

(No Model.)

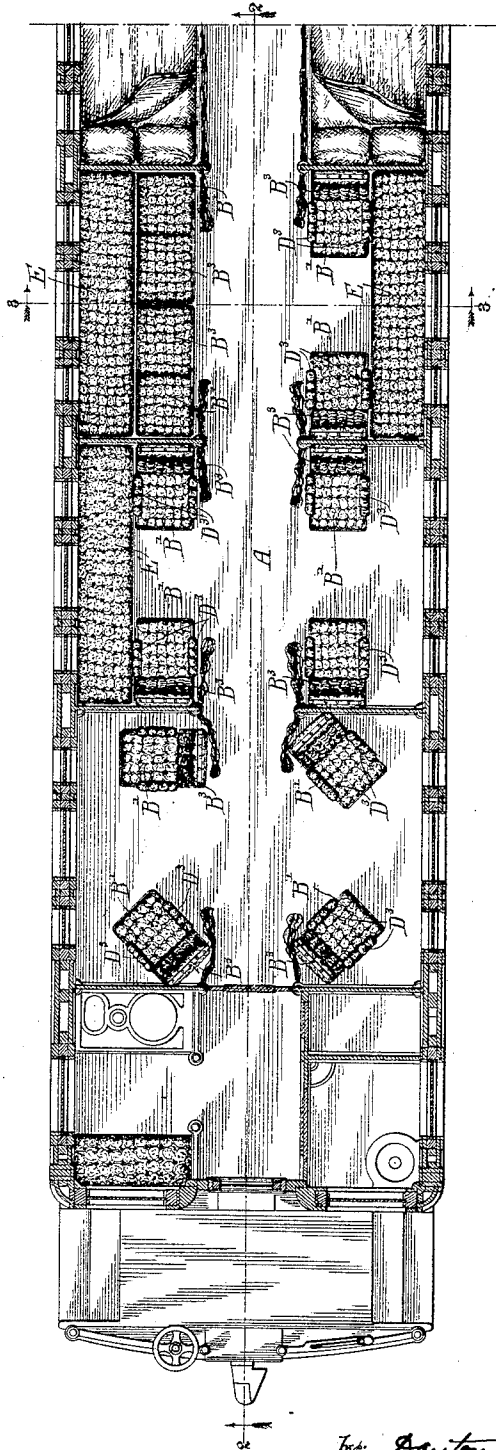
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J. D. S. REED.
PASSENGER CAR.

No. 461,132.

Patented Oct. 13, 1891.

Fig. 1.



Witnesses:

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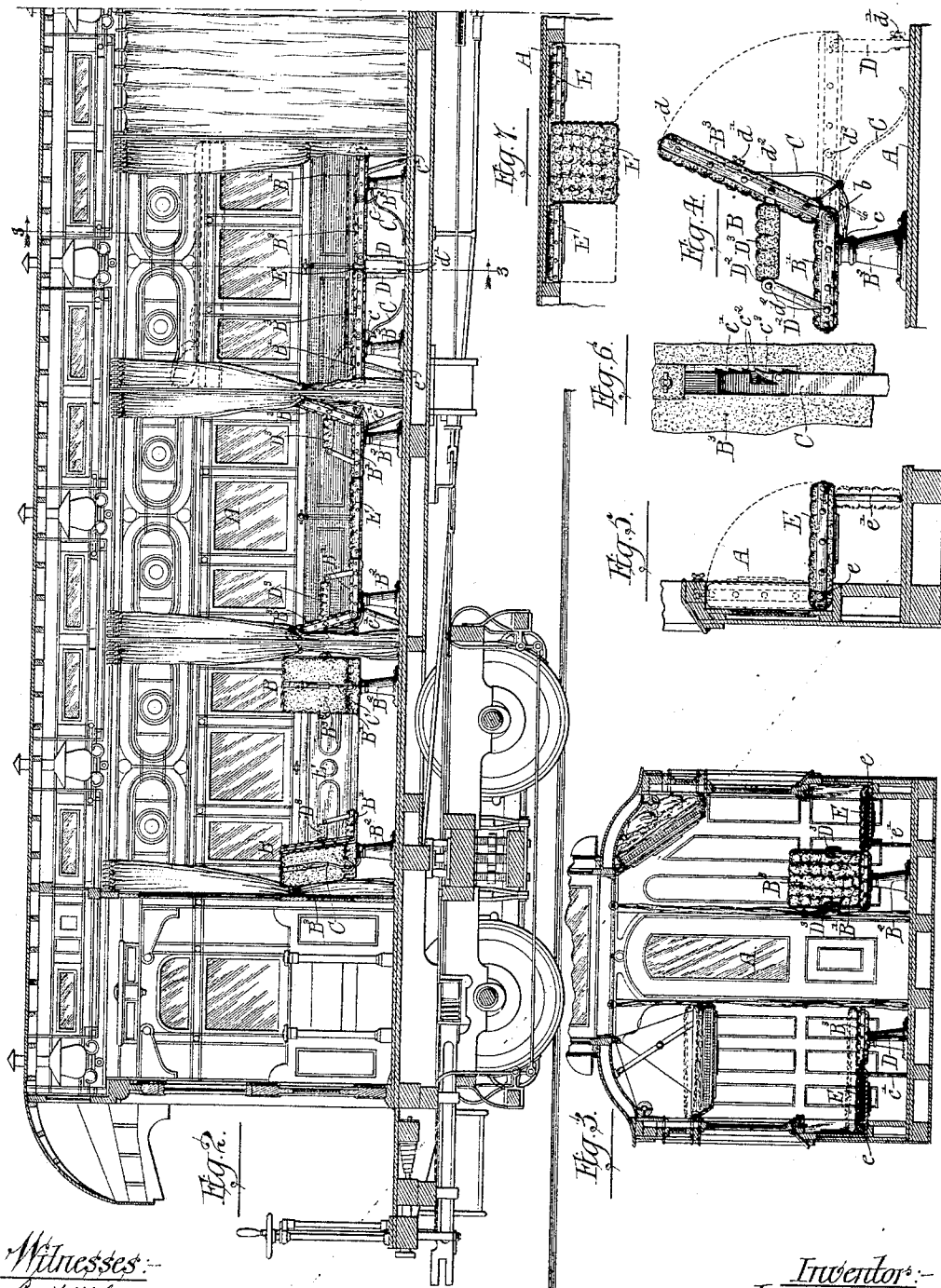
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J. D. S. REED.
PASSENGER CAR.

No. 461,132.

Patented Oct. 13, 1891.



Witnesses:-
Louis M. Whithead.
Wm. J. Henning

Inventor's:-
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UNITED STATES PATENT OFFICE.

JAMES D. S. REED, OF CHICAGO, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO
THOMAS B. ADAMS, OF CHEYENNE, WYOMING.

PASSENGER-CAR.

SPECIFICATION forming part of Letters Patent No. 461,132, dated October 13, 1891.

Application filed September 4, 1890. Serial No. 363,879. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. S. REED, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railroad Passenger-Coaches; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in railroad passenger-coaches, and more particularly to a novel construction as applied to parlor or chair cars, whereby the car may be readily converted into a sleeping-car, the chairs being so arranged as to permit the backs thereof to be lowered to the level of the seats, so as to form with the seats a continuous berth.

Heretofore parlor or chair cars have been provided with chairs only, said chairs being usually of the revolving type, but not adapted to have their backs lowered so as to form berths. In some instances these chairs are so constructed as to permit the occupants to tilt backward, if they so desire; but in this form of construction the entire chair is tilted, the seat retaining the same position relative to the back thereof at all times. Another form of chair in which the back is pivoted to the seat and adapted to be inclined backwardly has been commonly used; but in this form of construction the passenger occupying such chair is permitted to lean back, but not to lie down as in a bed or berth.

In sleeping-cars as heretofore constructed the seats are made rigid, the cushions on the seat and at the back being removable and adapted to be placed upon bars or slats extending from one seat-frame to the adjacent or opposite seat-frame, so as to form the lower berth. In this form of construction it is found necessary to place the two seats which form the lower berth in each "section" front to front, so that when both of the seats are occupied it becomes necessary for the occupant of one of said seats to ride backward. This is often very disagreeable to the passenger, but cannot be avoided in a car of this construction.

Furthermore, the seats made as above de-

scribed, being immovable, are uncomfortable, as the passengers occupying them must maintain substantially the same upright position during the entire journey, not being able to assume a reclining position until the berth has been made up by removing the cushions and arranging them, as before described.

In order to obviate these objections I make the chairs of the revolving type, but also hinge or pivot the back of each of said chairs to the margin of the seat portion thereof, so that it may be lowered to a horizontal position. By this construction when it is desired to make up the berths the two revolving chairs in each section may be placed back to back and the backs lowered into a horizontal position, so as to bring their top ends together, the two seat portions and the two backs forming a continuous bed or berth. As a further improvement I provide a lounge or sofa at the side of the car in each section, said sofa consisting of an upholstered or cushioned seat, preferably made the entire length of the section and hinged or pivoted along one edge to the side of the car, so that it may be folded up against the side of the car when not in use. These lounges or sofas may be made of two or more parts, if desired—as, for instance, the form illustrated in Fig. 7. By this construction the central part of the lounge may be let down and three persons occupy the section, the chairs being still free to rotate; or either one or both of the end parts of said lounge may be let down and occupied, the occupants being permitted to sit facing in either direction, as desired. This sofa is preferably made of sufficient width to cause its outer edge, when it is let down, to come up to or against the edges of the chairs when the backs thereof are lowered.

In the accompanying drawings, illustrating my invention, Figure 1 is a plan view of a railroad passenger-coach embodying my invention. Fig. 2 is a longitudinal vertical section on line 2 2 of Fig. 1. Fig. 3 is a vertical cross-section on line 3 3 of Figs. 1 and 2. Fig. 4 is an enlarged side view of one of the revolving chairs. Fig. 5 is an enlarged end view of the folding sofa or lounge, showing the manner in which it is connected with the side of the car. Fig. 6 is a view in detail of

means for adjusting the pivoted back of the chair. Fig. 7 is a plan view of a modified form of the folding sofa or lounge.

In said drawings, A indicates the car-body, of any desired one of the several forms of construction commonly in use.

B B indicate the revolving chairs, the seat portions B' B' of which are pivotally secured to standards B² B² and the backs B³ B³ of which are hinged or pivoted to the seat portions, as shown in the drawings at b b.

C C indicate supports for the back portions B³ B³ of the chairs. These supports may be made of any desired form; but I prefer to form them of springs connected at their lower ends with the stationary seat portion of the chair, as shown more particularly in Fig. 4 at c. I also prefer to form these spring-supports with adjustable connections with the back portions B³ B³ at their upper ends, as shown more particularly in Fig. 6 at c'. In the form of construction shown the spring-supports C C are each provided with a pawl c³, adapted to engage notches or teeth c² in the back of the seat, so that the angle of the back portion with the seat may be varied by engaging said pawl with the different notches or teeth upon said back. The elastic supports C C are designed to give a yielding support to the backs of the seats when the chairs are in use as such, but are designed to be disengaged from said backs altogether when they are let down to form the berths. A convenient arrangement of these springs is illustrated in Fig. 4, said spring being shown as adapted to be disengaged from the chair-back and dropped downwardly against the floor of the car when the backs are lowered.

D D represent legs or supports pivotally connected with the upper portions of the backs B³ B³, as shown in Figs. 2 and 4 at d d. These legs are normally held in position folded against said backs by any suitable fastening—as, for instance, the buttons d'. The arms D² D² of the chairs are preferably made of two or more parts pivoted together, as shown in the drawings at d² d², and provided with removable cushions or pads D³ D³, adapted to be removed when the chair-backs are lowered, so as to be out of the way.

E E indicate the hinged or pivoted lounges or sofas attached to the side of the car. These sofas are attached at one edge to the outer frame or body portion of the car, as indicated in the drawings by e e, and provided at their opposite free edges with pivoted legs e' e', adapted to be dropped down, so as to engage the floor of the car when the sofa or lounge is lowered and to fold up out of the way when the said lounge or sofa is raised up and secured to the side of the car. These lounges or sofas are preferably let into the side of the car, as shown more particularly in Fig. 5, in which the side of the car is shown recessed, so that when said lounges are folded up within said recesses their outer surfaces will be flush with the inner surface of the car-body. These

folding lounges may be upholstered upon one side only, if desired, and the other side made plain or paneled to correspond with the wood-work of the interior portion of the car, so that when said lounges are folded up within the recesses the upholstered portions will be entirely concealed from view.

The upper part of the car is preferably provided with the usual upper berths arranged to fold up against the side of the car when not in use, although it is obvious that said upper berths may be dispensed with, if desired.

One of the main advantages gained by the construction herein shown and described is that by the employment of the convertible chairs and folding lounges one car may be made to take the place of two, inasmuch as it may be used during the day-time as a parlor or chair car and at night the chairs and folding lounges may be arranged to form beds or berths.

Another advantage gained by this construction is that when there is only one occupant in the lower berth the folding lounge may, if desired, be left in its folded or closed position and the chairs alone used to form the bed or berth, thereby affording sufficient space between the chairs and the side of the car for the passenger to stand upon the floor while dressing and undressing, whereas great inconvenience is experienced in this respect in traveling in the sleeping-coaches ordinarily in use.

It is also clearly obvious that by the employment of the chairs constructed and arranged as herein described they may be revolved into any desired position, so that there will be no necessity for any one of the passengers to ride backward.

Furthermore, it is clearly obvious that by reason of the adjustable supports which sustain the pivoted backs of the chairs the passengers may change the position of their chairs as often as desired and may assume any desired position from an upright sitting to a reclining position. Furthermore, by the use of the spring-supports shown the backs of the several chairs are rendered elastic or yielding, and the comfort of the occupants largely increased thereby.

As a further and separate improvement the wooden partitions which separate the sections may each be made in two parts, the lower part extending down to and resting upon the floor, and during the day-time said partitions may be taken down and placed in the upper berths, as is usual in the forms of sleeping-cars commonly in use. In this construction the lower part of each of these partitions takes the place of the seat-back, which constitutes in the ordinary forms of cars the lower part of the division between the sections. If desired, the two parts of said partitions may be hinged together, so as to fold up when not in use.

Having described my invention, what I claim is—

1. The combination, with a car-body, of a

plurality of chairs arranged in rows adjacent to the central aisle and having backs adapted to be lowered to a horizontal position, said chairs being rotatable around a vertical axis and each adjacent pair of chairs being located at such distances apart that they may be turned back to back and the backs lowered to meet and form, in conjunction with the seats, a continuous horizontal bed, with a space between the same and the side of the car, substantially as described.

2. The combination, with a car-body, of a plurality of chairs arranged in two rows adjacent to the central aisle and having backs adapted to be lowered to a horizontal position, said chairs being rotatable around a vertical axis and each adjacent pair of chairs being located at such distances apart that they may be turned back to back and the backs lowered to meet and form, in conjunction with the seats, a continuous horizontal bed, with a space between the same and the side of the car, and means for supporting the said backs when lowered, substantially as described.

3. The combination, with a car-body, of a plurality of rotatable chairs provided with hinged backs adapted to be lowered into a horizontal position and a plurality of hinged or folding lounges or sofas, each pivotally connected at one of its sides to the car-body and adapted to be lowered, so as to form with two of said chairs a continuous bed or berth,

substantially as and for the purpose specified.

4. The herein-described car, comprising upper berths attached to the sides of the car-body, a plurality of rotatable chairs having hinged backs adapted to be lowered into a horizontal position, and a plurality of hinged or pivoted lounges or sofas attached to the sides of the car and each adapted to form with two of said chairs, when the backs of the latter have been lowered, a lower berth or bed, substantially as and for the purpose specified.

5. The herein-described car, comprising upper berths attached to the sides of the car-body, a plurality of rotatable chairs having hinged backs adapted to be lowered into a horizontal position, a plurality of hinged or pivoted lounges or sofas attached to the sides of the car and each adapted to form with two of said chairs, when the backs of the latter have been lowered, a lower berth or bed, and a plurality of removable partitions adapted to be secured in position between adjacent sections of the car, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

JAMES D. S. REED.

Witnesses:

TAYLOR E. BROWN,
GEORGE W. HIGGINS, Jr.