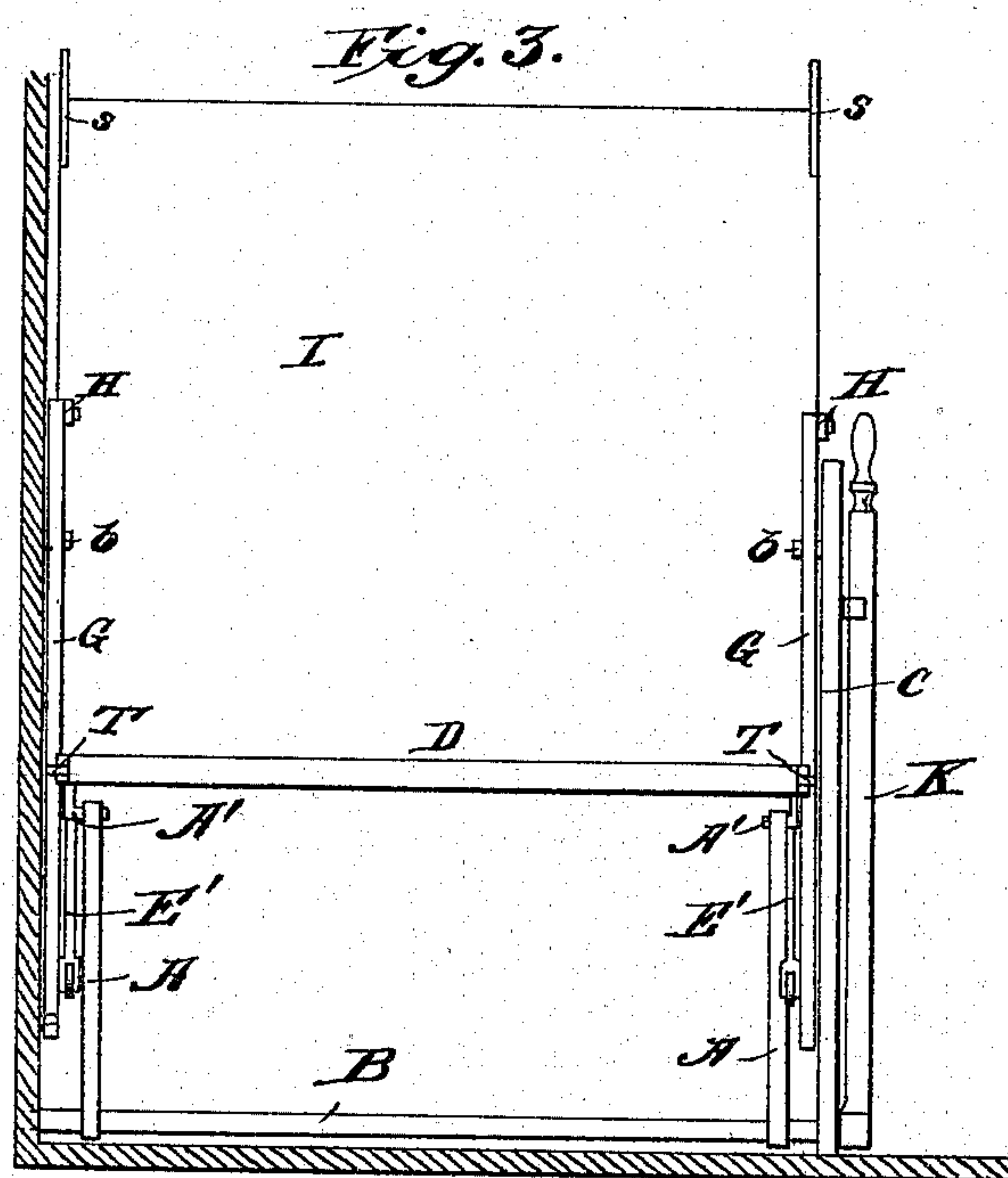
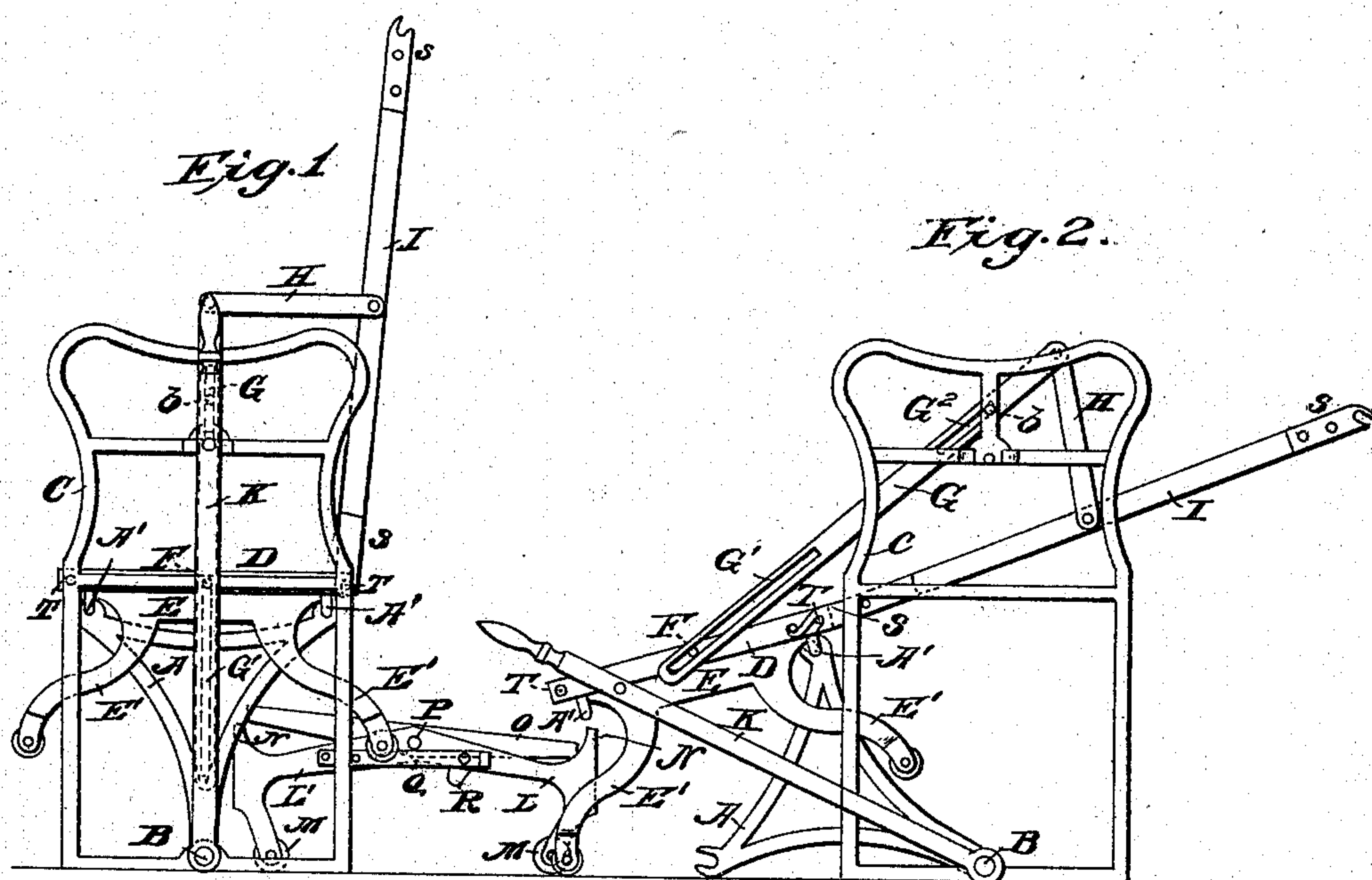


J. C. DE WITT.  
CAR SEAT AND COUCH COMBINED.

No. 21,326.

Patented Aug. 31, 1858.





# UNITED STATES PATENT OFFICE.

JOHN C. DE WITT, OF WEST BLOOMFIELD, NEW JERSEY.

## RAILROAD-CAR SEAT.

Specification of Letters Patent No. 21,326, dated August 31, 1858.

*To all whom it may concern:*

Be it known that I, JOHN C. DE WITT, of West Bloomfield, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Railroad-Car Seats for Rendering them Capable of Being Converted into Reclining-Couches; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification.

Figure 1, is a side elevation of one of the improved car seats in the position to which it is brought when designed to be occupied by the passengers in a sitting posture. Fig. 2, is a side elevation of the next seat in succession when lowered and converted into an inclined couch, capable of accommodating two passengers in a reclining or sleeping position. Fig. 3, is a transverse section through a portion of a railroad car, showing a front view of one of the seats, in a position to be sat upon.

Similar letters in the figures refer to corresponding parts.

The nature of this invention and improvement consists in suspending the car seats provided with reversible backs, upon oscillating cradles affixed to rocking shafts below, and combining with the same a series of slotted bars, portable trucks, and other appliances, in such a manner as to enable the seats to be arranged and secured in the usual position to accommodate the passengers in a sitting posture, or by a slight exertion, and in a moment of time, to cause their backs, bottoms, and upper parts of the movable trucks, to be brought to the proper degree of inclination to form comfortable reclining and sleeping couches.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

The cradles A, on which the seats are sustained, consist of skeleton metallic frames A, somewhat resembling right angled triangles in form, and secured at the apex of their lower parts to horizontal transverse rock shafts B, extending along the floor from the sides of the car to the passageway through the center of the same, and turning at their ends in suitable boxes formed in the sides of the car, and in the lower horizontal beams of upright frames C, next the passageway, the upper portions of which are curved, and situated at the proper height to

form the usual rests for the arms of the passengers. In the upper corners or angles of the skeleton frames A, are formed open slots, in which rest points or rounded projections A', extending downward from the corners of the bottoms D, of the seats. These points or projections A', are formed on castings E, secured on the under part of the ends of the seats, from which projections extend downward and backward, and forward curved arms E', having friction rollers on their lower ends. From the ends of the seat bottoms D, and midway between their edges or sides, project horizontal pins or studs F, which enter slots G', formed in the lower part of parallel rods or bars G, and which slots extend from the lower ends of said bars or rods G, to nearly half their length, where they terminate. The upper ends of these rods or bars G, are jointed by pins to the ends of other bars H, jointed in like manner at their opposite ends to the ends of the backs I, of the seats, at points midway between their upper and lower edges so as to readily admit said backs being turned over and reversed in the usual manner. Between these upper ends and the slots G', of these bars or rods G, are formed other slots G<sup>2</sup>, through which are inserted bolts b, respectively screwed into the sides of the car and upright bars of the upright frames next the passageway.

To the ends of the rock shafts B, next the passage way are secured the lower ends of oscillating levers K, on the upper ends of which are formed handles for enabling them to be moved either forward or back from a vertical line to incline the bottoms and backs of the seats. They are made slightly elastic from their lower to their upper ends so as to enable their upper parts, when brought to an upright position to spring into notches, slots or mortises formed on the faces of the horizontal beams of the upright frames C, and thus hold the seats firmly in the required position to accommodate the passengers in a sitting posture, and to be withdrawn from the same when desired to convert the seats into sleeping couches.

Between the seats are arranged truck frames L, sustained on friction wheels or casters M, at their corners, and having upright foot rests N, extending from end to end, nearly above the casters M. Between these upright foot rests N, and the curved



or bent bars L', of the truck frame L, are arranged vibrating platforms O, exactly fitting within the truck frames L, and suspended at the centers of their ends by pivots  
 5 or studs P, which enable them to be tilted at either side, to respectively form the proper angle of inclination with the bottoms D, of the seats when brought in connection with them. They can be either secured in a hori-  
 10 zontal position, or at the angles of inclination just mentioned, by means of a horizontal pin or stud projecting from spring bars Q, secured at one end to the curved or bent bars L', of the truck frames L, and entering  
 15 corresponding openings in segmental plates R, secured to the ends of the platforms.

The ends of the backs I, of the seats, are provided with metallic plates S, at their four corners in which are formed open seg-  
 20 mental slots which rest upon pins or studs T, projecting from the corners of the bottoms D, of their seats in such a manner as to form rests for the said backs at every variety of their position.

25 The method of operating these seats is as follows: When the seats are in the position represented in Fig. 1, to accommodate the passengers in a sitting posture, they are held firmly by the oscillating levers K, entering  
 30 the slots or notches on the face of the upright frames C, and the truck frames L, are moved on their casters M, under the rear portion of the seats next in advance. When it is desired to convert the seats into sleep-  
 35 ing or reclining couches, the spring oscillating levers K, are withdrawn from the said slots or notches, and turned downward toward the direction in which the car is moving. This causes the bottoms D, of  
 40 the seats, to be moved forward until the friction wheel or casters on the lower part of the forward wings E, rest upon the car floor, and the forward corners or angles of the cradles A, also rest upon the floor, the  
 45 open slots in the same having been withdrawn from the points or rounded projections A', on the front portions of the bottoms D, of the car seats, during their move-  
 ments forward, and the bottoms D, and

backs I, of the seats being guided in their 50 movements downward and forward by the pins or studs b, F, in the slots G', G<sup>2</sup>, in the bars or rods G, and the connecting bars H, at their upper ends. This movement  
 55 brings the bottoms and backs of the seats at an almost uniform angle of inclination with each other, and with the suspended platforms O, of the truck frames L, which have previously been tilted to the required  
 60 position, and secured by the spring bars a, on the ends of the truck frames, as before stated. In this expeditious manner, a series of comfortable double reclining or sleeping  
 65 lounges or berths are formed of the seats, capable of accommodating the whole number of passengers for which the car is designed, the pins or studs b, F, projecting  
 70 from the vertical bars of the upright frames C', resting against the upper ends of the slots G<sup>2</sup>, in the rods or bars G, and the points or rounded projections A', on the  
 75 rear corners of the bottoms D, resting in the open curved slots in the rear corner or angle of the cradles A, and serving to respectively sustain these parts.

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

Sustaining the bottoms D, of the car seats, on the slotted corners of the oscillating cradles A, capable of being turned on hori-  
 80 zontal transverse shafts B, and combining and arranging therewith slotted bars G, connected at their upper ends to the backs I, of the seats by bars H, and oscillating levers  
 85 K, and movable trucks L, with tilting platforms O, in such a manner as to enable the seats to be sustained and secured in the proper position to accommodate the passen-  
 90 gers in a sitting posture, or their bottoms D, and backs I, to be brought to the proper angle of inclination with the tilting platforms O, and in relation to each other, to form sleeping and reclining couches or berths, substantially as herein set forth.

JOHN C. DE WITT.

Witnesses:

CHARLES P. SANDFORD,  
 ISRAEL CRANE, JR.