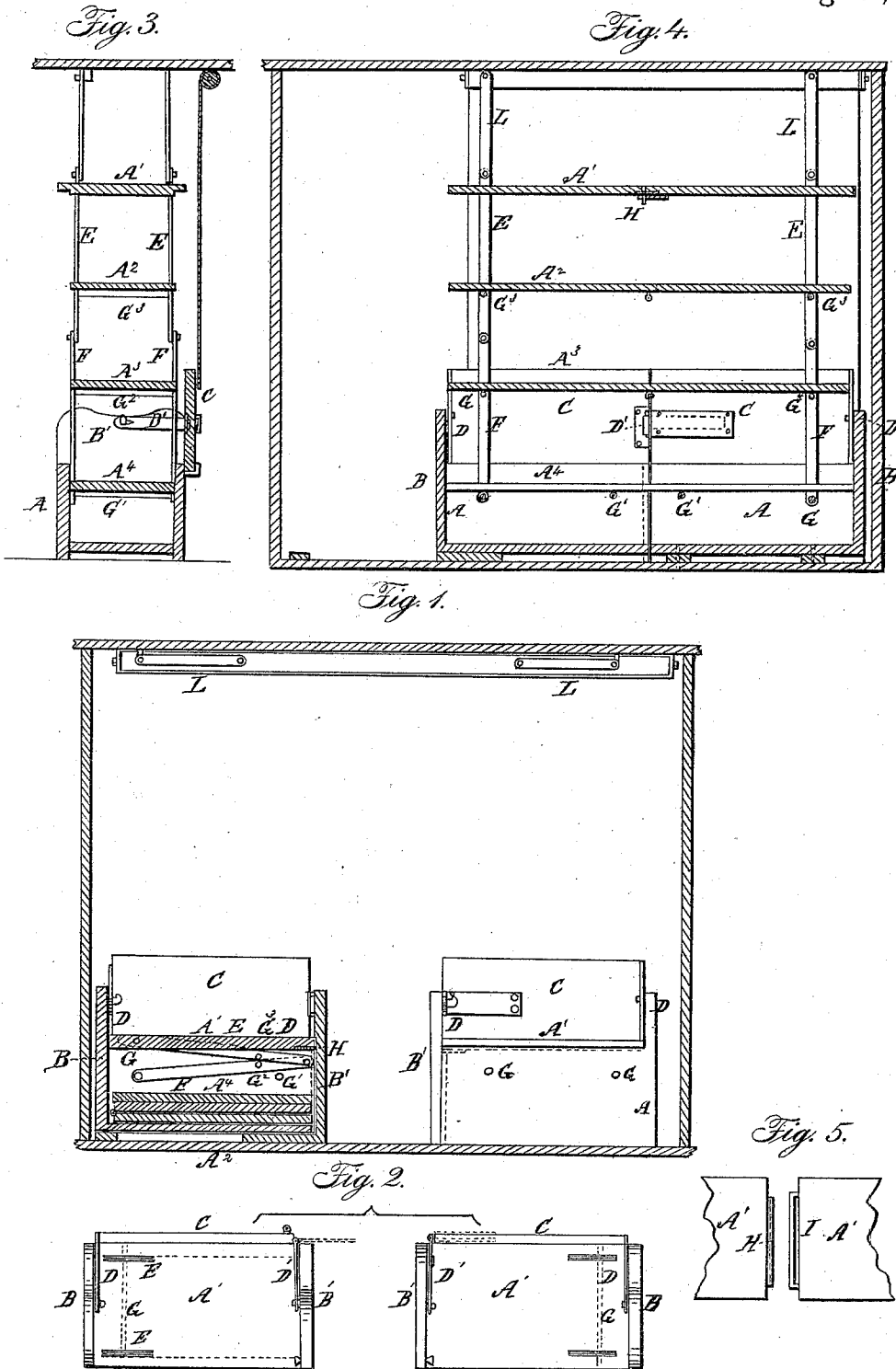


K. FREEMAN.
Car Seat and Couch.

No. 21,331.

Patented Aug. 31, 1858.



UNITED STATES PATENT OFFICE.

K. FREEMAN, OF FOND DU LAC, WISCONSIN.

CAR-SEAT AND COUCH.

Specification of Letters Patent No. 21,331, dated August 31, 1858.

To all whom it may concern:

Be it known that I, K. FREEMAN, of Fond du Lac, in the county of Fond du Lac and State of Wisconsin, have invented a new and useful Improvement in Railroad-Car Seats, by Which They are Susceptible of Being Readily Converted into Sleeping Couches or Berths; 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 transverse section of the body of a railroad car, and a longitudinal section through one of the seats, and a front elevation of the seat opposite the same. Fig. 2, is a top or bird's-eye view of two seats situated opposite each other. Fig. 3, is a transverse section through the seats, converted into a series of horizontal single sleeping berths or couches, arranged one above the other. Fig. 4, is a transverse section through the body of the car, and a longitudinal section of the berths or couches. Fig. 5, is a top view of the ends of the cushioned frames or boards which form the bottoms of the seats, and when raised, form the next to the lower berth.

Similar letters in the figures refer to corresponding parts.

The nature of this invention and improvement consists in, so constructing the seats of railroad cars, and combining therewith a series of parts, as shall enable them to be occupied by the passengers in a sitting posture, with all the comforts, facilities and advantages afforded by the ordinary car seat, and the seats on one side of the car to be removed in contact with those on the opposite side, and the whole series of seats to be readily converted into a series of single transverse sleeping berths or couches, one above the other, so as to afford sleeping accommodation to every passenger in the car.

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

The lower portions of the seats are inclosed in the form of a rectangular box A, the ends B, B', rising up beyond the seat portions of the same, and being curved to form the usual rests for the arms. The ends next each other are attached to the body of the seat, by inserting dove tail tongues, secured to near their edges, into corresponding grooves, formed in the ends of the hori-

zontal and upright portions of the timbers, forming the tops and sides of the seats. The backs C, are attached to the body of the seats by bars D, D', which admit of them being turned over or reversed from one side to the other, to enable the passengers to sit facing either end of the car, the bars D', at the ends B', next the center passageway, being hinged to the backs, and attached to peculiar formed pins or studs, with oblong heads, by corresponding oblong slots, which admit of their ready attachment and detachment, when it is desired to convert the seats into sleeping couches or berths.

The seats on one side of the car are permanently secured to the floor of the cars, and those on the opposite side are held immediately opposite by a dove tail tongue, secured to the floor, and passing between corresponding guides at the bottom of the frame of the seat, which method of attachment, enables these last mentioned seats to be arranged next the side of the car, in the same relation to the others as the ordinary seats, or to be moved over the center passageway and brought in direct contact with the seats opposite, and the passage way to be thus transferred from the center to one side of the car. This is only done when it is designed to convert the seats into sleeping couches or berths, and before it takes place the hinged bars D', are detached from the bolt or pins projecting from the upper part of the ends B', of the seats, and swung around parallel with the backs to which they are hinged, and the said ends B', are removed from the ends of the seats designed to be brought together.

The tops A, of the seats are cushioned in the usual manner, and rest upon the edges of the sides of the seats when used to sit upon, and are jointed by bolts near their sides and ends, next the sides of the car, to the ends of parallel bars E, which pass through slots in the tops A, of the seats, and are jointed at their opposite ends to the ends of corresponding bars F, whose opposite ends are jointed to horizontal rods G, which extend across the lower parts of the seats, immediately below the pins or bolts by which the bars E, are attached to the tops A', of the seats. Near the opposite ends of the seats, or those next the center passage way, are arranged similar cross rods G', which also extend across the lower part of the seats, on the same horizontal line and

parallel with the rods G. The jointed ends of the rods E, F, are kept parallel with each other and the same distance apart as their opposite ends, by horizontal rods G², G³.
 5 The bars E, F, and rods G², G³, fold upon each other within the lower parts of the seats, when the seats are in the state to sit upon, as represented in Figs. 1 and 2, but are capable of being raised and extended to
 10 a vertical straight line, toward the top of the car, with the upper perforated ends of the bars E, projecting above the upper parts A', of the seats, and attached to horizontal studs or pins projecting from the lower ends
 15 of upright bars L, jointed to staples or studs fastened to the ceiling or top of the car, in such a manner as to hold the bars and their attachments in a suspended position therefrom. When these parts are thus suspended
 20 and the ends of the tops A', of the seats next each other are connected together by the right angled lip or flange of a metallic plate H, secured on the under side of one of the tops next, its end entering a corresponding slot in a metallic plate I, secured to the corresponding end of the top
 25 A', of the opposite seat, the two ends of the said tops A' press against each other, and by this action combined with that of the hook formed lip or flange of the plate H, in the slot of the plate I, serve to sustain the two in a horizontal position and adapt them to the purposes of a single sleeping
 30 berth or couch. Immediately below this berth or couch A', A', are formed three other single berths or couches A², A³, A⁴, at equal distances apart, the lower one A⁴, being formed by oblong frames or boards, exactly fitting in the lower portions of the
 35 seats A, inside the bars F, and resting on the horizontal rods G', extending across the lower parts of said seats.

The two intermediate single berths or couches A², A³, are formed by placing the
 45 ends of oblong frames or boards, horizontally upon the horizontal rods G², G³, which frames or boards are jointed together at their opposite ends, by hinges, secured on their lower surfaces, with their butts situated immediately below the ends of the same, so as to bring them flush against each other when distended, and cause them to be sustained in a horizontal position. In this manner, four distinct comfortable single
 50 sleeping berths or couches are formed, for the accommodation of the four passengers occupying the two seats brought together,

and a longitudinal passage way the entire length of the car is left on the side of the same.

When it is desired to re-convert the seats into their original character, to be occupied in the usual sitting posture, the oblong and hinged frames or boards, forming the berths or couches A², A³, A⁴, are first removed, and the jointed bars L, are detached from the
 60 tops of the bars E, and swung upward out of the way, parallel with the ceiling or roof of the car, and the tops A', of the seats are detached from each other and lowered to their original position on top of the sides of the seats A, with the rods G', G², and bars E, F, folded under them. The movable
 65 seats are then slid on their ways to the side of the car, and the berths or couches A², A³, are folded together, and with the corresponding sized frames or boards A⁴, forming the lower berth or couch A⁴, are placed within the lower parts of the seats, below the horizontal rods G, G', and the dove tailed
 70 ends B', of the seats are attached to the ends of the same, and the swinging bars D, D', are attached to the oblong headed bolts, when the seats are ready for using in the ordinary manner, with all the comforts and
 75 facilities of the most approved car seats in use.

An upright curtain, capable of being rolled up and lowered may be placed between each series of berths if desired.

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

Making one of the ends of car seats detachable, and the seats on one side of the car so that they can be brought in direct
 90 contact with those immediately opposite, in the manner described, so as to transfer the longitudinal passage way from the center, to one side of the car, and in combining with the said car seats a series of bars E, F, L, and rods G, G', G², G³, capable of being
 95 folded together, and contained within the lower parts of the seats, or raised and elongated so as to form supports for horizontal single sleeping berths or couches A', A², A³, A⁴, placed one above the other at suitable
 100 distances apart, the whole being constructed and operated substantially as herein set forth.

K. FREEMAN.

Witnesses:

JOHN BANNISTER,
 EDMUND DELANY.