Sept. 11, 1923. 1,467,582

E. C. LANG

CAR SEAT

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FIG. 2.

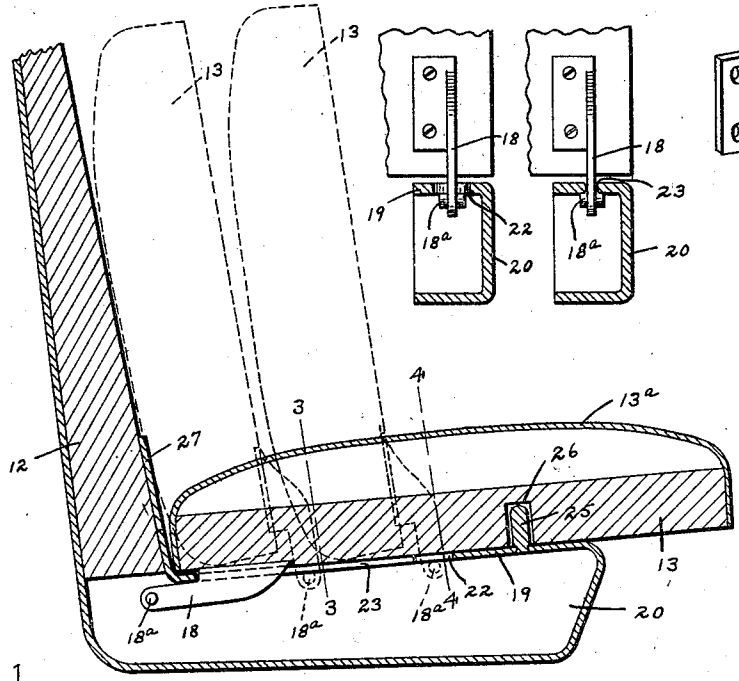


FIG. 4.

FIG. 3.

FIG. 5.

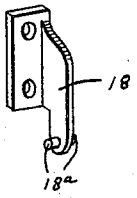
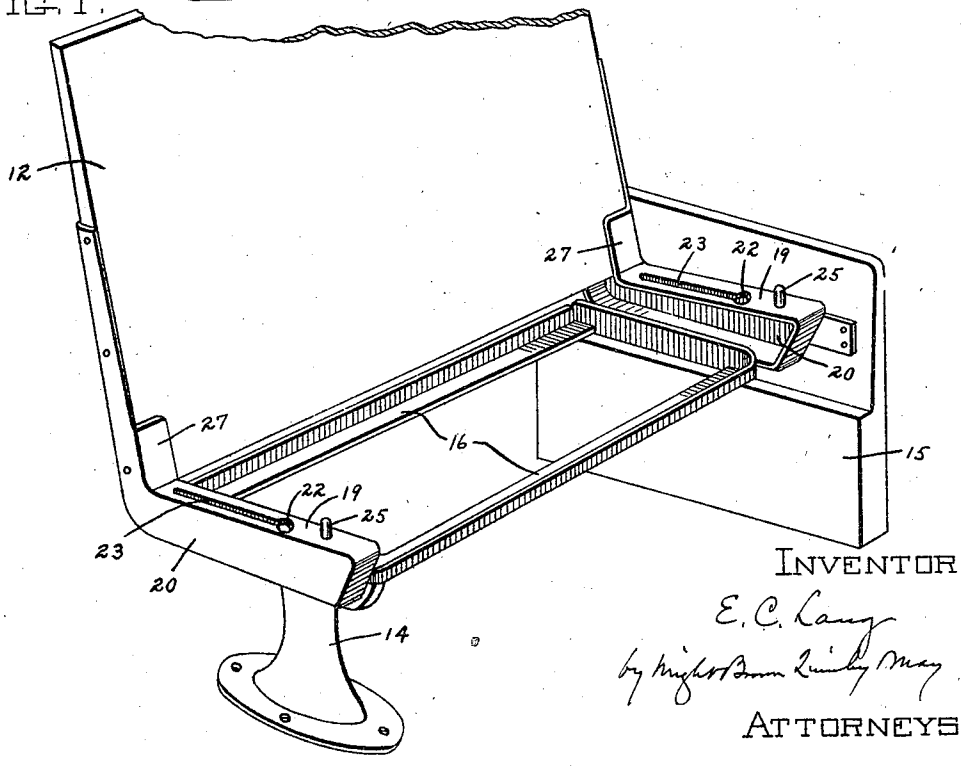


FIG. 1.



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FIG. 7.

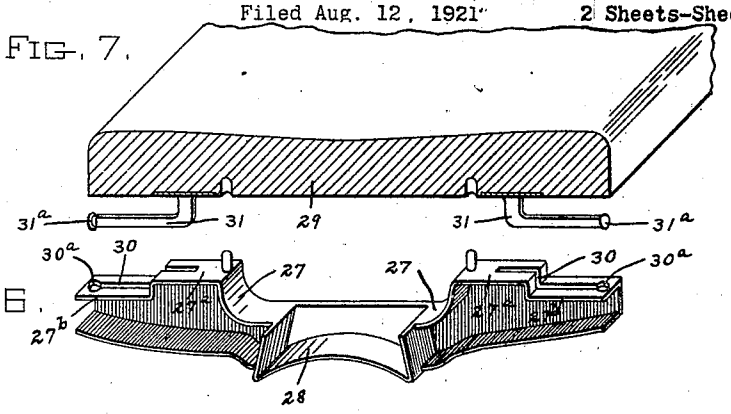


FIG. 6.

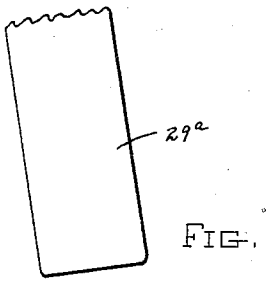


FIG. 8.

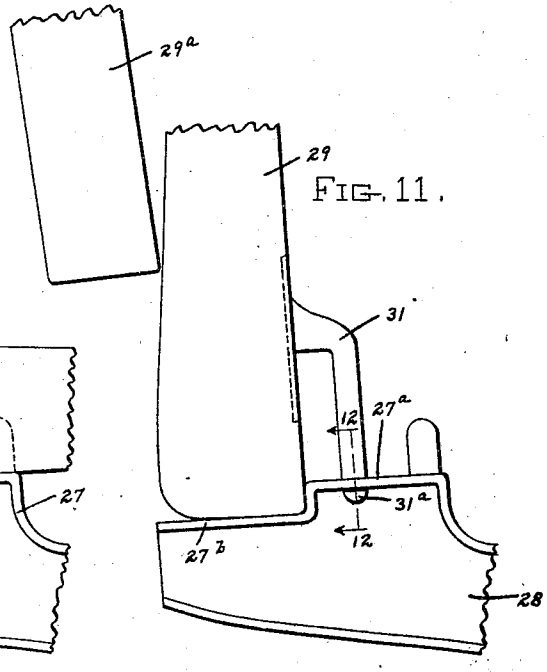


FIG. 11.

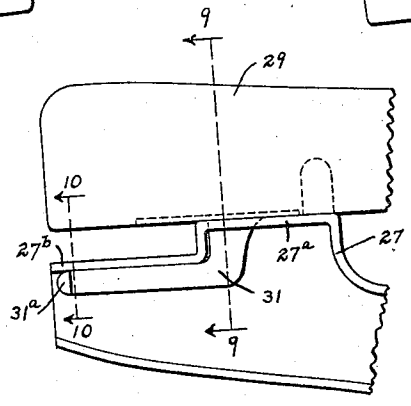


FIG. 10.

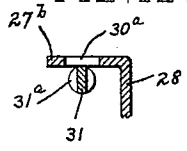


FIG. 9.

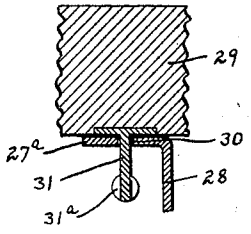
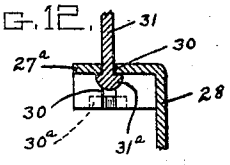


FIG. 12.



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Patented Sept. 11, 1923. 1,467,582

UNITED STATES PATENT OFFICE.

EDWARD C. LANG, OF MELROSE, MASSCHUSETTS, ASSIGNOR TO HEYWOOD-WAKEFIELD COMPANY, OF WAKEFIELD, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

CAR SEAT.

Application filed August 12, 1921. Serial No. 491,677.

To all whom it may concern:

Be it known that I, EDWARD C. LANG, a citizen of the United States, residing at Melrose, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Car Seats, of which the following is a specification.

This invention relates to a car seat, the seat section of which is supported by a suitable rest, and is adapted to be swung upwardly from its operative position on the rest to a position upturned against the back section.

The chief object of the invention is to provide a loose connection between the seat section and the rest, of extreme simplicity, and free from articulated hinge joints, said connection being organized to permit a swinging movement of the seat section on a shifting center, so that it may be upturned against the back section without injurious contact with the latter during the operation, and to maintain a loose anchoring engagement between the rest and the seat section, whereby unintentional or accidental separation of the seat section from the rest is prevented.

Other objects are to provide improved means for preventing removal of the seat section from the rest when in its upturned position; for permitting removal of the seat section only when the latter is a predetermined position; and for preventing downward tipping of the seat section from its operative position when the seat section projects considerably forward from the rest.

The invention is embodied in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings forming a part of this specification,—

Figures 1 to 5, inclusive, represent a non-reversible seat structure.

Figure 1 is a perspective view, showing the portions of a car seat embodying the invention, which include the rest and the back section, the seat section being removed.

Figure 2 is a section on the plane indicated by line 2—2 of Figure 1, through the back section and the rest, and a transverse sectional view of the seat section in its operative position.

Figure 3 is a fragmentary section on line 3—3 of Figure 2, showing a portion of the seat section as it appears when in its upturned position.

Figure 4 is a fragmentary section similar to Figure 3, taken on line 4—4 of Figure 2.

Figure 5 is a perspective view of the ear attached to the seat section.

Figures 6 to 12, inclusive, show the invention embodied in portions of a reversible seat structure.

Figure 6 is a perspective view of a rest formed as the rocker of a reversible seat.

Figure 7 is a fragmentary perspective sectional view, showing a portion of the seat section.

Figure 8 is a fragmentary elevation showing portions of the rocker, seat section and back section.

Figure 9 is a section on line 9—9 of Figure 8.

Figure 10 is a section on line 10—10 of Figure 8.

Figure 11 is a view similar to Figure 8, showing the seat section in its upturned position.

Figure 12 is a section on line 12—12 of Figure 11.

The same reference characters indicate the same parts in all of the figures.

Referring first to Figures 1 to 5, inclusive, of the drawings, 12 represents a fixed back section, which may be of any suitable construction and materials. One end portion of a seat section 13 is shown in transverse section by Figure 2. The seat section may be of any suitable construction, and may or may not include a yieldingly supported flexible top 13^a.

Figure 1 shows a suitable form of fixed supporting means, which may include the usual outer and inner end members 14 and 15, and suitable intermediate connecting members 16. The seat section is directly supported by rests 19, which in this case are fixed, and is one of a plurality of similar rests, two rests being employed, as shown by Figure 1. Each rest 19, as here shown, is a flange overhanging an open space below the rest and formed on a fixed metal end piece 20, to which the back section is attached. The seat section and the supporting means are provided with loose connection elements having means for permitting a swinging movement of the seat section, on a shifting center, from its operative position shown by full lines, to its upturned position,

upturned against the back section, as shown by dotted lines at the left of Figure 2, one of said elements being the rest 19.

Said connection elements also have means for preventing separation of the back section from the rest when the seat section is in its upturned position, and means for permitting separation of the seat section from the rest when the seat section is moved from its upturned position.

Said connection elements include in addition to the rest 19, an angular ear 18, rigidly secured to the rear portion of the seat section, and projecting from the bottom of the latter, the outer end of the ear being provided with a head or enlargement 18^a. The rest 19 may be formed in any suitable way to constitute another element of a loose connection permitting a swinging movement of the seat section on a shifting center and maintaining a loose anchoring engagement between the rest and the ear, the nature of said engagement being such that the seat section is not liable to be unintentionally or accidentally separated from the rest. As here shown, the rest is provided with a longitudinal slot 23, formed to receive the ear 18, and provided with an enlargement 22 at one end. When the seat section is held edgewise in the right-hand dotted line position of Figure 2, the head 18^a is passed through the enlargement 22. The seat section is then swung downward and moved edgewise inward to the full line position shown by Figure 2. A portion of the angular ear 18 is thus caused to project under a portion 19^a of the rest at the inner end of the slot 23, said portion constituting a stop which prevents the inner edge of the seat section from being swung upward by downward pressure on the forward edge portion of the seat section, the latter being formed to project considerably forward from the rest 19.

Thes lot 23 and ear 18 now permit a swinging movement of the seat section on a shifting center, from its operative to its upturned position, the seat section, when folded, being inclined backward and having its center of gravity shifted sufficiently to cause it to remain in the upturned position. The open space under the rest permits the free swinging of the ear with the seat section. The slot 23 is elongated, so that when the seat section is upturned, the ear head 18^a is under the narrower portion of the slot, as indicated by Figure 3, so that the ear cannot be removed from the rest, removal of the seat section from the rest while the seat section is upturned, being thus prevented. When the seat section while upturned is moved forward to the right-hand dotted line position (Figure 2), the ear head 18^a is adapted to pass through the slot enlargement 22, so that the seat section may be removed from the rest. Edgewise forward movement of the seat section from its operative position is prevented by a stud 25, projecting upward from the rest, and a socket 26 in the seat section which receives the stud.

In the embodiment shown by Figures 6 to 12, inclusive, the rest is provided by raised portions 27^a of flanges 27, forming parts of a rocker 28. The rocker is adapted to be tipped on a suitable support, and to support a seat section 29 in a transversely inclined position with either longitudinal edge raised above the other, as in a well known type of car seat, having a swinging reversible back section 29^a.

I do not show the means for movably supporting the rocker and the back section, such means being well understood by those skilled in the art.

The flanges 27 are provided with longitudinal slots 30, having enlargements 30^a at their outer ends, the inner ends of said flanges being formed in the raised portions 27^a, and the ends having the enlargements in depressed portions 27^b of said flanges. The seat section 29 is provided with two angular ears 31, each having a head or enlargement 31^a. The arrangement is such that when the seat is held in the position indicated by Figure 7, and moved downward, the ears 31 enter the slots 30, the heads 31^a passing through the slot enlargements 30^a. When the seat section is tipped from the operative position shown by Figure 8, to the upturned position shown by Figure 11, one of its arms 31 swings out of the corresponding slot 30, the other arm remaining in the other slot, and swinging therein until its head 31^a abuts against the raised portion 27^a of the rest, and is prevented from being withdrawn from the slot, as indicated by Figure 12. The seat section, therefore, has a swinging movement on a shifting center, in moving from its operative to its upturned position, and its removal from the rest when it is in its upturned position is prevented. The folded seat section rests on the depressed flange portion 27^a and against the back 29, the position of the seat section being such that it is not liable to fall forward.

It will be seen that the loose anchoring connection between the seat section and the rest is provided by imparting a predetermined formation to the rest, enabling the latter to serve also as a connection element, and by attaching the angular ear to the seat section, the expense and complication of articulated hinge joints being eliminated.

I claim:

1. A seat having, in combination, a pair of rests having upwardly facing upper surfaces forming seats for a movable seat section, and downwardly facing lower sur-

faces; supporting means for said rests forming open spaces below said lower surfaces, said rests having longitudinal slots provided with end enlargements; a movable seat section; angular brackets fixed to the bottom of the seat section and including inner portions perpendicular to said bottom, arms extended from said inner portions substantially parallel with said bottom, and transverse lugs on the rear ends of said arms, adapted to register with said enlargements and to be slidably engaged in said spaces with the lower surfaces of the rests, said brackets being removable from said slots only when the lugs are in a predetermined position below said enlargement.

2. A car seat having, in combination, a fixed back section, a pivotal and removable seat section, supporting members secured to the lower edges of said back section, and extending forwardly therefrom, said members including inturned flanges constituting rests having upwardly facing upper surfaces forming seats for the bottom of the seat section, and downwardly facing lower surfaces, said rests having longitudinal slots formed at their forward ends with enlargements, and angular securing brackets fixed to the bottom of said seat section, and including inner portions perpendicular to said bottom, arms rearwardly extended from said inner portions, substantially parallel with said bottom, and transverse lugs on the rear ends of said arms, adapted to register with said enlargements, and to be slidably engaged in said spaces with the lower surfaces of the rests, said brackets being removable from said slots only when the lugs are in a predetermined position below said enlargements, the arrangement being such that the lugs are below the enlargements only when the rest is in an upturned position and spaced forward from the fixed back section.

3. A car seat having in combination, a back section, a pivotal and removable seat section, rest members secured to the lower edges of said back section and extending forwardly therefrom, the said rests provided in their forward portions with inturned horizontal flanges having longitudinal slots arranged therein, said slots formed at their forward ends with enlargements, securing brackets fixed to said seat section, said brackets having their free ends rearwardly disposed and provided with transverse lugs adapted to engage said flanges for slidably securing the seat to the rests, and prevent tipping of the front end of the seat, said seat being removable from the rest when the latter is in a predetermined position relative to said flanges.

4. A seat having in combination a pair of supports, rests secured to said supports, said rests being provided with inturned flanges having longitudinal slots therein, enlargements formed in end portions of said slots, a removable seat, brackets provided with vertical and rearwardly extending arms fixed to said seat, transverse lugs arranged in said arms adapted to register with said enlargements, and to be slidably secured below said slots, said brackets being removable from said slots only when the lugs are in a predetermined position below said enlargements.

In testimony whereof I have affixed my signature.

EDWARD C. LANG.