

No. 682,163.

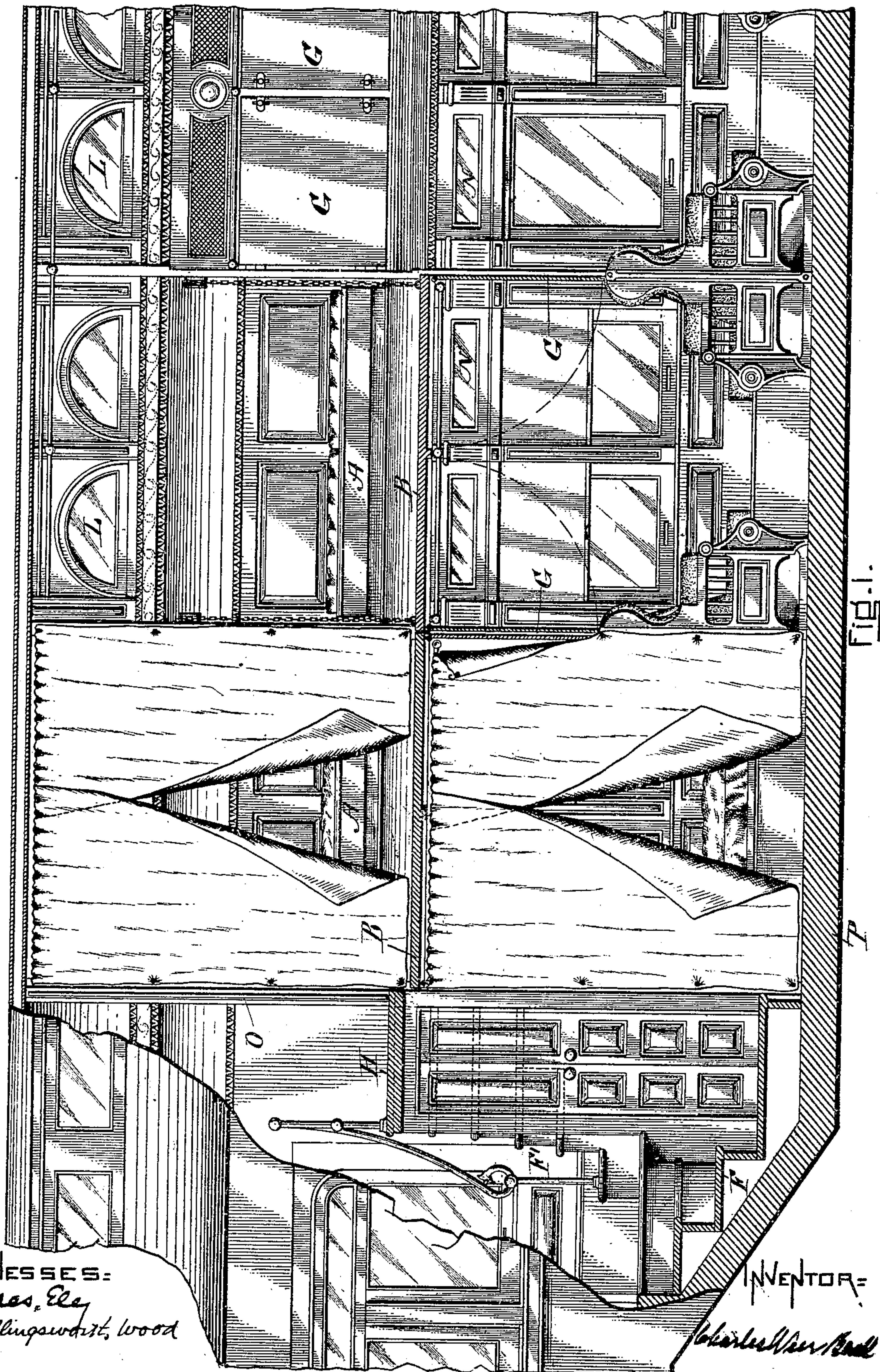
Patented Sept. 10, 1901.

C. W. BEALL.
SLEEPING CAR.

(Application filed July 1, 1901.)

(No Model.)

4 Sheets—Sheet 1.



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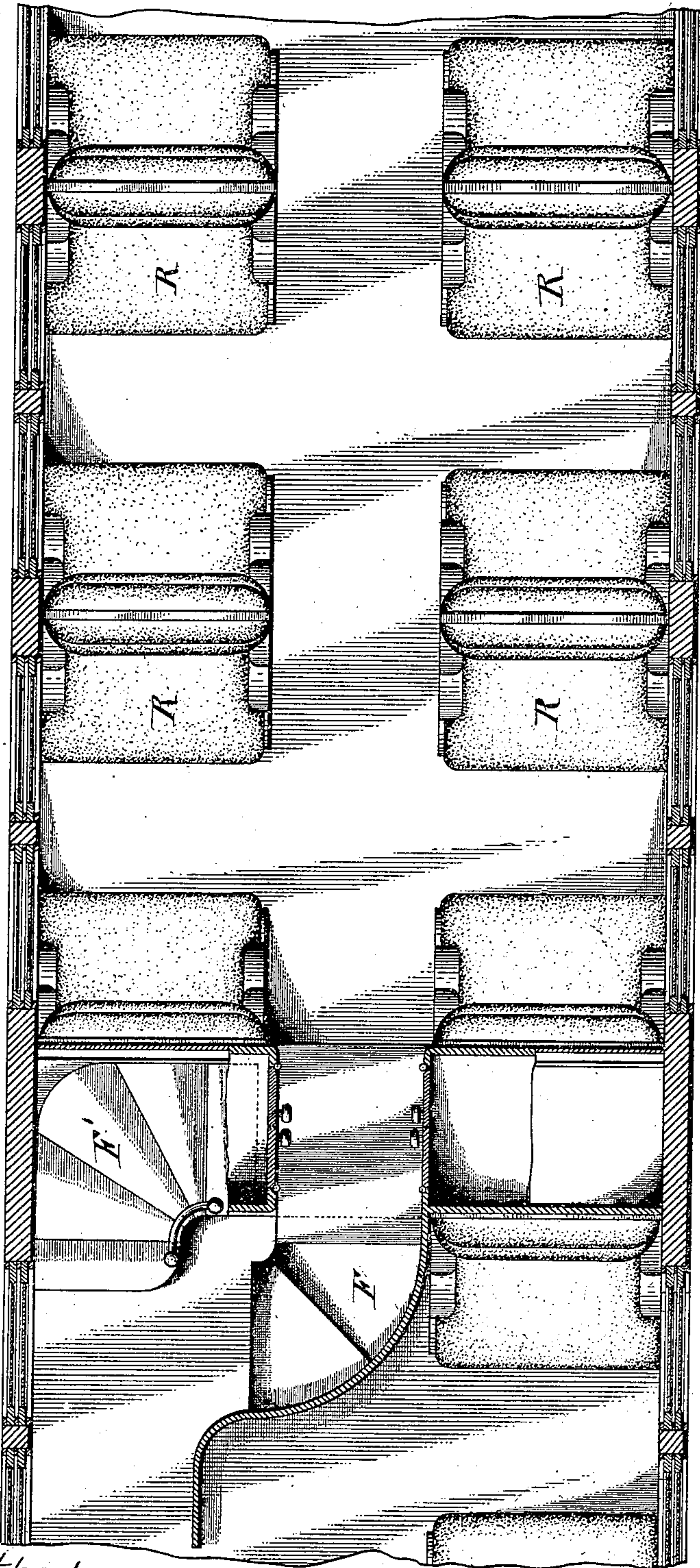
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WITNESSES:
Moses E. Ely

L. Hollingworth Wood

INVENTOR:

Charles W. Beall

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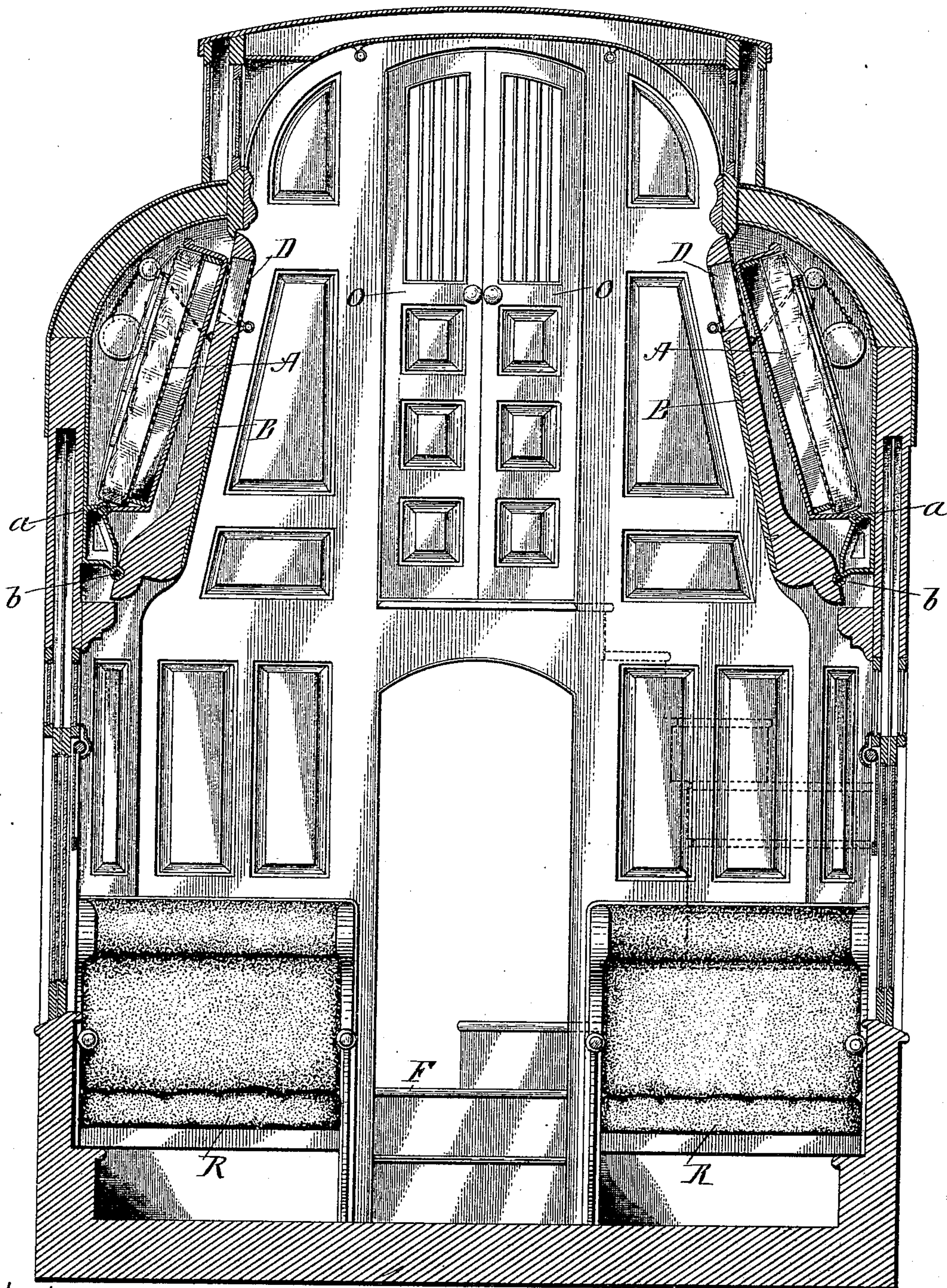
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WITNESSES:
Moses E. Ely
L. Hollingworth Wood

FIG. 3.

INVENTOR:
Charles W. Beall

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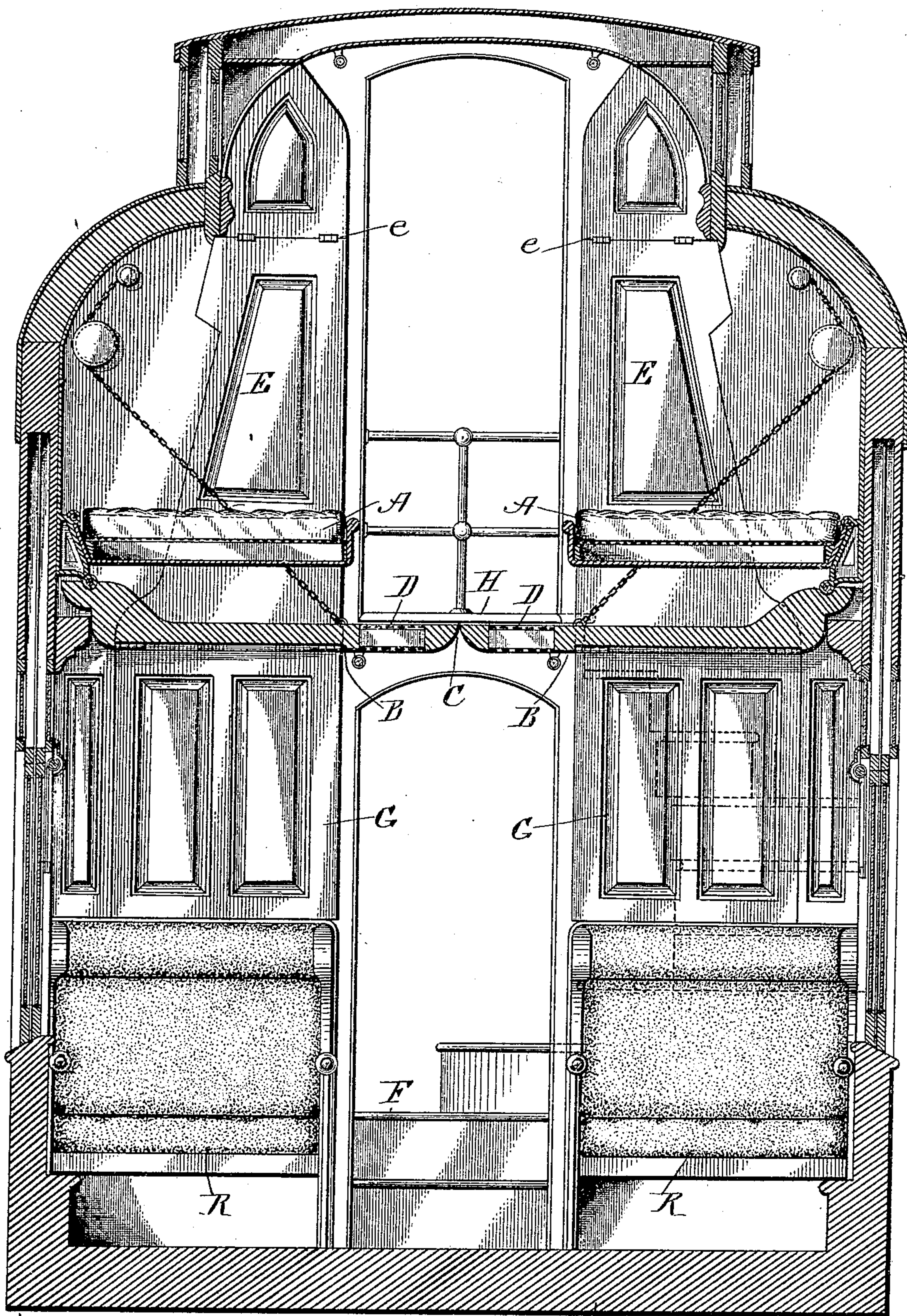
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4 Sheets—Sheet 4.



WITNESSES:

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L. Hollingsworth Wood

Fig. 4.

P

INVENTOR

Charles W. Beall

UNITED STATES PATENT OFFICE.

CHARLES WEIR BEALL, OF NEW YORK, N. Y.

SLEEPING-CAR.

SPECIFICATION forming part of Letters Patent No. 682,163, dated September 10, 1901.

Application filed July 1, 1901. Serial No. 66,647. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WEIR BEALL, a citizen of the United States, residing at New York, in the borough of Manhattan, State of New York, have invented new and useful Improvements in Sleeping-Cars, of which the following is a specification.

My invention consists in improvements in sleeping-cars whereby the discomforts of night travel can be reduced to a minimum without diminishing the standard passenger-carrying capacity of the car. By employing my improvements a sleeping-car can be built within the standard over all dimensions at present in vogue and provide sleeping accommodations for as many passengers as the ordinary Pullman sleeping-car, giving each passenger a full section instead of compelling two to share a section. The upper berths of a car embodying my improvements will be found to be at least as comfortable as the lower berths.

In the drawings hereto annexed, Figure 1 shows a longitudinal elevation, partly in section, of a car embodying my improvements. Fig. 2 is a sectional plan view of the same. Fig. 3 is a vertical cross-section of the car, showing the upper floor and berths folded; and Fig. 4 is a vertical cross-section of the car, showing the upper floor lowered and upper berths arranged for the night.

The ends of the car-body over the trucks are of the usual dimensions and construction. The middle body of the car between the trucks is built with a depressed floor which hangs within a few inches of the rails, as at P, Fig. 1. This arrangement of the middle body of the car gives enough vertical space between the floor and roof of the car for two tiers of sections, with an upper floor or deck between them, leaving over six feet head room in each tier of sections. By this arrangement the berths of a twelve-section sleeping-car are vertically separated from each other, so as to form a two-storied car for the entire length between the trucks.

In order to increase the comfort and attractiveness of the car during the day-time, the upper floor is made in sections, which are hinged at the sides of the car and fold up, inclosing the folded upper berths and giving

the passengers the benefit of the full height of the car.

In Figs. 3 and 4 the arrangement of upper and lower sections is clearly shown. The lower-berth arrangement is the usual one, the sectional cushioned berths being made up into seats, as at R, Fig. 3. The upper-floor sections B are each equal in length to a berth-section and in width to half the inside breadth of the car, so that when swung downward into horizontal position, Fig. 4, the floor-sections B meet along the middle line of the car and form a platform or deck from side to side of the car. These floor-sections B are hinged at *b* and are suspended by chains and counterbalances similar to those now in use on sleeping-car upper berths. The upper berths A are hinged at *a* and rest against the floor-sections B when the latter are folded up and descend of themselves into place when the floor-sections are lowered. The upper-berth sections are separated by removable partitions E, Fig. 4, which are jointed at *e*, so as to fold into proper length for storage in the upper berths. The floor-sections B may be provided with any desired fastenings at the point C where they meet, and, if required, ventilator-gratings may be inserted, as at D.

On the lower side of each upper-floor section there is secured a leaf G, which is so hinged as to swing down over the back of the lower-berth seats and there serve as a partition between the lower-berth sections.

Access to the lower and upper decks is afforded by the stairways F and F', which lead down and up from the platform-level of the car. At the upper-deck landing H there are provided sliding doors O, which lead into the upper deck and are locked in the day-time after the upper berths and upper-deck sections are closed.

Ventilation is afforded for each section, both upper and lower, the lower-berth ventilators being shown at N, Fig. 1, and the upper-berth ventilators at L.

In Fig. 1 the first section on the left is shown as fully made up for the night, the platform B in place, and the berth-curtains hung. The next section is shown with the floor B let down and neither berth made up. The next section shows the arrangement for

the day-time, the floor B swung into place against the side of the car and all the upper-berth furniture concealed.

5 The upper-berth ventilators L are made large enough to permit the exit of a passenger and are provided with swinging lids and screens, so that in case of accident the upper-deck passengers will not be distressed for lack of modes of egress.

10 The arrangement of space in the ends of the car is of the usual character.

What I claim, and desire to secure by Letters Patent, is—

15 1. In a sleeping-car, the combination with upper and lower tiers of berths, of an upper floor, constructed in sections hinged to swing from the sides of the car and to meet when swung down, so as to form a platform from side to side of the car.

20 2. In a sleeping-car, the combination of lower berths, swinging upper berths, a hinged sectional floor between the two, adapted to form a platform from side to side of the car.

25 3. In a sleeping-car the combination of a car-body depressed between the trucks, the portion of the car thus depressed provided with a lower tier of berths, a tier of upper

folding berths, a sectional folding floor between the two tiers of berths, which when lowered forms a floor from side to side of the car. 30

4. In a sleeping-car, the combination of lower berths, swinging upper berths, a hinged sectional floor between the upper and lower berths, which when lowered forms a floor 35 from side to side of the car, and partitions for the lower sections, hinged to the lower sides of the sections of the folding floor.

5. In a sleeping-car, the combination of lower berths, swinging upper berths, a hinged 40 sectional floor between the upper and lower berths, which when lowered forms a platform from side to side of the car, partitions for the lower berths, hinged to the lower sides of the sections of the folding floor, and jointed removable partitions for the upper-berth sections. 45

Signed by me at New York this 24th day of June, 1901.

CHARLES WEIR BEALL.

Witnesses:

L. HOLLINGSWORTH WOOD,
MOSES ELY.