No. 684,747. Patented Oct. 15, 1901.

C. E. COLE.

CAR SEAT.

(Application filed Nov. 15, 1899.)

(No Model.)

Fig. 1.

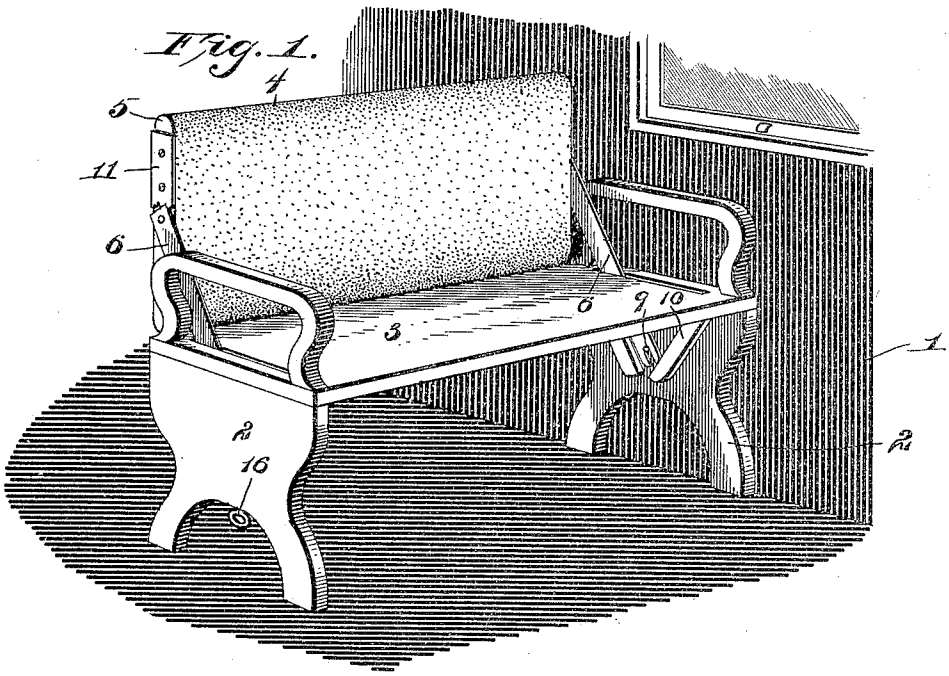


Fig. 2.

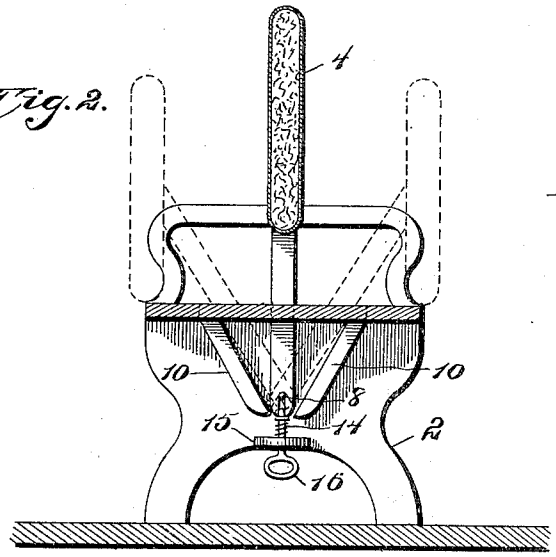


Fig. 3.

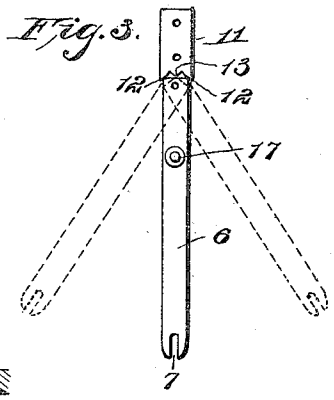
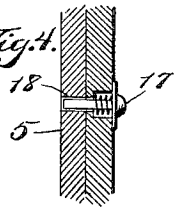


Fig. 4.



Witnesses

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CHARLES E. COLE, OF SACO, MAINE.

CAR-SEAT.

SPECIFICATION forming part of Letters Patent No. 684,747, dated October 15, 1901.

Application filed November 15, 1899. Serial No. 737,087. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. COLE, a citizen of the United States, residing at Saco, in the county of York and State of Maine, have invented certain new and useful Improvements in Car-Seats, of which the following is a specification.

My present invention relates to an improvement in car-seats, and has for its object the production of a seat comprising a reversible back, which may be readily positioned at either edge of the seat proper without laboriously turning it over in the manner ordinarily necessary to effect such reversal.

A further object of the invention is to provide simple and effective means for effecting the retention of the back directly above the middle of the seat when, as in an emergency, it is desirable to double the seating capacity of a car by subdividing each seat.

To the accomplishment of these and other objects the invention consists in the details of structure and arrangement hereinafter to be described, and succinctly pointed out in the appended claims.

Referring to the accompanying drawings, Figure 1 is a perspective view of my car-seat and a fragment of a car. Fig. 2 is a sectional elevation showing the inside of the end frame and the parts carried thereby, certain positions of the parts being shown in dotted lines. Fig. 3 is a detail view showing the relations of the back-supporting arms and the stop-plates, certain positions thereof being shown in dotted lines. Fig. 4 is a detail sectional view.

Referring to the numerals of reference indicating corresponding parts in the several views, 1 indicates the side wall of a car, and 2 the end frames of a car-seat, between which is supported in the usual manner the support or seat proper, 3, provided with a reversible back 4. This structure, in so far as its general relations are concerned, is that of an ordinary car-seat employed in the class of cars distinguished by a center aisle formed between the end frames of two longitudinal rows of transverse seats; but I shall now proceed with a description of the novel mounting of the back to permit of its expeditious reversal and adjustment.

The back 4 is preferably upholstered on both sides, and its ends are protected by end plates 5, which constitute wear-surfaces for oscillatory back-supporting arms 6, pivotally connected at their upper ends to the ends of the back just above its horizontal center. Each arm 6 is provided at its lower end with an elongated recess 7 for the reception of horizontal pintles 8 and 9, projecting from the end frames 2 at a suitable distance below the medial line of the seat 3. The oscillation of the supporting-arms is limited by stops 10, converging below the seat in the path of the arms and set at the angles required to properly position the back above either edge of the seat as the arms are swung forward or back, according to the direction of movement of the car.

By reason of the location above the center of the pivotal mounting of the back upon the supporting-arms the back will at all times remain in the vertical position regardless of the angular disposition of the arms. It is necessary, however, that some means be provided for restricting the free pivotal movement of the back at each edge of the seat in order that a firm rest for the back of the passenger may be afforded. I therefore secure to the ends of the back a pair of stop-plates 11, somewhat wider than the arms 6 and provided, respectively, with a pair of stop-lugs 12, extending below the upper end of the adjacent arm and having their opposed faces disposed at opposite angles of, say, forty-five degrees. As the seat is swung to either position one stop-lug of each pair will abut against the side of the adjacent supporting-arm and will retain the back in its vertical position and lend rigidity to the structure. Between each pair of stop-lugs is preferably located a triangular projection 13, which rests against the end of the arm and constitutes a rocker, preventing lost motion at the point of pivotal connection.

The device constructed in accordance with the preceding description constitutes a complete embodiment of my invention in its broadest aspect, inasmuch as it comprehends a back reversible as to the seat without necessity for the actual reversal of the back itself; but, as premised, I have provided for the subdivision of the seat by the locking of the back directly above its center. This re-

sult is obtained by the location of a spring-actuated latch-bar 14 at the aisle end of the seat, preferably carried in bearings 15 inside of the end frames and constantly urged upwardly by its spring. This latch-bar is designed to be urged into the lower end of the recess 7 when the adjacent back-supporting arm is in the vertical position, thereby retaining the back midway between the edges of the seat, and thereby subdividing the latter longitudinally. The latch terminates at its lower end in a handle 16, which may be depressed to retract the latch-bar when it is desired to rearrange the back, and a spring-catch 17, carried by one of the arms 6 and designed to engage a recess 18 in one of the end plates 5, is preferably provided to secure the back rigidly in its central or intermediate position. The intermediate position of the back is only necessary, however, in an emergency, and I therefore round the lower ends of the supporting-arms 6, so that they will slip over the end of the latch-bar without effecting engagement therewith when the back is thrown quickly to either of its ordinary positions.

From the foregoing it will be observed that I have produced a novel car-seat the back of which may be arranged at either edge of the seat without actual reversal of position or may be automatically locked above the medial line of the seat when extreme economy of seating surface is required; but while the present embodiment of my invention is at this time deemed to be preferable I do not limit myself to the structural details defined, but reserve the right to effect such changes, modifications, and variations as may come properly within the scope of the protection prayed.

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

1. The combination with a car-seat, of oscillating arms pivotally connected at their lower ends to the seat-standards, coverging stops for said arms, a back pivotally secured to the upper ends of said arms, and stop-plates secured to the ends of the back and having the lower ends formed with inclined lugs and a projection between said lugs adapted to be engaged by the upper ends of the arms.

2. The combination with a car-seat, of pins projecting from the inner sides of the seat-supports; oscillating arms slotted at their lower ends to receive said pins; converging stops on the inner sides of the seat-supports; a back pivotally secured between the upper ends of said arms; and stop-plates secured to the ends of the seats and notched at their lower ends to form oppositely-inclined lugs and a central triangular projection.

3. The combination with a car-seat, of pins projecting from the inner sides of the seat-supports; oscillating arms slotted at their lower ends to receive said pins; a back pivotally secured between the upper ends of said arms; and means for securing said arms and back in vertical position consisting of a spring-latch adapted to project into the slot at the lower end of one of said arms; and a spring-catch carried by one of said arms and adapted to enter a recess at the end of the back.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES E. COLE.

Witnesses:
GEORGE A. EMERY,
PHILIP C. TAPLEY.