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Jan. 30, 1923. 1,443,479.

A. L. LAMBERT.

CAR SEAT.

FILED MAR. 18, 1921.

Fig. 2,

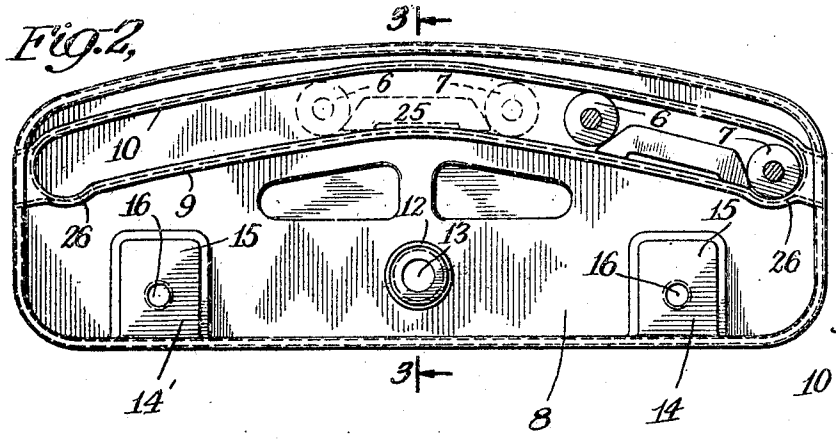


Fig. 3,

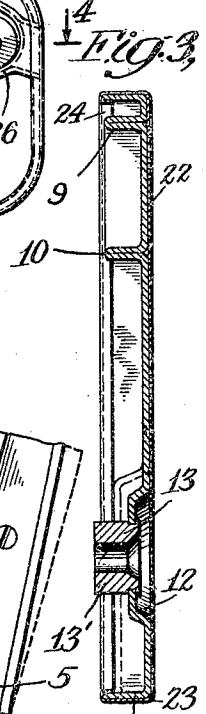


Fig. 4,

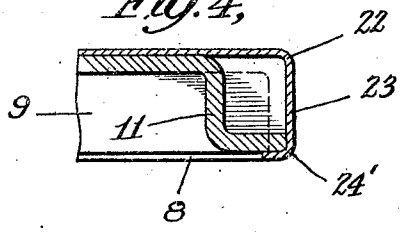
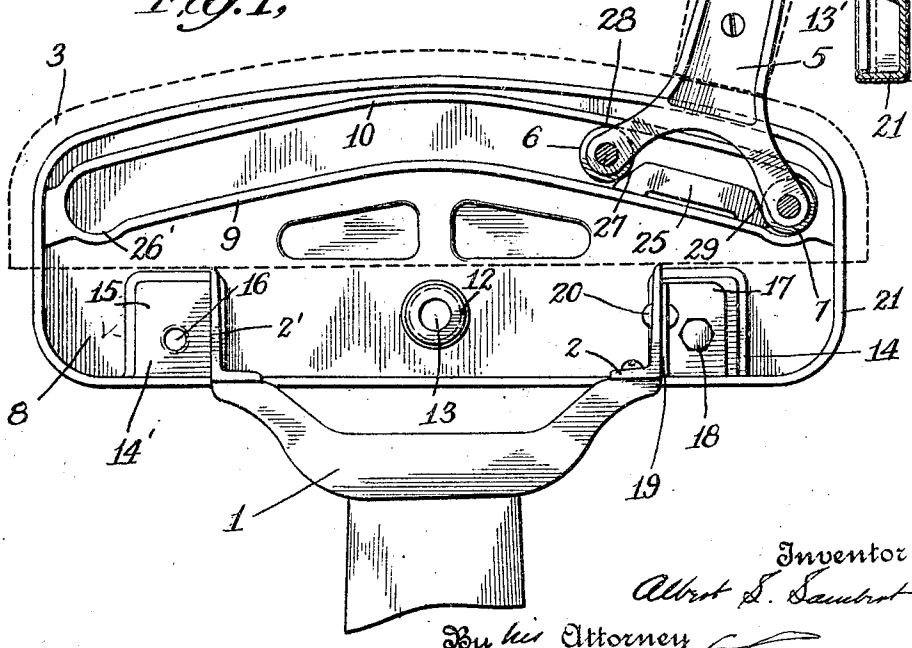


Fig. 1,



Inventor

Albert L. Lambert

By his Attorney

J. C. Edwards

Patented Jan. 30, 1923. 1,443,479

UNITED STATES PATENT OFFICE.

ALBERT L. LAMBERT, OF NARBETH, PENNSYLVANIA, ASSIGNOR TO AMERICAN MOTOR BODY COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF DELAWARE.

CAR SEAT.

Application filed March 18, 1921. Serial No. 453,459.

To all whom it may concern:

Be it known that I, ALBERT L. LAMBERT, a citizen of the United States, residing at Narbeth, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Car Seats, of which the following is a specification.

My invention relates to reversible car seats for railway carriages and the like and one of the objects of this invention is to provide for this type of seat an improved seat end which posseses great strength, which can be manufactured at small cost, which is arranged to facilitate the application thereto of the seat-reversing mechanism, and one which permits of the concealment or covering of the parts of the seat which are attached thereto so as not to be in the way of a passenger moving down the aisle.

A further object of my invention applies particularly to the well known reversible car seat construction wherein the back standards carry rollers mounted to travel back and forth in channel tracks carried on the seat ends. Due to the vibration of the moving train these rollers are apt to be joggled about between the upper and lower members of the channel track, particularly when the seat is unoccupied, and such joggling occasions considerable noise and rattle. The particular object involved is to provide means to prevent the rollers from joggling or rattling about in the channel track and thus to eliminate the objectionable noise and rattle above referred to.

Other objects of this invention will be in part obvious and in part pointed out hereinafter.

I will now describe a reversible car seat of a well known type, confining my description, however, as far as possible, to such parts of the seat as necessarily cooperate with my improvements, and I will particularly point out the parts to which my improvements relate and, in describing my improvements, will explicitly distinguish between what is old and what is claimed as new. In this connection attention is hereby directed to the accompanying drawings forming part of this specification and illustrating one possible embodiment of my invention. In the drawings Fig. 1 represents a side elevation of a reversible car seat, embodying my invention, the back being shown in one of its extreme positions; Fig. 2 is a plan view of the end plate of the car seat built according to my invention and includes, diagrammatically, the rollers carried by the back standard and my invention applied thereto; Fig. 3 is a vertical section of my improved end plate taken on the line 3—3 of Fig. 2, and Fig. 4 is a horizontal section of a fragment of the end plate taken on the line 4—4 of Fig. 2.

Similar reference characters designate similar parts throughout the several views of the drawings.

Referring to the drawings, the reference character 1 represents the usual aisle pedestal, 2 and 2′ the cross members, supported on the aisle pedestal and the wall support for the seat, 3 the seat cushion (shown in dotted lines) supported on cross members 2 and 2′, 4 the usual back provided on its edges with metallic standards, one of which is shown at 5, carrying at its lower end rollers 6 and 7, which are mounted to be moved back and forth in curved channel tracks carried on the seat ends, one of which is shown at 8, of the car seat, in the well known manner.

Since my invention relates to the novel and improved end plate for the seat, sometimes called seat end, the seat end will now be described in detail. In accordance with my invention the seat end 8 is formed from a single piece of sheet metal of a weight and strength sufficient to give the required strength. The channel track for the rollers 6 and 7 is formed on the inside surface of the seat end by pressing or otherwise shaping the piece of sheet metal in such a way that it will present two parallel, spaced folds or flanges 9 and 10, extending inwardly and longitudinally across the seat end and forming a channel track, comprising respectively lower track member 9 and upper track member 10, as shown. At each extremity of these track members a portion of the piece of sheet metal is pressed inwardly to provide a flange 11 forming a stop for the rollers 6 and 7 when they reach the extremities of the track. Heretofore it has been customary to form the channel track separately from the seat end and to secure it to the inner face of the seat end with rivets or by welding, or the like. It is readily apparent that by pressing a single sheet of metal to form a seat end with the required channel track

integral therewith, considerable saving of expense and time is effected in the manufacture of the seat end and considerable saving in material is effected, and at the same time space at the ends of the seat is conserved.

As a further improvement in seat end construction, the end plate may be formed to present integral portions suitable for the attachment thereto of parts of the seat mechanism. One of these portions, as illustrated, comprises a boss 12 below the channel track formed integrally on the seat end, at its centre, and has a perforation 13 adapted to receive the usual bushing 13′ for one end of a rocker rod. Boss 12 provides on the exterior of the seat end a pocket of such depth that the end of the bushing 13′ or the rocker rod, or a retaining nut thereon will not extend beyond the outer surface of the seat end.

Other integral portions, providing pockets, may be formed in the seat end, as at 14 and 14′ adjacent the ends of cross members 2 and 2′. The inner surface 15 of these pockets have perforations as at 16 so that an angle iron 17 may be readily and easily bolted thereto, as at 18, and to the cross member 2, as at 20, in the usual manner, with the bolt head or nut on the bolt 18 toward the outside of the seat end seated in the pocket with no part extending beyond the outer surface thereof. Thus it is apparent that a seat end of the above configuration and construction maintains all the parts of the seat mechanism which are connected thereto, out of the way of a passenger traveling down the aisle and so masks these parts that they are not likely to catch against a grip carried by a passenger nor to catch into and tear a passenger's clothing.

An inwardly extending peripheral flange 21 may be formed about the seat end, and a cover plate 22 provided with a corresponding inwardly extending flange 23, may be applied to the outside of the seat end with flange 23 overlapping flange 21, to further mask the parts of the seat mechanism which are attached to the seat end for the purpose desired. The cover plate may be joined to the seat end by welding or the like and in this manner a smooth flat surface may be provided for the outside of the seat end, or any suitable design supplied thereto. The welding operation may be dispensed with by bending or pressing the flange 23 of cover plate 22 about the inner edge of flange 21 as shown at 24. At the extremities of the channel track the end plate and the flange 23 of the cover plate 22 may be brought together by continuing flange 11 of the end plate at right angles and until it abuts flange 23 as at 24′. The surface of the seat end, even without the cover plate, is sufficiently flat for direct attachment to the car wall at the wall side of the seat.

I will now describe the feature of my invention whereby noise occasioned by the rattling or vibrating of the rollers 6 and 7 in the channel track is eliminated. To this end a device, preferably comprising a block of metal 25, is loosely positioned on the lower channel track member 9 between rollers 6 and 7, and extends somewhat less than the full distance between the rollers when they are in normal position on the track, as is shown by dotted lines in Fig. 2. Each end of this block 25 presents a sloping surface receding upwardly from the adjacent roller. At each end of the lower channel track member 9 is formed a depression 26 and 26′, respectively, into which the outside roller is adapted to fall as the roller approaches the end of the channel track and the seat reaches either extreme position. As the outside roller drops into a depression the inner roller will ride upwards on the adjacent surface of member 25 so as to be firmly held against the upper channel track member 10, and while the seat is in an extreme position the inner roller will be so firmly held against the upper channel track that it will be prevented from vibrating or rattling, and may not occasion objectionable noise by so doing.

In operation it has been found that the provision of member 25 in no way retards or hinders the easy reciprocation of the back in the usual manner. As the back approaches one extreme position, for instance, the position illustrated in Figs. 1 and 2, roller 7 will roll into depression 26 and member 25 will thereby be held against further horizontal movement, and as roller 7 drops further into the depression, roller 6 will ride up on the surface 27 of member 25 until it is firmly pressed against the upper channel track member 10, as at 28, by the weight of the back which causes roller 7 to drop into depression 26. Similarly, when the back is reversed, roller 6 will drop into depression 26′ and roller 7 will be held against vibratory movement in the channel track on account of its having ridden upward on surface 29 of member 25 and is being firmly pressed against the upper channel track member 10, by the weight of the back which causes roller 6 to sink into depression 26′.

It is believed that applicant's invention relating to means for avoiding the objectionable noise as above described is broadly new, and since many changes could be made in the above construction and many apparently widely different embodiments of this invention may be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What I claim is:

1. A metal seat-end comprising, in combination, an integral frame of pressed steel having a pair of spaced, inwardly extending, longitudinal, parallel folds forming a channel track for supporting and guiding a back-supporting standard, said frame also having an inwardly extending boss having a perforation and adapted to support a rocker rod wholly interiorly of the outer surface of said frame, and having a pair of inwardly disposed pockets each having a perforation, and each adapted to be bolted to a cross member with said bolting means wholly interiorly of the outer surface of said frame, and a cover plate secured over the outer surface of said frame.

2. In a reversible car seat, the combination with seat mechanism including a back-supporting standard, rollers on said standard, and a track comprising upper and lower track members for guiding said rollers, of means comprising a recess at each extremity of one of said track members and a wedge movable into engagement with one of said rollers for preventing said rollers from vibrating against said track members when said rollers are at either extremity of said track.

3. In a reversible car seat, the combination with a channel track comprising upper and lower track members, a back and standard therefor, and a pair of spaced rollers carried by said standard between said track members for lateral reciprocation, of means comprising a recess at each extremity of said lower track member and a wedge member movable into engagement with both said rollers, for holding a roller against vibration in one of said recesses, and for guiding and holding the other roller against said upper track member when said rollers are at either extremity of said track.

4. In a reversible car seat, the combination with a channel track comprising upper and lower track members and a pair of spaced back-supporting rollers mounted for reciprocation in said track, of a depression at each extremity of the lower track member and means loosely positioned on said lower track between said rollers whereby one roller is guided into positive contact with said upper track member when the other roller enters one of said depressions.

5. In a reversible car seat the combination with seat mechanism including a back-supporting standard, rollers on said standard and a track comprising upper and lower track members for supporting and guiding said rollers, of means loosely supported on said lower track member for guiding one of said rollers against said upper track member when said rollers reach an extremity of said track and for holding said roller firmly against said upper track member when said rollers are in said extreme position.

6. In a reversible car seat, the combination with seat mechanism including a back-supporting standard, rollers on said standard, and a track comprising upper and lower track members for supporting and guiding said rollers, of a member slidably positioned on said lower track between said rollers and adapted to be moved freely back and forth thereon by said rollers, an upwardly sloping surface on said member adjacent each roller, and a depression on said lower track at each extremity thereof, whereby when said rollers approach an extremity of said track the outer roller will enter said depression and hold said member against further movement, and as said outer roller sinks into said depression the inner roller will travel upward on the adjacent sloping surface of said member into contact with said upper track member, said contact being maintained so long as said outer roller is seated in said depression.

7. In a reversible car seat, the combination with a channel track, comprising upper and lower track members, and a pair of spaced back-supporting rollers mounted for reciprocation in said track, of depressions in the lower track member, one at each extremity thereof, and a metal block loosely positioned on said lower track member between said rollers and presenting an upwardly sloping surface adjacent each of said rollers, said block extending substantially the entire distance between said rollers, and adapted, when one of said rollers enters one of said depressions, to present an upwardly sloping track for the other roller whereby said roller is guided into positive engagement with said upper track member.

This specification signed and witnessed this 11th day of March, 1921.

ALBERT L. LAMBERT.

Witnesses:

WILLIAM J. EARNSHAW,

R. M. FRIES.