Oct. 18, 1949. M. WATTER 2,485,078

SLEEPING CAR ARRANGEMENT

Filed March 20, 1946 3 Sheets-Sheet 1

FIG. 1.

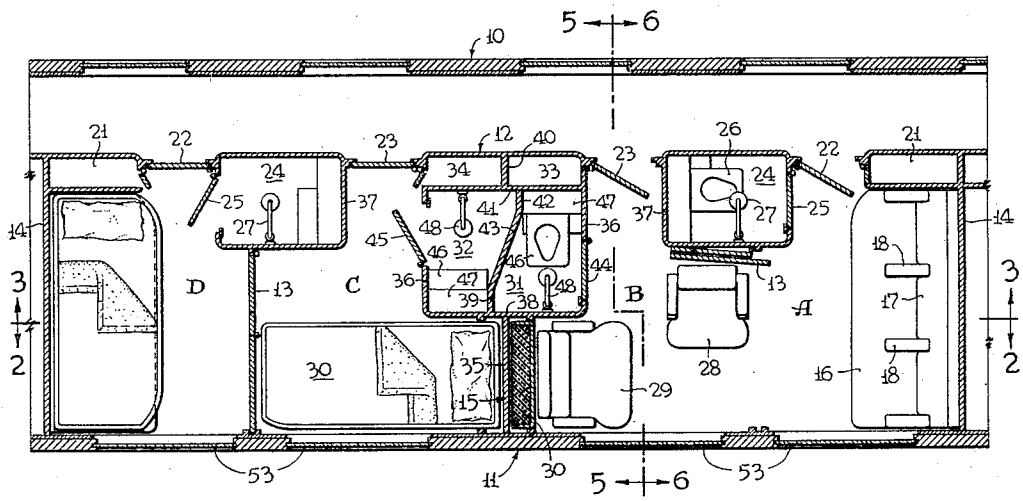
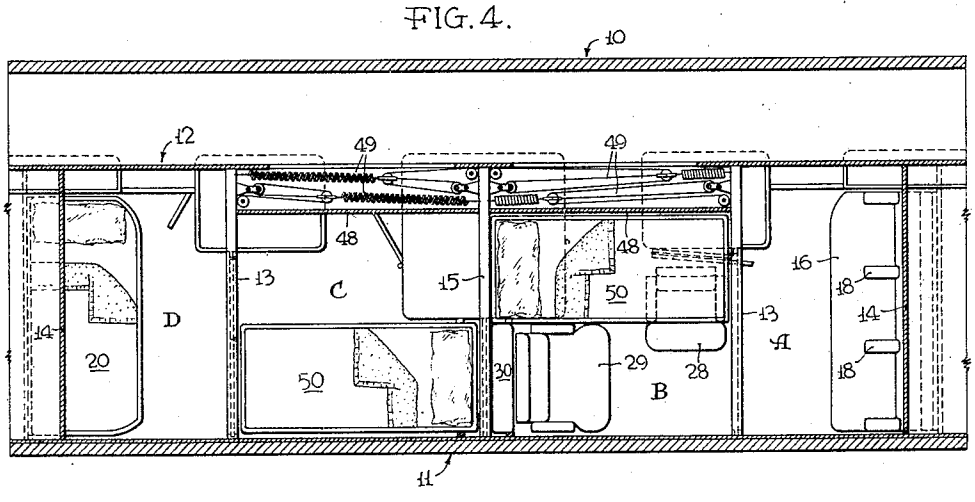


FIG. 4.



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Oct. 18, 1949. M. WATTER 2,485,078

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Filed March 20, 1946 3 Sheets-Sheet 2

FIG. 2.

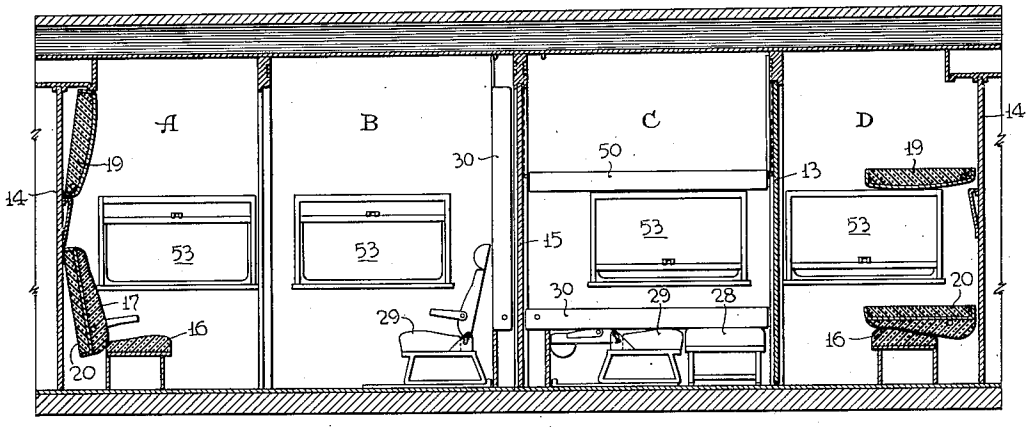
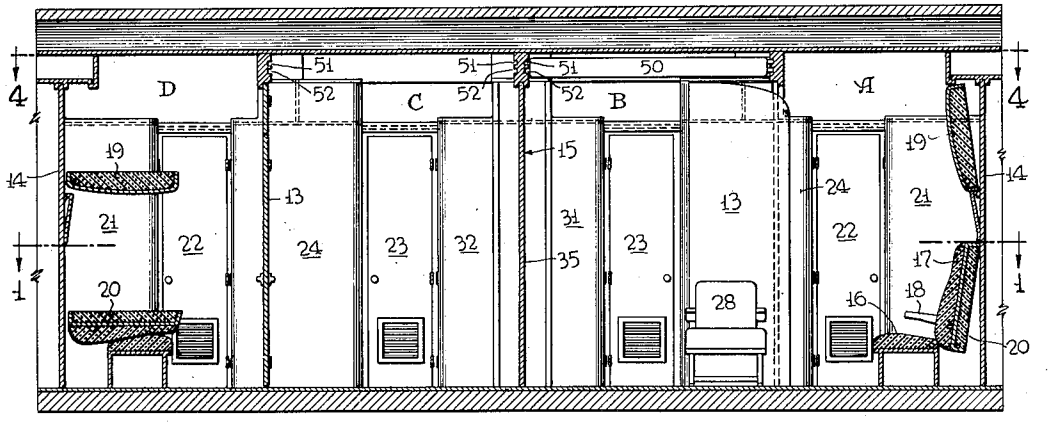


FIG. 3.



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SLEEPING CAR ARRANGEMENT

Filed March 20, 1946 3 Sheets-Sheet 3

FIG. 5.

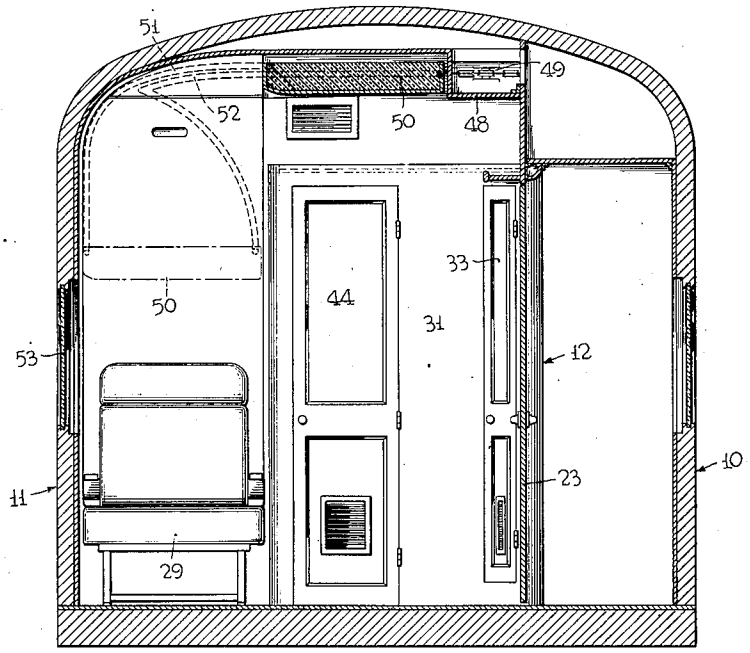
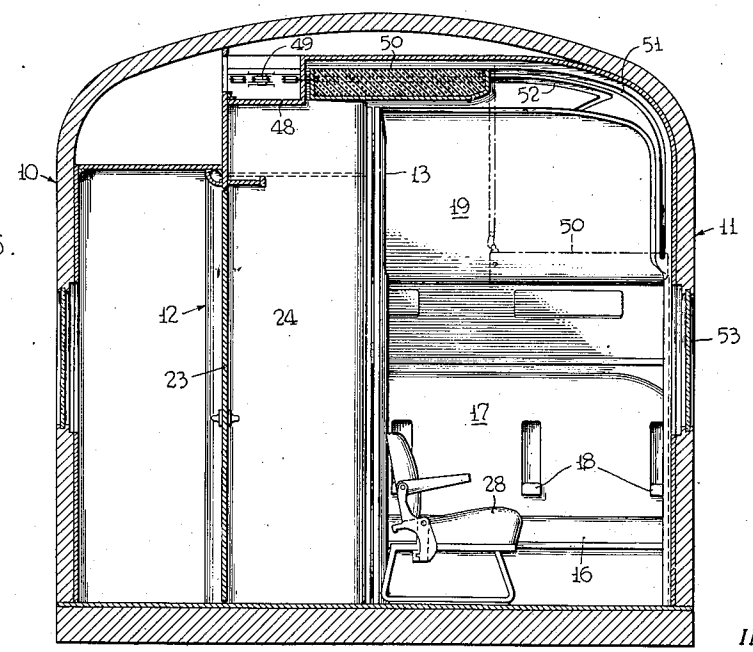


FIG. 6.



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UNITED STATES PATENT OFFICE

2,485,078

SLEEPING CAR ARRANGEMENT

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Application March 20, 1946, Serial No. 655,726

7 Claims. (Cl. 105—315)

1

The invention relates to railway cars and more particularly to the interior arrangements of sleeping cars.

It is concerned more particularly with improvements in the type of sleeping car accommodations disclosed in copending application Serial No. 619,138 for Railway sleeping car in the name of Goodrich K. Murphy and filed September 28, 1945, now Patent No. 2,462,027, Feb. 15, 1949.

In that type of sleeping car, a series of rooms convertible from sitting into sleeping rooms are disposed between a side aisle and the opposite side wall of the car. Each room has provision for accommodating several persons and has associated therewith a separate enclosed toilet compartment of a size sufficient to enclose a toilet, wash basin and shower with ample space so as not to cramp the movements of an occupant. According to the room arrangement of said type a room having a bed extending transversely of the car is arranged in adjoining relation to a room having a bed extending longitudinally of the car and another such pair of rooms is arranged symmetrically with respect to the first pair about a fixed transverse wall extending between the car side and aisle walls and so on, as desired, for the length of the car. The adjacent rooms having transverse and longitudinally extending beds respectively may be converted into one large room by a collapsible transverse partition normally separating them and extending between the side wall and a toilet compartment arranged along the aisle wall.

The adjacent rooms having longitudinally extending beds have their respective toilet compartments located along the opposite sides of the transverse walls separating them and have their inclined walls opposite said transverse wall form with the inclined end walls of the toilet compartments of the adjacent transverse room, inclined passageways leading from the aisle doorways to the respective rooms.

According to this invention, the arrangement of the toilet compartments about this transverse wall and the passageways into the rooms are improved so as to decrease the overall dimension of the toilet compartments longitudinally of the car and to straighten their sides with respect to the aisle, thus providing an improved entrance passageway and a more spacious room interior and at the same time making it possible to interchangeably use the toilet facilities in any of the toilet compartments, i. e. requiring no rights and lefts, for the different compartments.

These and other objects and advantages and the

2

manner in which they are attained will become apparent from the following detailed description when read in connection with the drawings forming a part of this specification.

In the drawings; all more or less diagrammatic:

Fig. 1 is a sectional plan view of a portion of a railway car equipped according to the invention, the view showing two complete pairs of rooms, the pair at the right being shown thrown together to make one large sitting room and the pair at the left being made up as separate bedrooms; the section being taken substantially along the line 1—1 of Fig. 3;

Fig. 2 is a longitudinal sectional elevational view of the rooms as arranged in Fig. 1, the section being taken substantially along the line 2—2 of Fig. 1 and looking toward the side wall of the car;

Fig. 3 is a view similar to Fig. 2, but looking in the opposite direction, i. e. toward the aisle, the section being taken substantially along the line 3—3 of Fig. 1;

Fig. 4 is a horizontal sectional view through the upper portion of the car, the view being taken substantially along the line 4—4 of Fig. 3;

Fig. 5 is a transverse sectional view, on an enlarged scale, the section being taken substantially along the line 5—5 of Fig. 1; and,

Fig. 6 is a similar view looking in the opposite direction as indicated by the arrows at the end of the line designated 6—6.

The invention is shown associated with a railway car having side walls 10 and 11, and an aisle wall 12. Between the aisle wall 12 and the car side wall 11 are arranged a series of four separate rooms, and this room arrangement may be continued throughout the length of the car, if desired. For convenience, the rooms are designated A, B, C and D. Rooms A and D are similarly equipped but reversely arranged and rooms B and C are also similarly equipped but reversely arranged.

As in the above-referred to application, rooms A and B and rooms C and D are convertible into one large room by collapsing the transverse partition 13 separating them, as indicated at the right of Fig. 1. Rooms A and D have fixed end transverse walls 14 and rooms B and C are separated by a fixed transverse wall, designated generally by 15.

Rooms A and D have transverse seats 16 and seat backs 17 and a folding upper bed 19, disposed along the transverse walls 14 separating them from adjoining rooms. Each back 17 has foldable arm rests as 18 and a bed 20 fixed there-

to and folds down as shown in room D to provide a lower horizontally extending bed, and the upper bed 19 normally folded against wall 14 swings out to provide a horizontally extending upper bed when the room is made up as a bedroom, as shown best in Figs. 2 and 4. A wardrobe 21 is provided for each room A and D between the seat 16 and the aisle.

Doorways, with swinging doors as 22, open in the rooms A and D from the aisle. Similar doors and doorways 23 open into the rooms B and C. Between the doors 22 and 23 along the aisle wall 12 are arranged the generally rectangular cross-section toilet compartments 24 for communication with the respective rooms A and D through doorways and doors 25. These toilet compartments are equipped with a folding toilet 26, a usual folding wash basin disposed in vertically spaced relation to the toilet, a shower spray 27 and other usual appurtenances, not shown. The toilet and wash basin are foldable against the wall of the compartment 24 opposite the doorway 25 to clear the major portion of the floor of the compartment for taking a shower or dressing. A usual shower curtain (not shown) would be provided. The toilet, wash basin and other accessories are preferably constructed as a unit which may be interchangeably used in either of the compartments 24.

As shown in Fig. 1, the collapsible partition 13 folds against the adjacent inside wall of the toilet compartment 24.

The rooms B and C are provided for use as sitting rooms with collapsible chairs 28 and 29. Chair 28 is preferably a loose chair and chair 29 may also be loose but arranged to face longitudinally with its back adjacent the transverse wall 15 separating the rooms B and C. In each room B and C a lengthwise folding bed 30 forming a lower bed folds in its stored position against the transverse wall 15, and behind the back of the associated chair 29. To provide as compact an arrangement as possible longitudinally of the car, the toilet compartments 31 and 32 of the rooms B and C are arranged to extend lengthwise of the transverse wall between the bed 30 and chair 29 in the respective rooms to a point adjacent the aisle wall. They are not extended all the way to the aisle wall, to provide room for wardrobes 33 and 34 communicating with the respective rooms.

The portion 35 of the transverse wall 15 flanking the stowed beds 30 is arranged at substantially right angles to the side wall 14 and the pair of toilet compartments 31 and 32, as a pair, are arranged substantially symmetrically on opposite sides of the plane of said portion 35. The walls 36 of the compartments 31 and 32 facing the respective rooms are arranged at substantially right angles to the aisle wall 12 and form with the adjacent walls 37 of the respective toilet compartment 24 passageways from the doorways 19 into the respective rooms B and C. To provide adequate width longitudinally of the car at one end of the toilet compartments 31 and 32 they are widened at one end and the widened end of one is arranged opposite the narrow end of the other, see Fig. 1.

This arrangement is achieved without destroying the symmetrical arrangement of the pair 31 and 32 with respect to the plane of portion 35 of the transverse wall by extending the inner margin of the portion 35 longitudinally by a short portion 38 and then transversely by a short portion 39 forming an offset from part 35. Similarly, the transverse portion 40 separating the wardrobes 33 and 34 and disposed in the same plane as the portion 35 has a short lengthwise extension 41 in a direction opposite the extension 38 and a short transverse portion 42 offset from said plane. The two portions 39 and 42 offset from the plane of portions 35 are connected by an inclined portion 43. Thus it will be seen that the portions 39, 43 and 42 form a common wall separating the toilet compartments 31 and 32 opening into the respective rooms B and C through doorways and doors 44 and 45.

The entrance doors 44 and 45 are located opposite the wide ends of the compartments and the folding toilet 46 and folding wash basin 47 which may be combined in a unitary structure are disposed when folded entirely within the narrow end of the respective compartments. With this arrangement the same unit may be used to fit either compartment. At the wide ends of the compartments are arranged the shower sprays, as 48, which are similar to sprays 27 of the compartments 24. It will be seen that a large floor area is free for the use of the shower or for dressing when the toilet and wash basin are folded as shown in compartment 32, Fig. 1. When they are extended they project into the wider portion of the compartment and thus are in a position where they can be most conveniently utilized. Shower curtains, not shown, are of course intended to be used with the shower sprays.

The toilet compartments and the wardrobes terminate short of the ceiling of the rooms, and a compartment 48 may be extended along the aisle wall just below the room ceiling of each room B and C. This compartment may house the counter-balance gear, generally indicated by 49, for operating the upper bed 50 associated with the respective rooms B and C. Normally this bed 50 is stored adjacent the ceiling, but is movable to use position shown in dot and dash lines in Figs. 5 and 6, through guiding grooves 51 and 52 in the respective transverse walls 15 and 13 cooperating with roller pins on the beds, the beds being controlled in this movement by the counterbalance means 49, all as fully disclosed in the above referred to application. The lower beds 30 are first moved from their vertical stowed positions flanking the transverse wall to the lowered horizontal position adjacent the car side wall, as shown at the left of Fig. 1. Before this is done the chair 29 is slid forward so it can be collapsed as shown in Fig. 2 to fit under the bed 30.

By reference to Fig. 1 it will be seen that the chair 29 projects well beyond the adjacent toilet compartment 31, giving the person seated in the chair a view through the passageway leading to the aisle, and giving a feeling of added roominess over the arrangement shown in the above-referred to application, where the major width of the toilet compartment projects from the transverse wall adjacent the seat and cuts off the view of the person seated thereon.

The arrangement shown and described gives the maximum of use of the rooms without unduly crowding the occupants, and the features which make this possible are the improved arrangement of the toilet compartments at the opposite sides of the doorways 23 and passageways leading therefrom to the rooms B and C. Simplicity of construction is achieved by providing a construction which enables a single combined toilet and wash basin fixture to be used inter-

changeably with all the toilet compartments. Greater roominess is attained by this arrangement since the overall width in the lengthwise direction of the car is made a minimum by the reversed arrangement with respect to each other of the two toilet compartments 31 and 32.

Each of the rooms A, B, C and D is provided with a large window 53, and the beds are each fully-made up before they are stowed and can be readily moved from stowed to use position and vice versa in the manner fully described in the hereinbefore mentioned co-pending application.

While the invention has been herein described in considerable detail, it will be understood that changes and modifications may be made by those skilled in the art departing from this detail while still maintaining the main features of the invention, and it is intended to protect such changes and modifications in the appended claims.

What I claim is:

1. In a railway sleeping car, a pair of rooms arranged between a car side wall and a side aisle wall and separated by a transverse wall interconnecting the car side and aisle walls and further defined by transverse end walls longitudinally spaced from said separating wall, a foldable bed in each room normally stowed against said transverse wall adjacent the car side wall and movable to horizontal use position extending longitudinally of the car and substantially from said separating wall to the associated transverse end wall, and a pair of enclosed toilet compartments, one for each room, lengthwise flanking said transverse wall which constitutes a common separating wall for said compartments, the wall of each compartment opposite said common wall being arranged substantially rectangularly to the aisle wall and the common wall being inclined so as to make one end of each compartment wider than the other and disposing the wide end of one compartment opposite the narrow end of the other.

2. In a railway sleeping car, a pair of adjoining rooms arranged between a car side wall and a side aisle wall and separated by a transverse wall interconnecting said car side and aisle walls and further defined by transverse end walls longitudinally spaced from said separating wall, a lengthwise foldable bed in each room normally stowed against the portion of said transverse wall adjacent the car side wall and movable to horizontal use position extending longitudinally of the car substantially from said separating wall to the associated transverse end wall, and a pair of enclosed toilet compartments, one for each room, having their longest dimension in plan extending transversely of the car, said compartments flanking the opposite sides of said transverse wall and said transverse wall in the region of said compartments being inclined, the transverse walls of said compartments opposite the inclined portion of the transverse wall being arranged substantially at right angles to the aisle wall thus making one end of each compartment wider than the other and locating the wide end of one opposite the narrow end of the other and thereby decreasing the overall width of the combined compartments in a direction lengthwise of the car.

3. In a railway sleeping car, a pair of adjoining rooms arranged between a car side wall and a side aisle wall and separated by a transverse wall interconnecting said car side and aisle walls and further defined by transverse end walls longitudinally spaced from said separating wall, a

lengthwise foldable bed in each room normally stowed against the portion of said transverse wall and movable to horizontal use position extending longitudinally of the car substantially from said separating wall to the associated transverse end wall adjacent the car side wall, a pair of enclosed toilet compartments, one for each room, flanking the opposite sides of said transverse wall and having the portion of the transverse wall flanked by them serve as a common wall between them, the transverse walls of said compartments opposite said common wall being disposed at substantially right angles to the aisle wall, and each forming one side of a passageway leading from a doorway in the aisle wall into the associated room, a separate enclosed toilet compartment arranged along the aisle wall of each room and having a transverse wall on the opposite side of the associated aisle doorway and forming the opposite side of said passageway leading from the aisle doorway of the associated room, said last-named separate enclosed toilet compartments opening, respectively, into rooms adjoining said pair of rooms.

4. In a railway sleeping car, a pair of adjoining rooms arranged between a car side wall and a side aisle wall and separated by a transverse wall interconnecting said car side and aisle walls and further defined by transverse end walls longitudinally spaced from said separating wall, said transverse wall adjacent said car side wall having a portion extending right-angularly to said side wall for substantially the width of a bed, a lengthwise foldable bed in each room normally stowed against said portion of the transverse wall and movable to horizontal use position extending longitudinally of the car substantially from said separating wall to the associated transverse end wall, a pair of toilet compartments, one for each room, disposed as a pair to extend symmetrically on opposite sides of the plane of said portion of said transverse wall, said compartments having their greatest dimension in plan paralleling said transverse wall, the transverse wall inwardly of said portion being offset toward one room, then extending through an inclined portion to a similar offset toward the other room, the transverse walls of said compartments opposite said first-named transverse wall extending at substantially right angles to the aisle wall, said compartments being of the same dimensions in plan but reversely arranged with respect to each other, each compartment having a narrow end opposite a wide end of the other compartment and each having a toilet and wash basin in vertically spaced relation disposed adjacent the narrow end of the compartment.

5. In a railway sleeping car, a pair of adjoining rooms arranged between a car side wall and a side aisle wall and separated by a common transverse wall interconnecting said car side and aisle walls and further defined by transverse end walls longitudinally spaced approximately bed length from said separating wall, said common transverse wall having a portion extending from said car side wall and a portion extending from said aisle wall disposed in a common transverse plane and substantially at right angles to said side and aisle walls, and having further portions extending from the inner margins of the respective first-named portions at substantially right angles thereto and in opposite directions, respectively, from said common plane, and an inclined portion interconnecting the margins of said last-named portions remote from said plane,

a pair of toilet compartments disposed, as a pair, symmetrically on opposite sides of said plane and utilizing said inclined portion of said transverse wall as a common wall separating them, the transverse walls of said compartments opposite said common wall being disposed substantially at right angles to said aisle wall and having doorways opening into the respective rooms, the outer and inner longitudinal walls of said compartments being disposed substantially in the planes of said second-named portions of said common transverse wall separating the rooms.

6. In a railway sleeping car, a pair of adjoining rooms arranged between a car side wall and a side aisle wall and separated by a common transverse wall interconnecting said car side and aisle walls and further defined by transverse end walls longitudinally spaced approximately bed length from said separating wall, said common transverse wall having a portion extending inwardly from the car side wall in a plane substantially at right angles to said car side wall and further having offset portions on opposite sides of said plane disposed respectively, one at the inner margin of said first-named portion and the other adjacent the aisle wall and an inclined portion interconnecting said offset portions and crossing said plane, a pair of toilet compartments disposed, as a pair, symmetrically on opposite sides of said plane and separated by a common wall formed by said offset and inclined portions, each compartment having a transverse wall, opposite said common wall separating them, which extends at substantially right angles to the aisle wall, and doorways in said last-named transverse walls leading to the respective rooms.

7. In a sleeping car having a longitudinally extending aisle wall defining with one of the car side walls, a side aisle, and with the other car side wall, a space for rooms, a pair of rooms separated by a fixed transverse wall extending between said aisle wall and said other side wall and further defined by transverse end walls longitudinally spaced approximately bed length from said separating wall, a fixed length bed in each room stowable for day time use of the room adjacent said fixed transverse wall, and positionable for sleeping use in a horizontal position adjacent said other side wall, and an enclosed toilet compartment associated with each room and extending lengthwise along said transverse wall between the associated bed and said aisle wall, said transverse wall forming a common wall between said compartments having its ends offset from each other longitudinally of the car and connected by an inclined portion, the transverse walls of said compartments opposite the inclined common wall portion being arranged substantially at right angles to the aisle wall, and a doorway from each compartment to the respective room.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
1,231,805	Stebbins	July 3, 1917
1,231,806	Stebbins	July 3, 1917
1,556,483	Brown	Oct. 6, 1925
1,767,361	Hautot	June 24, 1930
1,798,542	Koch et al.	Mar. 31, 1931