

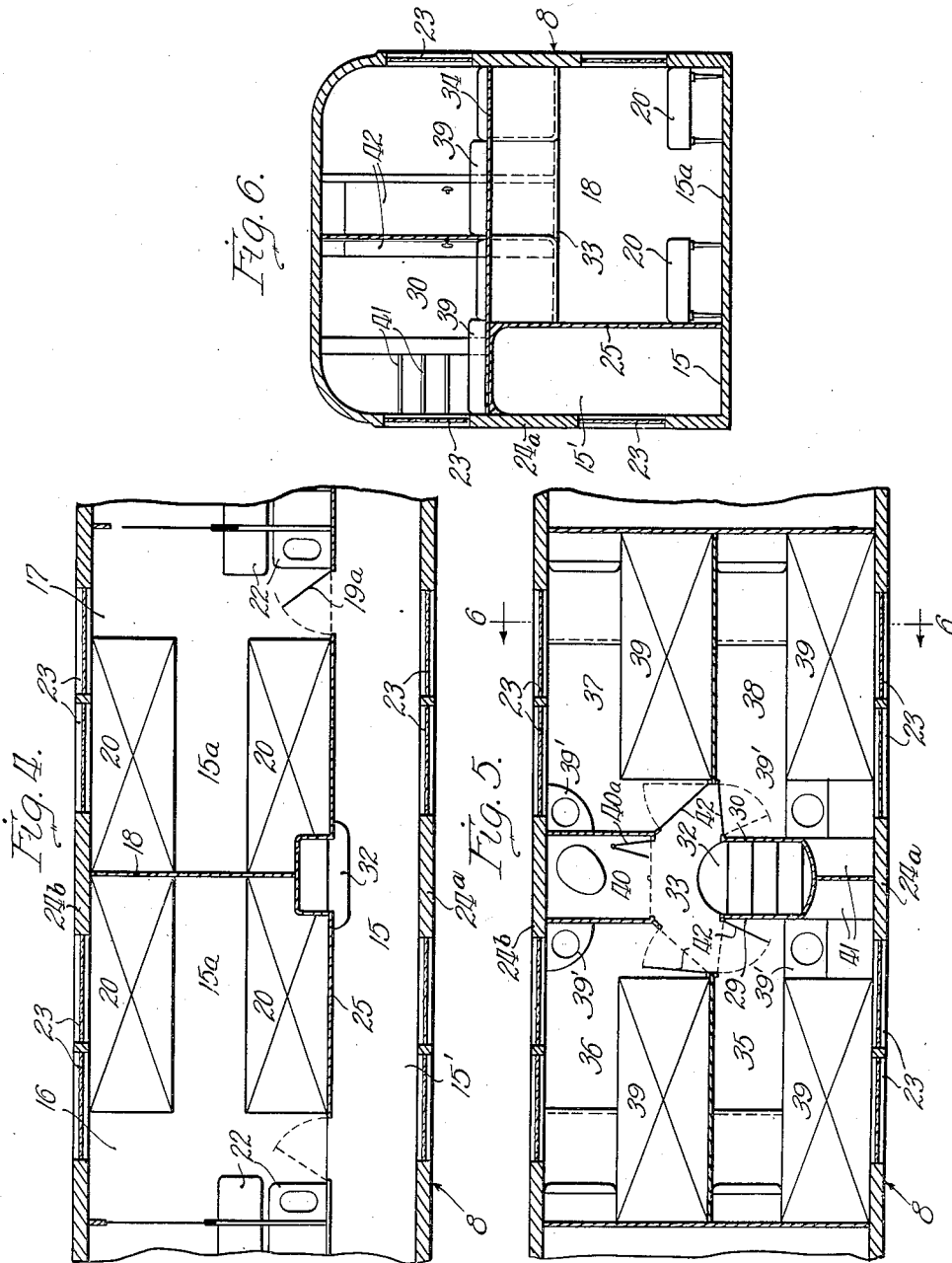
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SLEEPING CAR

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SLEEPING CAR

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24 Claims. (Cl. 105—315)

My invention relates to sleeping cars and its object is to provide an improved compartment car in which the passenger capacity is materially increased without increasing the overall size of the car. A further object is the provision of a generous number of individual or single rooms.

Compartment cars at present in vogue are of two general types. The older type comprises a series of compartments each of which accommodates two, and some of them three, passengers. The newer type comprises a series of individual or single compartments. In either case, the number of passengers which can be accommodated in the car is so limited that the economic waste entailed makes traveling in them expensive, and to a great extent prohibitively so.

My invention contemplates a double deck arrangement, i. e., lower and upper rooms, and by combinations of double and single rooms, and arrangement of the beds therein, I am enabled to utilize the standard allotment of space most efficiently and to accommodate a sufficient number of passengers in one car to bring travel in them within the means of the average patron of sleeping cars.

In an application filed of even date herewith, Serial No. 349,976, I have illustrated and described and claimed, broadly and specifically, certain arrangements. The present application presents other arrangements and I am here claiming simply certain specific arrangements coming under the broader claims of my copending application referred to.

My present invention is illustrated in the accompanying drawings in which

Figure 1 is a partial plan view showing the arrangement of the lower deck of the car;

Figure 2 is a partial plan view of the upper deck, this view being in appropriate alignment with the corresponding plan of Figure 1, in order to facilitate reading of the drawings;

Figure 3 is a vertical cross sectional view taken on the line of plane 3—3 of Figure 2;

The other figures show another form of my invention.

Figure 4 is a partial plan view of the lower deck;

Figure 5 is a corresponding partial plan view of the upper deck, this figure being placed in vertical alignment with Figure 4 in order to facilitate reading of the drawings; and

Figure 6 is a cross sectional view taken on the plane of the line 6—6 of Figure 5.

The body of the car is indicated at 8 and is divided into a series of compartments and an

aisle as will now be described. The main floor deck is indicated at 15 and the compartments on that deck are the so-called lower compartments. Running along one side of the car is the aisle 15', of small width relative to the width of the car. The lower compartments are indicated at 16 and 17. They are all of the same size and are identical except that half of them are the complement of the other half, i. e., compartment 16 is the complement of compartment 17, and the next compartment to the right is the same as compartment 16, the length of the car thus comprising a series of pairs of compartments or double units. The cross dividing wall 18 may have in it a sliding partition 18a acting as a door to permit communication between the adjoining compartments. Alleys 19 lead from aisle 15' to two doors 19a which lead respectively into adjoining compartments, the alley 19 being formed by side walls 19b and the adjoining compartments being otherwise separated by the partition 19c. The bed 20 lies lengthwise of the car toward the aisle side of each room. The floor space of the compartment is indicated at 15a and, as shown, it is ample for the installation of permanent toilet facilities shown as comprising a toilet stool 22 and wash basin 22'. A loose chair 22a affords a seat for the compartment, which seat may face in either direction for either direction of travel or may face directly out of the window, at the window sitting space in the compartment. The windows 23—23 are appropriately placed in the side walls 24a, 24b of the car, in transverse alignment, those on one side being placed, as shown, to light the compartments and those on the other side lighting the aisle. Solely for convenience of reference, the side wall 24a will be referred to as the right wall and the side wall 24b as the left wall.

The lengthwise dividing wall 25 is interrupted not only to provide the alleys 19 but also to provide the stair well which will be referred to presently.

Over each pair of lower rooms, I provide four upper rooms each of which takes up half the width of the car. The stair well is formed by the walls 29 and 30 and the stair, within these walls, indicated at 32 leads up from the aisle to the upper deck. The upper deck is of multiple-stage construction, having floor portions 33 and the bed portions 34, the latter portions being higher than the former portions to the extent of the appropriate height of a bed. The floor portions 33 lie over the beds below, and the bed portions 34 lie over the floor portions below and

the aisle. The result is that a person may stand comfortably wherever there is open floor space, or in the aisle, below and, at the same time, a person may stand comfortably wherever there is floor space above.

The upper compartments are indicated at 35, 36, 37 and 38. They are substantially identical except that each one of each pair is a complement of the other and each pair is a complement of the next.

Each of the upper compartments has a lengthwise bed 39, those on one side of the car lying over the floor spaces of the compartments below and those on the other side of the car lying over the aisle. The transverse zone of the stair well is utilized for a toilet room 40, having folding door 40a on one side and storage shelves 41 on the other.

Suitable doors 42-42 permit access from the landing at the head of the stair into the respective rooms. The floor space 33 of each of the upper compartments is ample for the accommodation of toilet facilities 39' and such loose furniture as may be necessary, such as a chair like that indicated at 22a in the lower compartments. The windows for the upper compartment are in number and position the same as those below, being placed at a height immediately above the bed.

The space between the top of the bed and the ceiling of each compartment, either upper or lower, is more than sufficient for retiring comfortably, and wherever there is occasion to stand, there is more than sufficient room for that purpose. No more than the standard length, width and height of sleeping cars now in vogue is required and twenty-seven passengers, each in an individual room, may be accommodated in a car of such standard size.

In the form of my invention illustrated in Figures 4, 5 and 6 I provide double rooms below. The arrangement there shown accommodates 28 passengers in fourteen single upper rooms and seven double lower rooms.

For convenience the same reference characters are used for analogous parts in the showing of this modification. The differences are as follows:

The entry to the rooms below is direct rather than by way of an alley and the two beds are narrower than the lower beds of Figure 1.

The rooms above are much the same except that they are somewhat longer and the beds on one side are disposed against the dividing wall instead of against the outer wall of the car. In the upper compartments 36 and 37 loose chairs, like the chairs 22a of the lower compartments, may be positioned alongside the windows 23. These chairs can be faced in either direction which is a desirable feature in both the upper and lower compartments because many sleeping car patrons refuse to ride backward during day travel.

I claim:

1. In a sleeping car, a body having a main floor divided into a side aisle and a series of compartments flanking said aisle, a two-stage upper deck roofing said aisle and said compartments, a bed in each of said compartments lying lengthwise of the car, the lower stages of said upper deck lying over said beds and the upper stages thereof lying over the open floor spaces below, and lengthwise beds lying on the upper stages of said upper deck over and within the area of said aisle.

2. In a sleeping car, a body having a main floor divided into a side aisle and a series of compart-

ments flanking said aisle, a two-stage upper deck roofing said aisle and said compartments, a bed in each of said compartments lying lengthwise of the car, the upper stages of said upper deck lying over the open floor spaces below, means centrally dividing the upper deck lengthwise of the car, and cross partitions to form a series of upper compartments on each side of the car, and a bed in each of said upper compartments on the upper stage of said upper deck.

3. In a sleeping car, a body having a main floor divided into a side aisle and a series of compartments flanking said aisle, a two-stage upper deck roofing said aisle and said compartments, a bed in each of said compartments lying lengthwise of the car, the upper stages of said upper deck lying over the open floor spaces below, said upper deck being divided into compartments, two over and co-extensive with each lower compartment and its adjacent aisle portion.

4. In a sleeping car, a body divided into an aisle and a series of compartments, a two-stage upper deck roofing said aisle and said compartments, a bed in each of said compartments lying lengthwise of the car, the upper stages of said upper deck lying over the open floor spaces below, said compartments being arranged in pairs, the upper deck being divided into compartments, four over each pair of lower compartments, and a stair well and toilet room between adjacent pairs of upper compartments.

5. In a sleeping car, a body having a main floor divided into a side aisle and a series of compartments flanking said aisle, a two-stage upper deck roofing said aisle and said compartments, a bed in each of said compartments lying lengthwise of the car, the upper stages of said upper deck lying over the open floor spaces below, means centrally dividing the upper deck lengthwise of the car, and cross partitions to form a series of upper compartments on each side of the car, and a bed in each of said upper compartments on the upper stage of said upper deck, and a stair leading to said upper deck.

6. In a sleeping car, a body having a main floor divided into a side aisle and a series of compartments flanking said aisle, a two-stage upper deck roofing said aisle and said compartments, one bed in each of said compartments lying lengthwise of the car, the upper stages of said upper deck lying over the open floor spaces below, means centrally dividing the upper deck lengthwise of the car, and cross partitions to form a series of upper compartments on each side of the car, and a bed in each of said upper compartments on the upper stage of said upper deck.

7. In a sleeping car, a body divided into an aisle and a series of compartments, a two-stage upper deck roofing said aisle and said compartments, two beds in each of said compartments lying lengthwise of the car, the upper stages of said upper deck lying over the open floor spaces below, means centrally dividing the upper deck lengthwise of the car, and cross partitions to form a series of upper compartments on each side of the car, and a bed in each of said upper compartments on the upper stage of said upper deck.

8. In a sleeping car, a body divided into an aisle extending along one side of the body and a series of lower compartments between said aisle and the other side of the body, beds in said lower compartments extending lengthwise of the car, a multiple-stage upper deck roofing said aisle and said lower compartments and divided into upper

compartments, the lower stages of said upper deck lying over portions of said lower beds and the upper stages thereof lying over portions of the open floor spaces below, and beds in a plurality of said upper compartments on upper stages of said upper deck extending lengthwise of the car and lying over the aisle.

9. In a sleeping car, a body divided into an aisle extending along one side of the body and a series of lower compartments between said aisle and the other side of the body, beds in said lower compartments extending lengthwise of the car, a multiple-stage upper deck roofing said aisle and said lower compartments and divided into upper compartments, the lower stages of said upper deck lying over portions of said lower beds and the upper stages thereof lying over portions of the open floor spaces below, and beds in a plurality of said upper compartments on upper stages of said upper deck and extending lengthwise of the car.

10. In a sleeping car, a body divided into an aisle extending along one side of the body and a series of lower compartments between said aisle and the other side of the body, beds in said lower compartments extending lengthwise of the car, a multiple-stage upper deck roofing said lower compartments and divided into upper compartments, one of the lower stages of said upper deck lying over portions of said lower beds and another stage of said upper deck lying over portions of the open floor spaces below, and beds in a plurality of said upper compartments on upper stages of said upper deck extending lengthwise of the car and along the window sides of said upper compartments.

11. In a sleeping car, a body divided into an aisle extending along one side of the body and a series of lower compartments between said aisle and the other side of the body, beds in said lower compartments, a multiple-stage upper deck roofing said lower compartments and divided into upper compartments, one of the lower stages of said upper deck lying over portions of said lower beds and another stage of said upper deck lying over portions of the open floor spaces below, and beds in said upper compartments on upper stages of said upper deck extending lengthwise of the car and along the window sides of said upper compartments opposite to the aisle side of the car.

12. In a sleeping car, a body divided into an aisle extending along one side of the body and a series of lower compartments between said aisle and the other side of the body, beds in said lower compartments, a multiple-stage upper deck roofing said lower compartments and divided into upper compartments, one of the lower stages of said upper deck lying over portions of said lower beds and another stage of said upper deck lying over portions of the open floor spaces below, and beds in a plurality of said upper compartments on upper stages of said upper deck extending lengthwise of the car and disposed over said lower compartments.

13. In a sleeping car, an aisle, a plurality of substantially transverse partitions associated with said aisle and defining a plurality of individual lower compartments, beds in said lower compartments extending lengthwise of the car, a plurality of substantially transverse partitions defining a plurality of individual upper compartments on a higher level than said lower compartments, and beds in said upper compartments extending lengthwise of the car and lying over said aisle.

14. In a sleeping car, an aisle, a plurality of

substantially transverse partitions associated with said aisle and defining a plurality of individual lower compartments, beds in said lower compartments extending lengthwise of the car, a plurality of substantially transverse partitions defining a plurality of individual upper compartments on a higher level than said lower compartments, beds in said upper compartments extending lengthwise of the car and lying over said aisle, and a plurality of flights of stairs located at spaced points along the length of the car and leading from said aisle up to said upper compartments.

15. In a sleeping car, a body divided into an aisle extending along only one side of the body, a plurality of transverse partitions extending from said aisle to the opposite side wall of the body and defining a series of lower compartments, doors in certain of said partitions for establishing direct communication between adjacent lower compartments, beds in said lower compartments extending lengthwise of the car, windows in said opposite side wall of the body opening into said lower compartments, a part of the floor space in each of said lower compartments being of full standing room height at the window and adapted to receive a movable chair which can occupy different positions at the window, a multiple stage upper deck roofing said lower compartments, transverse partitions above said upper deck defining a plurality of upper compartments, the lower stages of said upper deck lying over portions of the beds in said lower compartments and the upper stages thereof lying over portions of the open floor spaces below, beds in said upper compartments on upper stages of said upper deck extending lengthwise of the car along said opposite side wall, and a plurality of flights of stairs located at spaced points along the length of the car and leading from said aisle up to said upper compartments.

16. In a sleeping car, a body divided into an aisle extending along only one side of the body, a plurality of transverse partitions extending from said aisle to the opposite side wall of the body and defining a series of lower compartments, beds in said lower compartments extending lengthwise of the car, windows in said opposite side wall of the body opening into said lower compartments, the floor space of each of a plurality of said lower compartments including window sitting space at said window adapted to receive a movable chair which can occupy different positions at the window; a multiple stage upper deck roofing said lower compartments, transverse partitions above said upper deck defining a plurality of upper compartments, the lower stages of said upper deck lying over portions of the beds in said lower compartments, and the upper stages thereof lying over portions of the open floor spaces below, beds in said upper compartments on upper stages of said upper deck extending lengthwise of the car, and a plurality of flights of stairs located at spaced points along the length of the car and leading from said aisle up to said upper compartments.

17. In a sleeping car, a body comprising right and left side walls and a lengthwise dividing wall defining an aisle along the right side of the body, a plurality of transverse partitions extending from said aisle to the left side wall of the body and defining a series of lower compartments, doors in certain of said partitions for establishing direct communication between adjacent lower compartments, beds in said lower compartments,

windows in said left side wall of the body opening into said lower compartments, the floor space of each of a plurality of said lower compartments including window sitting space at said window adapted to receive a movable chair which can occupy different positions at said window, a multiple stage upper deck roofing said lower compartments, transverse partitions above said upper deck defining a plurality of upper compartments, the lower stages of said upper deck lying over portions of the beds in the lower compartments, and the upper stages thereof lying over portions of the open floor spaces below, portions of said upper stages extending at a substantially uniform level from said lengthwise dividing wall to said left side wall to provide head room greater than that of the average standing passenger extending to the left side wall in each lower compartment, beds in said upper compartments on upper stages of said upper deck extending lengthwise of the car along the left side wall of the car and a plurality of flights of stairs located at spaced points along the length of the car and leading from said aisle up to said upper compartments.

18. In a sleeping car, a car body comprising a main floor and right and left side walls, a lengthwise dividing wall adjacent to said right side wall and defining therewith a lengthwise aisle extending along the right side of the car body, a plurality of transverse partitions extending from said lengthwise wall to the left side wall of the car body and defining a plurality of lower compartments, doors in certain of said partitions for establishing direct communication between adjacent lower compartments, beds in said lower compartments extending lengthwise of the car, windows in the left side wall of the body opening into said lower compartments, the floor space of each of a plurality of said lower compartments including window sitting space at said window adapted to receive a movable chair which can occupy different positions at said window, a multiple stage upper deck roofing said lower compartments, transverse partitions above said upper deck defining a plurality of upper compartments, the lower stages of said upper deck lying over portions of the beds in said lower compartments and the upper stages thereof lying over portions of the open floor spaces below, portions of said upper stages extending at a substantially uniform level to said left side wall to provide head room greater than that of the average standing passenger extending to the left side wall in each lower compartment, beds in said upper compartments on upper stages of said upper deck, and a plurality of flights of stairs located at spaced points along the length of the car and leading from said aisle up to said upper compartments.

19. In a sleeping car, a car body comprising a main floor and two side walls, a lengthwise dividing wall adjacent to one of said side walls, and defining therewith a lengthwise aisle extending along one side of the car body, a plurality of transverse partitions extending from said lengthwise wall to the opposite side wall of the car body and defining a plurality of lower compartments, doors in certain of said partitions for establishing direct communication between adjacent lower compartments, beds in said lower compartments extending lengthwise of the car, a multiple stage upper deck roofing said lower compartments, transverse partitions extending from side wall to side wall of the car body above said upper deck and defining a plu-

rality of upper compartments, each of said upper compartments having standing room space therein on lower stages of said upper deck, the lower stages of said upper deck lying over portions of the beds in said lower compartments, and the upper stages thereof lying over portions of the open floor spaces below, beds in said upper compartments on upper stages of said upper deck, windows opening into said upper compartments through both side walls of the car, said windows at the aisle side opening into said upper compartments above the aisle, and a plurality of flights of stairs located at spaced points along the length of the car and leading from said aisle up to said upper compartments.

20. In a sleeping car, a car body comprising a main floor and two side walls, a lengthwise dividing wall adjacent to one of said side walls and defining therewith a lengthwise aisle extending along one side of the car body, a plurality of transverse partitions extending from said lengthwise wall to the opposite side wall of the car body and defining a plurality of lower compartments, beds in said lower compartments extending lengthwise of the car, a multiple stage upper deck roofing said lower compartments, transverse partitions above said upper deck defining a plurality of upper compartments, the lower stages of said upper deck lying over portions of the beds in said lower compartments, and the upper stages thereof lying over portions of the open floor spaces below, each of said upper compartments having standing room space therein on lower stages of said upper deck, beds in said upper compartments on upper stages of said upper deck, and a plurality of flights of stairs located at spaced points along the length of the car and leading from said aisle up to said upper compartments.

21. In a sleeping car, a car body comprising a main floor and two side walls, a lengthwise dividing wall adjacent to one of said side walls and defining therewith a lengthwise aisle extending along one side of the car body, a plurality of transverse partitions extending from said lengthwise wall to the opposite side wall of the car body and defining a plurality of lower compartments, doors in certain of said partitions for establishing direct communication between adjacent lower compartments, beds in said lower compartments, a multiple stage upper deck roofing said lower compartments, transverse partitions extending from side wall to side wall of the car body above said upper deck and defining a plurality of upper compartments, each of said upper compartments having standing room space therein on lower stages of said upper deck, the lower stages of said upper deck lying over portions of the beds in said lower compartments, and the upper stages lying over portions of the open floor spaces below, beds in said upper compartments on upper stages of said upper deck extending lengthwise of the car along the side wall of the car opposite to the aisle side, and windows opening into said upper compartments through the two side walls of the car, the windows at the aisle side opening into said upper compartments above the aisle.

22. In a sleeping car, a car body comprising a main floor and two side walls, a lengthwise dividing wall adjacent to one of said side walls and defining therewith a lengthwise aisle extending along one side of the car body, a plurality of transverse partitions extending from said lengthwise wall to the opposite side wall of the car

body and defining a plurality of lower compartments, beds in said lower compartments, a multiple stage upper deck roofing said lower compartments, transverse partitions above said upper deck defining a plurality of upper compartments, the lower stages of said upper deck lying over portions of the beds in said lower compartments and the upper stages thereof lying over portions of the open floor spaces below, beds in said upper compartments on upper stages of said upper deck extending lengthwise of the car along the side wall of the car opposite to the aisle side, and a plurality of flights of stairs located at spaced points along the length of the car and leading from said aisle up to said upper compartments.

23. In a sleeping car, a car body comprising a main floor and two side walls, a lengthwise dividing wall adjacent to one of said side walls and defining therewith a lengthwise aisle extending along one side of the car body, a plurality of transverse partitions extending from said lengthwise wall to the opposite side wall of the car body and defining a plurality of lower compartments, said compartments being arranged in pairs, beds in said lower compartments, extending lengthwise of the car, a toilet in each of said lower compartments, a multiple stage upper deck roofing said lower compartments, transverse partitions above said upper deck defining a plurality of upper compartments, the lower stages of said upper deck

lying over portions of the beds in said lower compartments and the upper stages thereof lying over portions of the open floor spaces below, beds in said upper compartments on upper stages of said upper deck, and stairs between each pair of lower compartments leading from said aisle up to said upper compartments.

24. In a sleeping car, a car body comprising a main floor and two side walls, a lengthwise dividing wall adjacent to one of said side walls and defining therewith a lengthwise aisle extending along one side of the car body, a plurality of transverse partitions extending from said lengthwise wall to the opposite side wall of the car body and defining a plurality of lower compartments, beds in said lower compartments extending lengthwise of the car, a toilet in each of said lower compartments, a multiple stage upper deck roofing said lower compartments, transverse partitions above said upper deck defining a plurality of upper compartments, the lower stages of said upper deck lying over portions of the beds in said lower compartments and the upper stages thereof lying over portions of the open floor spaces below, beds in said upper compartments on upper stages of said upper deck, and windows opening into a plurality of said upper compartments over said aisle.

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