(No Model.)

H. S. HALE.

CAR SEAT.

No. 459,564. Patented Sept. 15, 1891.

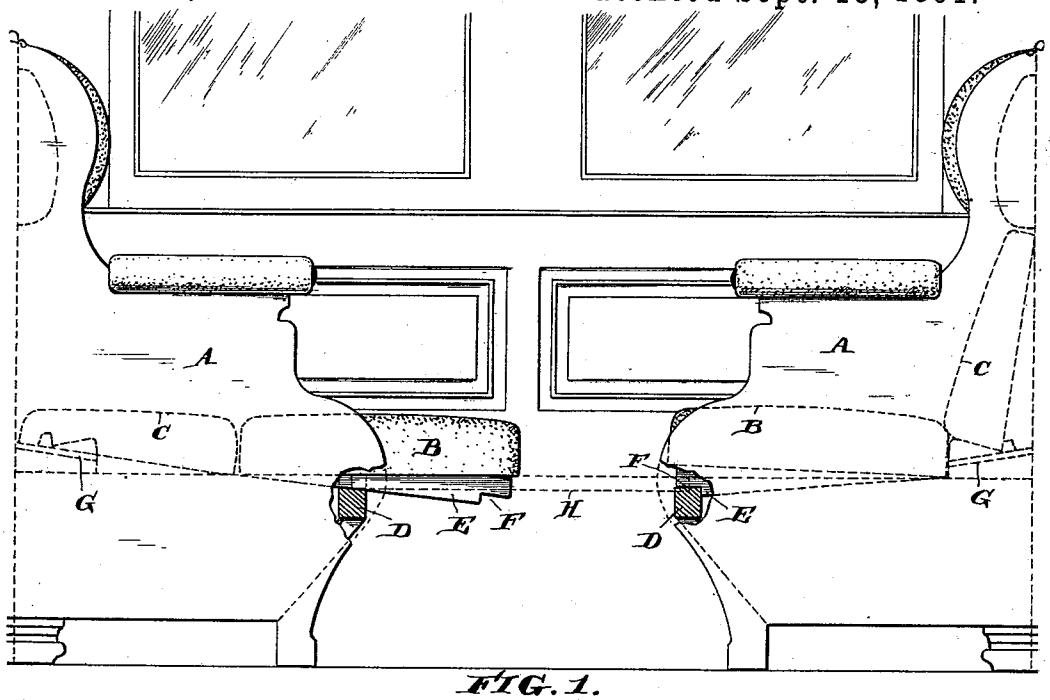

FIG. 1.

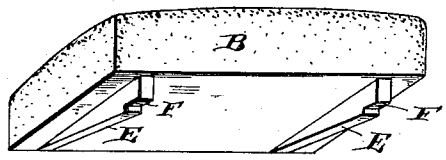

FIG. 2.

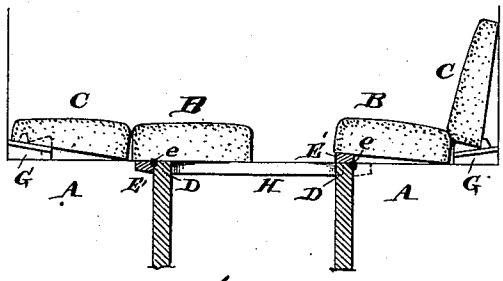

FIG. 3.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY S. HALE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE HALE & KILBURN MANUFACTURING COMPANY, OF SAME PLACE.

CAR-SEAT.

SPECIFICATION forming part of Letters Patent No. 459,564, dated September 15, 1891.

Application filed February 13, 1890. Serial No. 340,334. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. HALE, of the city and county of Philadelphia and State of Pennsylvania, have invented an Improvement in Car-Seats, of which the following is a specification.

My invention has reference to car-seats; and it consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

My improvements set out in this specification have particular reference to the car-seats employed in sleeping-cars, wherein the cushions of the two oppositely-facing seats are adjustable for the purpose of converting the two seats into a berth. A great difficulty which has heretofore existed in seats of this kind has been that the cushions when adjusted to form the berth were required to be substantially horizontal, and this necessitated in the construction heretofore used that the said cushion should also be horizontal when moved back to its place for the occupancy of the passenger during the day-time.

The object of my invention is to overcome this defect and provide a simple construction whereby the said cushion during the day-time may have the forward or front edge considerably higher than the rear edge, so that the tendency is to throw the body of the occupant backward against the cushions forming the back of the seats, making the car-seat exceedingly comfortable during the day-time. Furthermore, by the employment of my invention I may enable this inclination of the seat-cushion to be very great during the day-time, and yet at night when the seat-cushion is utilized as part of the berth the upper surface of the cushion may be arranged in a perfectly horizontal or substantially horizontal plane.

Referring to the drawings, Figure 1 is a side elevation of a section of a sleeping-car, showing my invention applied thereto. Fig. 2 is a perspective view of the seat-cushions slightly inclined upward; and Fig. 3 is a cross-section through a section of a sleeping-car, showing a modification of my invention.

A A represent two car-seats of a section of a sleeping-car and are arranged to face each other.

B are the seat-cushions, and C are the back-cushions, the latter being made substantially as are now in use.

D are the front rails of the seats A and form the support for the usual cross-bars H, which are preferably inserted during the night-time to sustain the seat-cushions B when drawn out to meet each other, as is well known.

To the under side of each of the seat-cushions B, I secure two inclined rails E, preferably having notches F at the forward ends. These inclined rails E are arranged at or near each end, as shown in Fig. 2, so as to allow the seat to be made light and at the same time to preferably form continuous guides to the rear. These rails E rest upon the front rails D, which may be notched or preferably formed to receive them. The under portions of the seat-cushions B are preferably flat and substantially parallel to the upper surfaces, though this is not absolutely necessary. When the seat-cushions are drawn out, as indicated in the left-hand portion of Fig. 1, they rest upon the rails H and also upon the framing of the seats, and when the backs C are placed down in the ordinary position the bed is substantially horizontal as to its upper surface. When the seat-cushions are placed back in the position for day-time, as shown at the right-hand part of Fig. 1, the back rests upon the frame C, and the seat B is caused to have its forward edge raised upward by the action of the inclined rail E upon the rail D. When the seat B is moved fully back, the notch F of the rail E is received by the rail D, and this acts as a lock to prevent the seat-cushion B from accidentally being pushed outward.

It will be observed by examining the right-hand part of Fig. 1 that the seat-cushion B is retained at a decided angle or incline, making it very comfortable to sit upon, and this, too, without in the least impairing its function as a mattress for the berth during the night-time.

It is evident that the rails E need not be continued to the rear edge of seat-cushions,

as shown, but may be confined wholly to the forward edge of the seat. In place of putting the rails upon the cushions B transverse rails may be employed, which are hinged to the frame D of the seat. This is shown in Fig. 3, in which I have the transverse rails or bars E′ hinged to the main frame or rail D at *e*. When the berth is made up, the part E′ is turned into the box, so that the cushion rests flat upon the rail H and the frame of the seat. During the day-time, when the cushions are moved into the position shown at the right-hand part of Fig. 3, the transverse rail or part E′ is turned upward, so as to rest upon the rail or frame D and be interposed between it and the front edge of the seat B, thus causing the forward edge of the said seat to be held in an elevated position, imparting to the cushion a decided inclination, as desired. It will be observed in this construction that I am enabled to make my seat-cushion with upper and lower faces or surfaces substantially parallel, and the inclination is accomplished by interposing auxiliary or independent pieces between the front edge of said cushion and the main frame of the car-seat.

I do not limit myself to the mere details of construction which are here shown, as they may be modified in various ways without departing from the spirit of my invention.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of two main car-seat frames arranged opposite to each other and each provided with supports at its front and rear portions, a movable seat-cushion for each of the seat-frames supported thereby and without direct connection therewith, so as to be removable therefrom, an intermediate support between the front support of each seat-frame and the front of its movable seat-cushion to tilt the front edge of the seat-cushion when supported thereby as a seat, and a movable horizontal support between the two seat-frames to support the front edges of the cushions adjacent to each other and in the same horizontal plane with each other and with their rear edges when moved from their seat-frames to form a continuous flat bed-surface.

2. The combination of two main car-seat frames arranged opposite to each other and each provided with supports at its front and rear portions and also provided with a second elevated support at its rear portion, a movable seat-cushion for each of the seat-frames supported thereby and without direct connection therewith, so as to be removable therefrom, an intermediate support between the front support of each seat-frame and the front of its movable seat-cushion to tilt the front edge of the seat-cushion when supported thereby as a seat, a back-cushion for each seat-frame of greater thickness at its lower edge than at its upper edge and having its lower edge supported by the elevated support at the rear of the seat-frame, so as to be tilted or inclined backward, and a movable horizontal support between the two seat-frames to support the front edges of the cushions adjacent to each other and in the same horizontal plane with each other and with their rear edges when moved from their seat-frames to form a continuous flat bed-surface with the upper edges of the back-cushions resting upon the elevated support at the rear of the seat-frame and the lower edge upon the face of the seat-frame.

3. The combination, with the seat-frame A, having the front support D, of the removable horizontal supporting-bar H, adapted to be arranged in front of the front support D of the seat-frame, the seat-cushion B, adapted to be supported upon the seat-frame A as a seat, the intermediate support E between the seat-cushion B and the front support D of the seat-frame A to tilt or raise the front edge of the seat-cushion B when resting on the frame A as a seat, the elevated support G at the rear of the seat-frame, and the back-cushion C, having a greater thickness at the lower than at the upper edge and having its lower edge resting upon the elevated support G.

4. The combination of the main frame of a car-seat having a front supporting-rail D, a removable seat-cushion provided with an inclined guide E upon its under surface extending toward its front edge and adapted to rest upon the supporting-rail D to tilt the front edge of the seat-cushion, and a removable horizontal support H, adapted to be placed in front of the rail D, but out of line with the guide E upon the under surface of the seat-cushion for the purpose of receiving and supporting the flat under surface of the seat-cushion when moved from the seat-frame.

In testimony of which invention I have hereunto set my hand.

HENRY S. HALE.

Witnesses:
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