car between said side aisle and the opposite side of the car, each of said rooms of the upper deck having a folding bed therein arranged to extend transversely of the car when moved to its horizontal use position, the center aisle of said lower deck having its upper portion projecting some distance above the standing floor areas of said upper deck rooms and the beds in said upper deck rooms, when in use position, overlying the top of said center aisle.

2. In a double-deck sleeping car supported by trucks adjacent its ends, at least the car portion extending between said trucks comprising a lower deck having a center aisle and an upper deck having a side aisle, the ceiling of said center aisle being raised a substantial height above the floor of the side aisle, rooms arranged on said lower deck on opposite sides of said center aisle, each having a folding bed therein extending longitudinally of the car substantially the full length of the room, when in its horizontal use position, rooms arranged on said upper deck between said side aisle and the opposite car side, each having a folding bed therein extending transversely of the car, when in its horizontal use position, the top of said center aisle projecting some distance above the standing floor areas of said upper-deck rooms.

6

3. In a double-deck sleeping car supported by trucks adjacent its ends, at least the car portion extending between said trucks comprising a lower deck having a center aisle, rooms arranged on opposite sides of said aisle, each room having a folding bed therein extending longitudinally of the car substantially the full length of the room when in its horizontal use position, said rooms having a standing-room floor below the level of the aisle floor, an upper deck having a raised central portion to provide head room for the center aisle, a side aisle on said upper deck having its floor well below said raised central portion of the upper deck and rooms arranged to extend transversely of the car between said side aisle and the opposite car side, each of said upper deck rooms having a folding bed therein extending transversely of the car when in its horizontal use position.

4. In a double-deck sleeping car supported by trucks adjacent its ends, at least the car portion extending between said trucks comprising a lower deck having a center aisle, rooms arranged on opposite sides of said aisle, each room having a longitudinally facing seat and a folding bed therein extending longitudinally of the car substantially the full length of the room when in its horizontal use position, an upper deck having a raised central portion to provide head room for the center aisle, a side aisle on said upper deck having its floor well below said raised central portion of the upper deck and rooms arranged to extend transversely between said aisle and a car side, each of said upper deck rooms having a longitudinally facing seat therein disposed in the space between said raised central portion and the car side and a folding bed therein extending transversely of the car when in its horizontal use position.

5. In a double-deck sleeping car supported by trucks adjacent its end, a through-running center sill, a central car portion extending between trucks comprising a lower deck having a center aisle with its floor supported on top of the center sill, and depressed floor portions between the center sill and the sides of the car, rooms arranged on opposite sides of said aisle and center sill, each said rooms having a folding bed therein arranged to extend longitudinally of the car substantially the full length of the room when in its horizontal use position, an upper deck having depressed side floor portions and a raised central portion over the center aisle of the lower deck, a side aisle on said upper deck, and rooms arranged on the upper deck between said side aisle and the opposite car side, each having a folding bed therein extending transversely of the car.

CAROLUS L. EKSERGIAN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,798,542	Koch et al. _____	Mar. 31, 1931
2,312,906	Horton et al. _____	Mar. 2, 1943
2,430,324	Bartholomew _____	Nov. 4, 1947