S. A. WALKER & F. BENNETT.

CAR SEAT.

APPLICATION FILED MAR. 5, 1910.

1,044,607.

Patented Nov. 19, 1912.

4 SHEETS—SHEET 1.

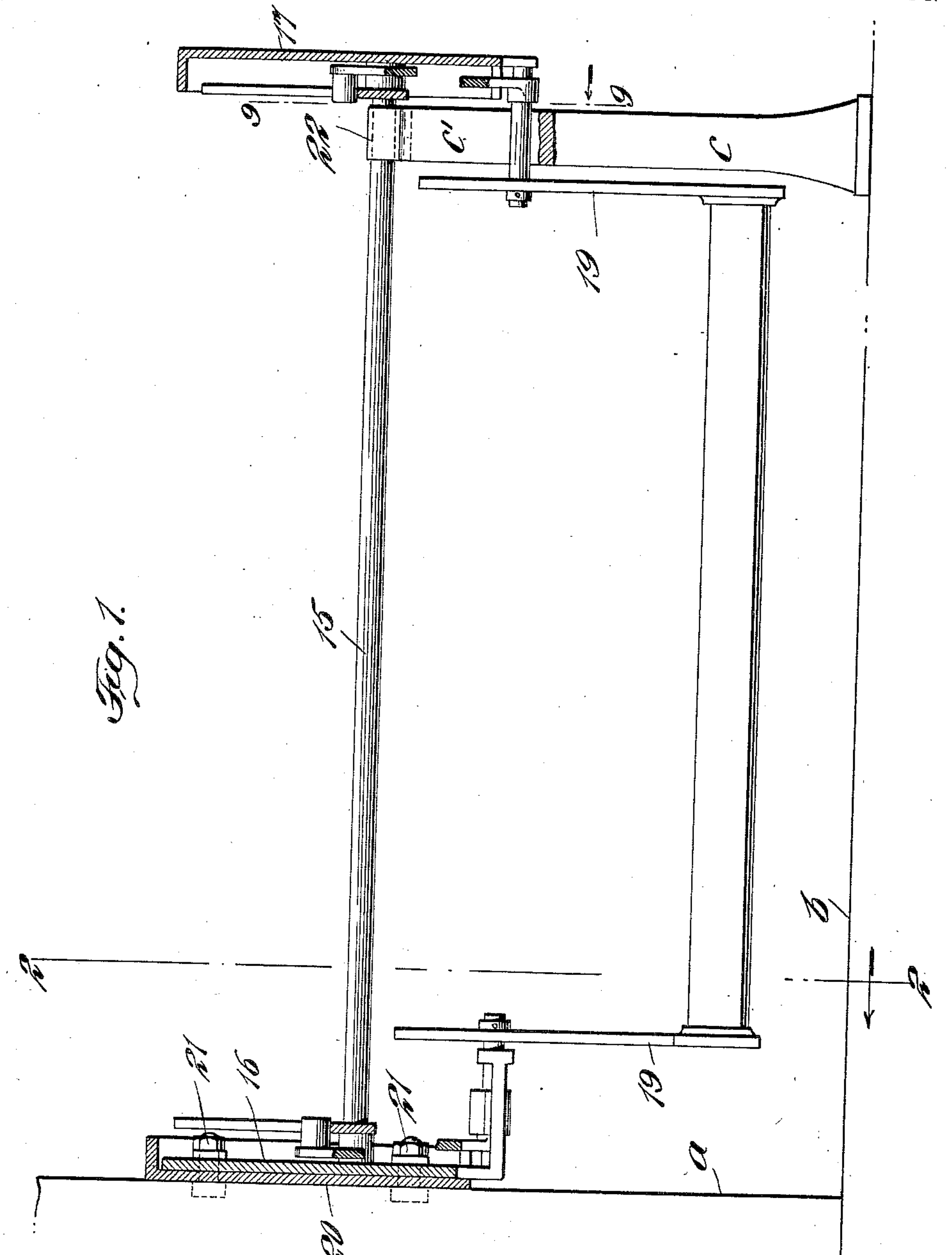

Fig. 1.

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4 SHEETS—SHEET 2.

Fig. 2.

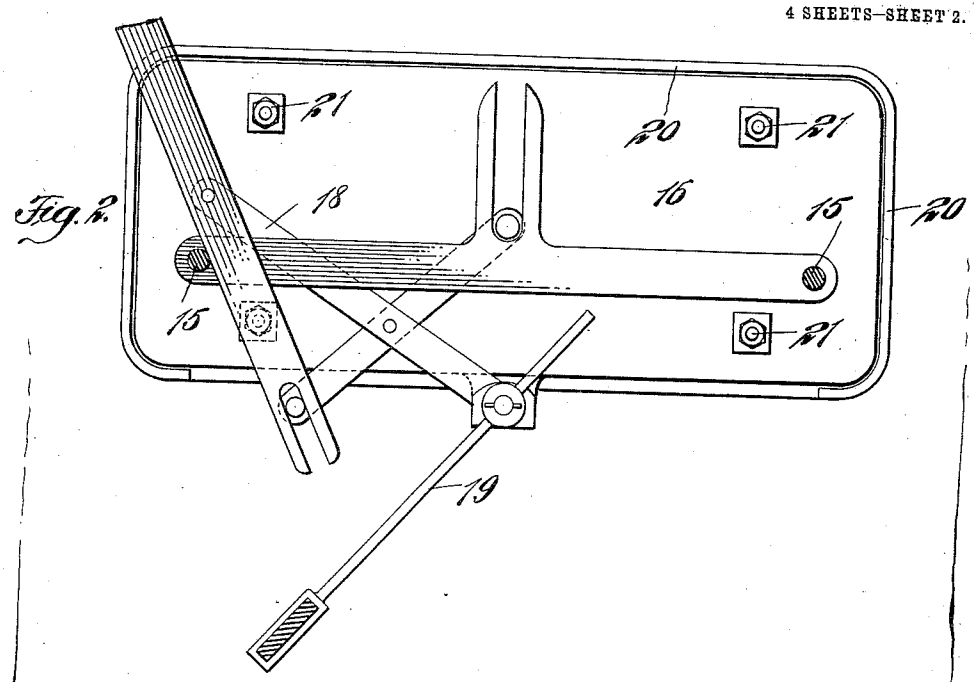
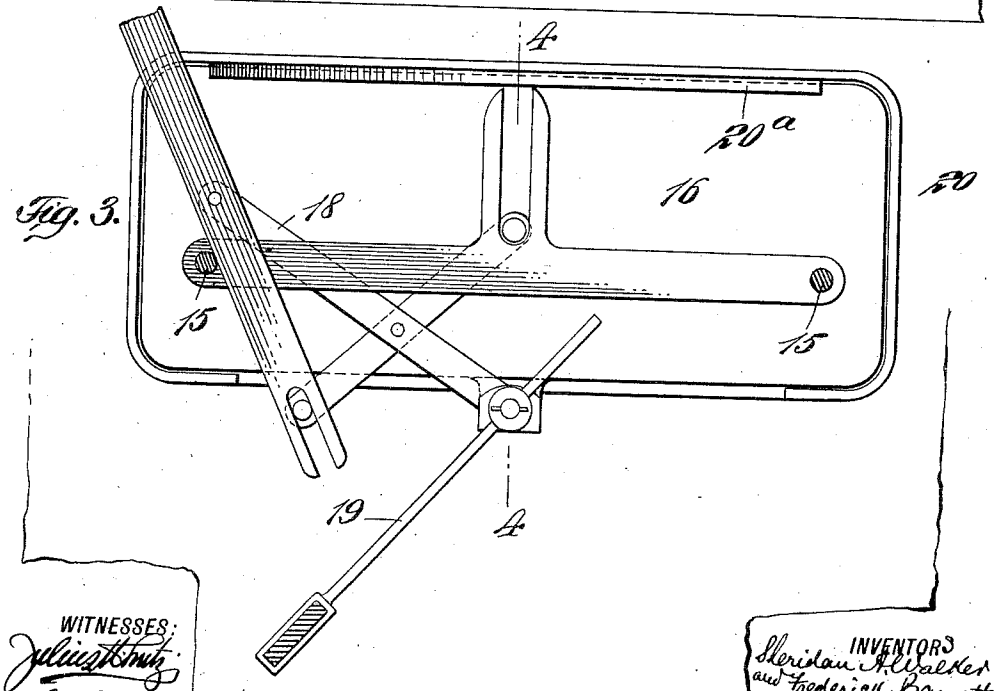


Fig. 3.



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4 SHEETS—SHEET 3.

Fig. 5.

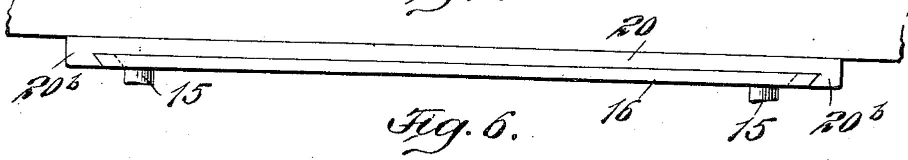
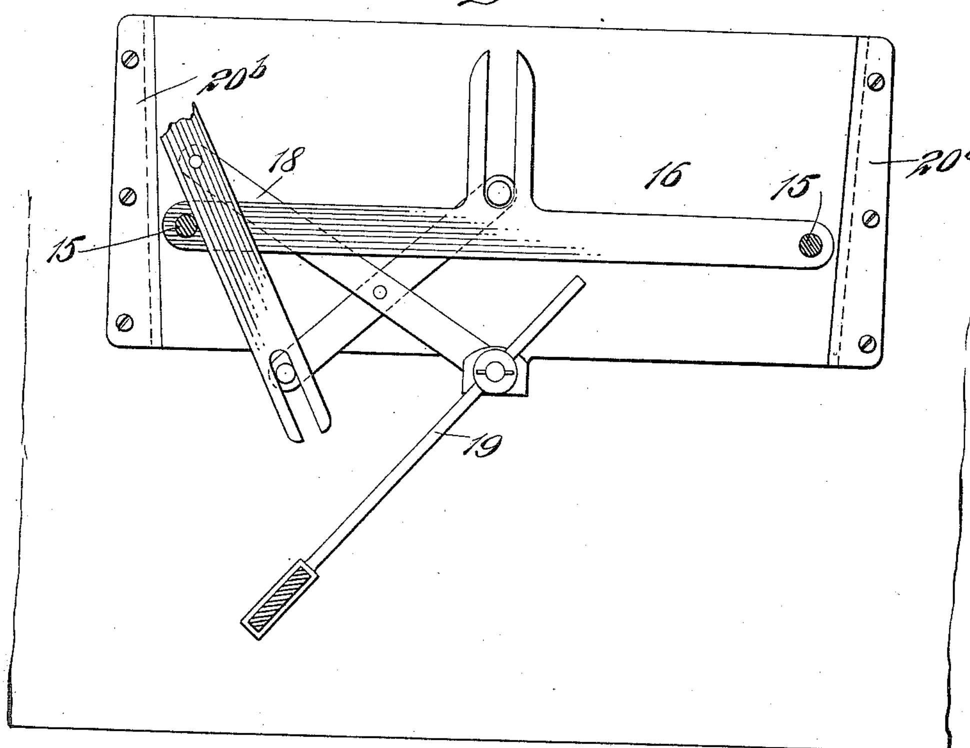


Fig. 6.



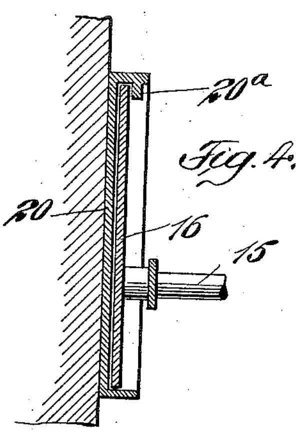


Fig. 4.

Fig. 7.

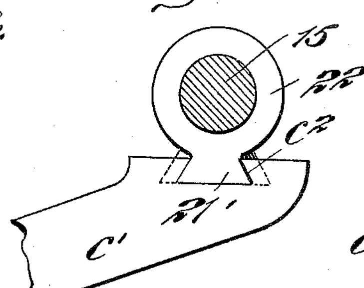
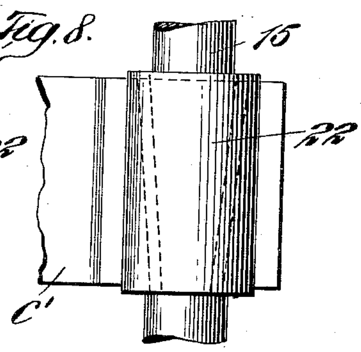


Fig. 8.



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4 SHEETS—SHEET 4.

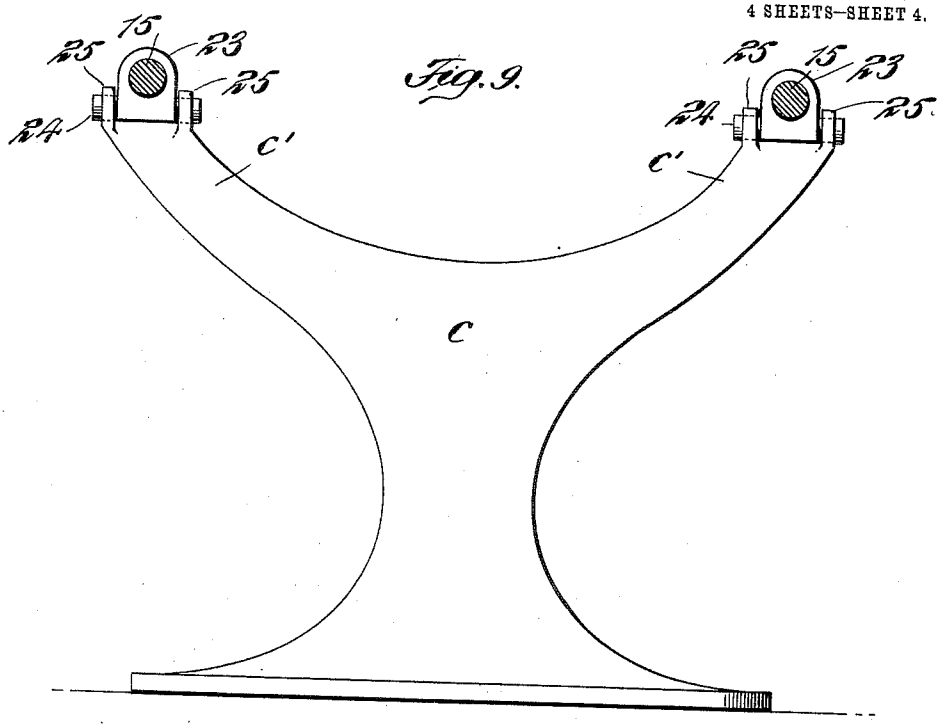


Fig. 9.

Fig. 10.

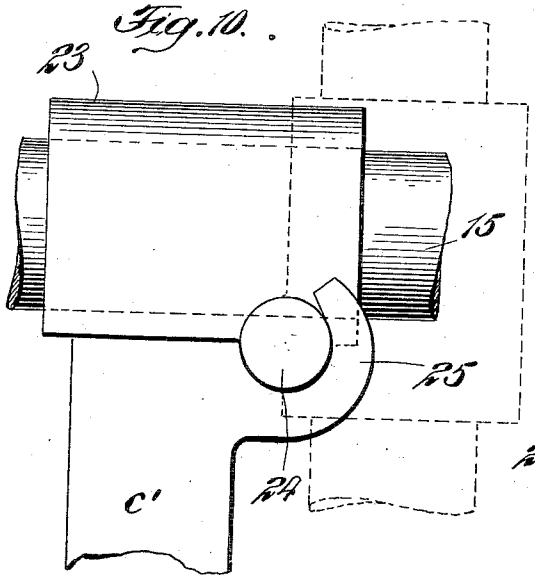
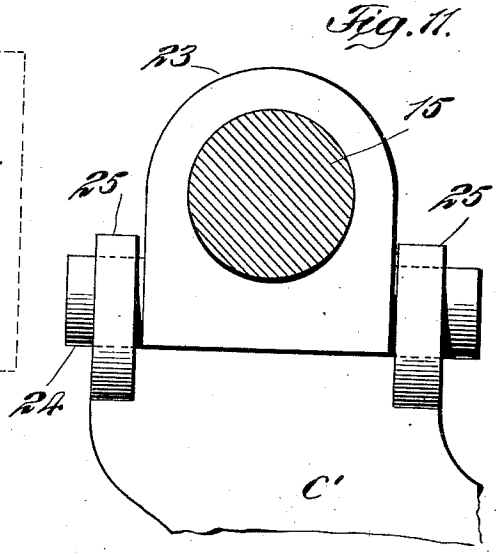


Fig. 11.



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UNITED STATES PATENT OFFICE.

SHERIDAN A. WALKER, OF NEW YORK, AND FREDERICK BENNETT, OF RAVENSWOOD, NEW YORK, ASSIGNORS TO WALKER & BENNETT MFG. CO., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

CAR-SEAT.

1,044,607. Specification of Letters Patent. Patented Nov. 19, 1912.

Application filed March 5, 1910. Serial No. 547,528.

To all whom it may concern:

Be it known that we, SHERIDAN A. WALKER and FREDERICK BENNETT, of the borough of Manhattan, city, county, and State of New York, and Ravenswood, Queens county, New York, have invented certain new and useful Improvements in Car-Seats, of which the following is a full, clear, and exact specification, such as will enable others skilled in the art to which it appertains to make and use the same.

The principal object of our present invention is to provide means for mounting a car seat in such a way that it may be readily removed to permit of cleaning or repairing the car.

It is also an object of our invention to provide means by which the wall end of the seat may be readily attached to the cars, particularly metallic cars without involving any work whatever on the walls of the cars to place or remove the seat.

Still a further object of the invention is to render the seat more readily disconnectible from the wall end fastening member and, if desired, to allow of the seat being swung on the aisle upward to approximately vertical position, thus leaving the floor of the car entirely clear and greatly facilitating cleaning, painting and repair.

We attain these ends by the provision of peculiarly arranged devices fastening the wall end of the frame work of the seat directly to the side wall of the car and by the further provision of novel devices for disconnectibly or loosely joining the frame part of the seat to the aisle pedestal. At the aisle pedestal the frame part may be made loosely connected or, if desired, we may employ a peculiar hinge device which allows the seat to be thrown up bodily and thus temporarily supported in vertical position on the aisle pedestal.

Our invention involves various other features of importance, all of which will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is now had to the accompanying drawings, which illustrate, as examples, the various preferable embodiments of our invention.

In these drawings—Figure 1 is a sectional front elevation of so much of the mechanism of the seat as is necessary to an understanding of our improved manner of mounting the seat; Fig. 2 is a sectional elevation thereof on the line 2—2 of Fig. 1; Fig. 3 is an elevation of a modification; Fig. 4 is a section thereof on line 4—4 of Fig. 3; Fig. 5 is a plan view of a further modification; Fig. 6 is an elevation thereof; Fig. 7 is an enlarged elevation of the manner of disconnectibly joining the frame parts to the pedestal; Fig. 8 is a plan view thereof; Fig. 9 is a view illustrating the manner of mounting the seat on the aisle pedestal so that the seat may be turned up vertically thereon, this view being equivalent to a sectional elevation on the line 9—9 of Fig. 1, excepting that it shows a modified construction. Fig. 10 is an enlarged side view of the hinge device shown in Fig. 9; and Fig. 11 is an enlarged view thereof.

Referring particularly to Fig. 1, *a* indicates the inner surface of the side wall of the car, *b* the floor and *c* the aisle pedestal which is forked at its upper end as shown in Fig. 1 and more fully shown in Fig. 9. The said mechanism may be of any construction common in transverse car seats, but it is preferably that set forth in the copending applications, Serial No. 454,599, filed September 24, 1908, and Serial No. 502,904, filed June 18, 1909, by Frederick Bennett. The drawings illustrate parts of this mechanism, namely, the two transverse frame rods 15 joined to the outer frame plate 16 and to the inner frame plate 17 at their respective ends (see Figs. 1 and 2); said frame plates and tie-rods support the back mechanism 18 and the foot-rest mechanism 19, fragments of which are illustrated throughout the various views.

The outer frame plate 16 in Figs. 1 and 2 is seated within the flange or socket plate 20 which is secured by bolts or other fastening 21 permanently to the side wall of the car. The plate 16 bears against the plate 20 and is surrounded by the marginal flange thereof, so that in this manner the wall end of the seat is supported so that it may be readily disconnected. The advantages of this structure are numerous. One of the most striking is, that in the construction of modern metal cars, the plates 20 may be fastened in position during the erection of the car, thus allowing the seats to be installed any time or place and removed with equal readiness.

Figs. 3 and 4 illustrate a modification of this arrangement according to which the

bolts 21 are dispensed with and the upper edge of the plate 16 is engaged by a depending flange 20^a on the upper edge of the plate 20. With this arrangement the aisle end of the seat is first tilted upward slightly to permit introduction of the upper edge of the plate 16 under the flange 20 and thereupon said aisle end of the seat is permitted to fall to its normal position at which time the parts assume the adjustment shown in the drawings. They will retain this adjustment as long as the inner end of the seat is held in its normal position.

In Figs. 5 and 6 the frame plate 16 is slightly beveled at its vertically disposed edges and the plate 20 has inclined undercut flanges 20^b at its corresponding edges, so that the plate 16 may be dropped downward against the plate 20 and between the flanges 20^b, thus holding the plate firmly in position, but at the same time permitting of its ready removal by lifting the frame parts upward clear of the flanges 20^b.

Various devices may be resorted to for mounting the aisle end of the seat on the pedestal *c*. Figs. 1, 7 and 8 show a construction according to which the seat may be readily disconnected from the pedestal without operating nuts, bolts or other similar fastenings. Referring to these views, the forked arms *c'* of the pedestal are formed with dovetail grooves c^2 in their upper surfaces which receive the dovetail extensions 21′ of the boxes 22 wherein the rods 15 are slidably mounted. These boxes may be secured to the arm *c'* by jamming the dovetails 21′ in said grooves c^2, thus firmly fastening the seat in position. To disconnect the seat it is only necessary to force back the boxes until the dovetails 21 clear the walls of the grooves c^2 at which time the seat will be completely disconnected from the inner pedestal *c'*.

Figs. 9, 10 and 11 show an arrangement permitting the seat to be swung upward to vertical position on the pedestal *c*. According to this device the rods 15 are mounted in boxes 23 and said boxes carry trunnions 24 which are loosely placed in hook-bearings 25 of which there are two pairs, one pair at the upper end of each branch *c'* of the forked pedestals *c*. These hook-bearings 25 open toward the sides or wall of the car and the parts are so arranged that the bearings 23 may swing with the trunnions 24 from the position shown by full lines in Fig. 10 to that illustrated by broken lines in said view. As the bearings 23 thus swing the rods 15 and the whole of the car seat necessarily follow so that the wall ends of the car seat will be disengaged from their holding devices at that point and the seat swung upward bodily. During this movement the foot rest devices swing with the seat and move between the branches of the forked pedestal. The rods 15 may be made to slide in the boxes or they may be fast therein. In the former case as the seat is thus moved upward, the seat will slide downward slightly, the rods 15 moving longitudinally in the boxes 23. This operation will continue until the foot rest devices strike the fork of the pedestal *c* and this will sustain the seat in upright position preventing it from moving farther downward. Further, by making the rods 15 longitudinally movable in the boxes 23, the disengagement of the seat from the fastening devices at the sides of the car may be facilitated and rendered easy in some cases, although as we have said, it is not strictly essential to have the rods loose in the boxes. It is also pointed out that with the construction shown in Figs. 9, 10 and 11 when the parts are in the position shown by full lines in Fig. 10, the trunnions may be disengaged from the hook-bearings 25, thus enabling the entire seat to be bodily removed from the mounting devices. When, however, the seats are raised vertically as shown by the broken lines in Fig. 10, the hooks 25 lock the trunnions and prevent removal of the seats.

Our invention therefore allows us to very conveniently install the seats in cars particularly modern steel cars and to remove them easily, allowing the cars to be thoroughly cleaned and greatly facilitating the work of painting and repair. It avoids the necessity of permanently fastening the seats in place and provides an easy means of handling the same. The plates 16 and 17 being rigidly joined by the rods 15 carry all of the working parts of the seat and the four elements 16, 15 and 17 further sustain the back and cushion making the seat and its mechanism self-contained and distinct from the plate 20 and pedestal *c*.

Having thus described our invention what we claim as new and desire to secure by Letters Patent of the United States, is:

1. In a car-seat, a frame for supporting the seat consisting of two end members spaced apart and connected by suitable tie-rods, one end of the frame being detachably-connected to the car wall and the other end removably supported in the arms of a suitable standard, so that the frame supporting the seat may be moved to provide a passageway between the car-wall and standard, and for other purposes.

2. In a car-seat, a frame for supporting the seat consisting of two end members spaced apart and connected by suitable tie-rods, one end of the frame being detachably-connected to the car-wall and the other end supported in devices detachably-connected to the arms of a suitable standard, so that said frame may be bodily removed from its supports.

3. In a car-seat, a frame for supporting

the seat consisting of two end members connected together by tie-rods and detachably-supported at one end in a plate fixed to the car-wall, and at the other in boxes removably-seated in the ends of a bifurcated standard.

4. A frame for supporting car-seats consisting of suitable rods detachably supported at one end by the arms of a suitable standard, and at the other end by a member detachably-connected to the car-wall.

5. A frame for supporting car-seats consisting of suitable rods supported at one end by a plate-member detachably-connected to the car-wall and at the other end by devices detachably-connected to the arms of a standard.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

SHERIDAN A. WALKER.
FREDERICK BENNETT.

Witnesses:
ISAAC B. OWENS,
T. C. MARTIN.