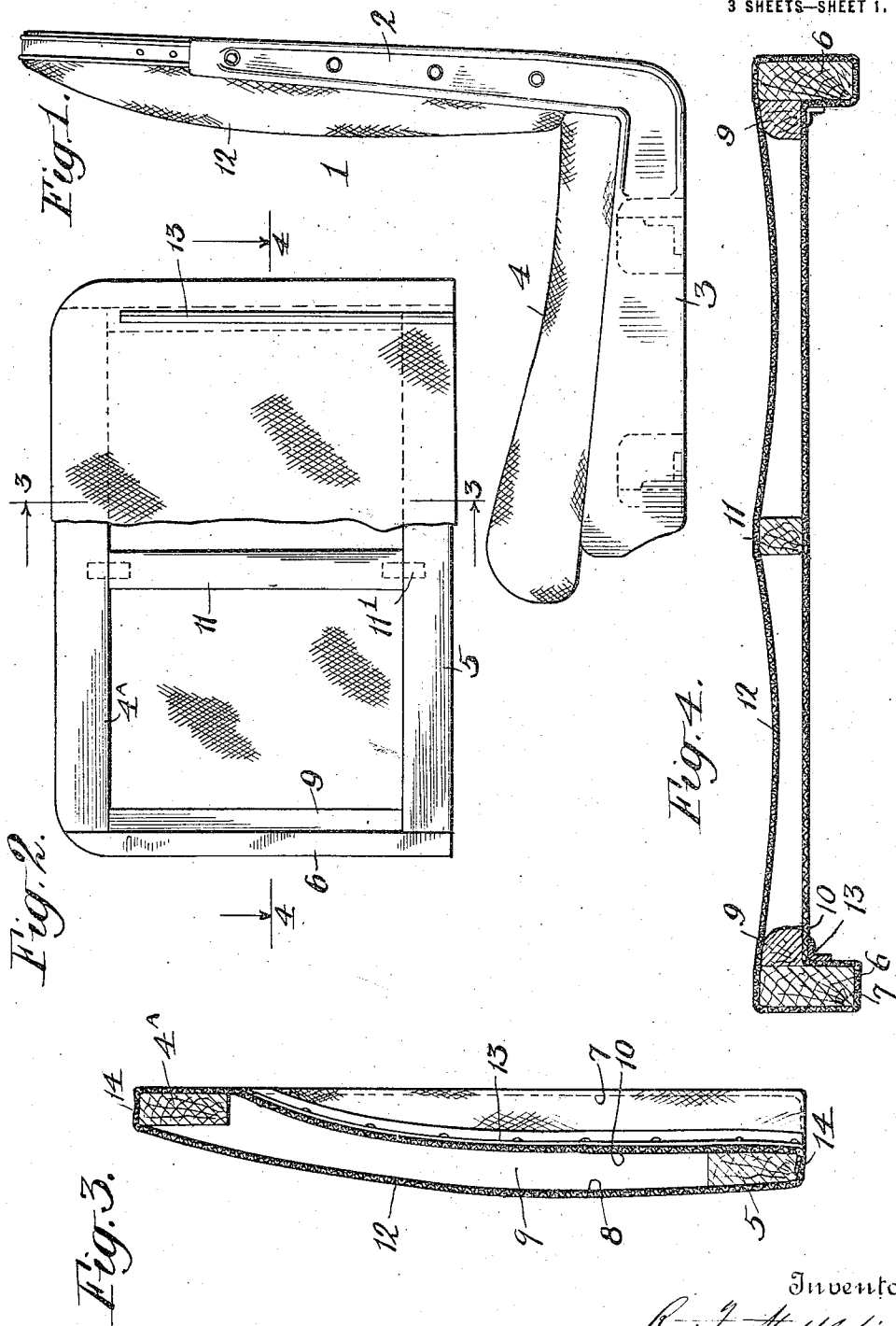


1,250,698.

Patented Dec. 18, 1917.  
3 SHEETS—SHEET 1.



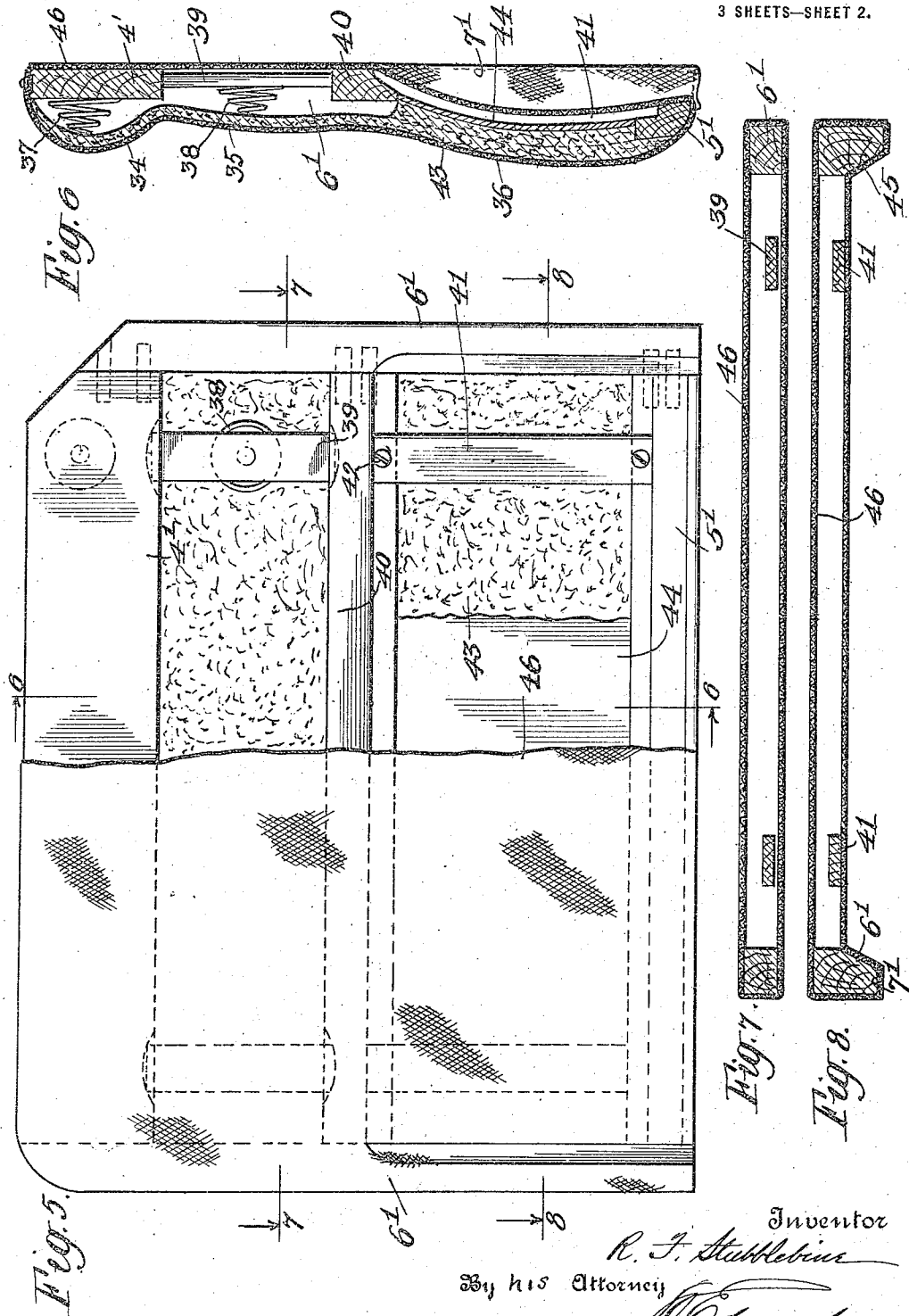
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CAR SEAT.  
APPLICATION FILED MAY 20, 1916.

1,250,698.

Patented Dec. 18, 1917.

3 SHEETS—SHEET 2.

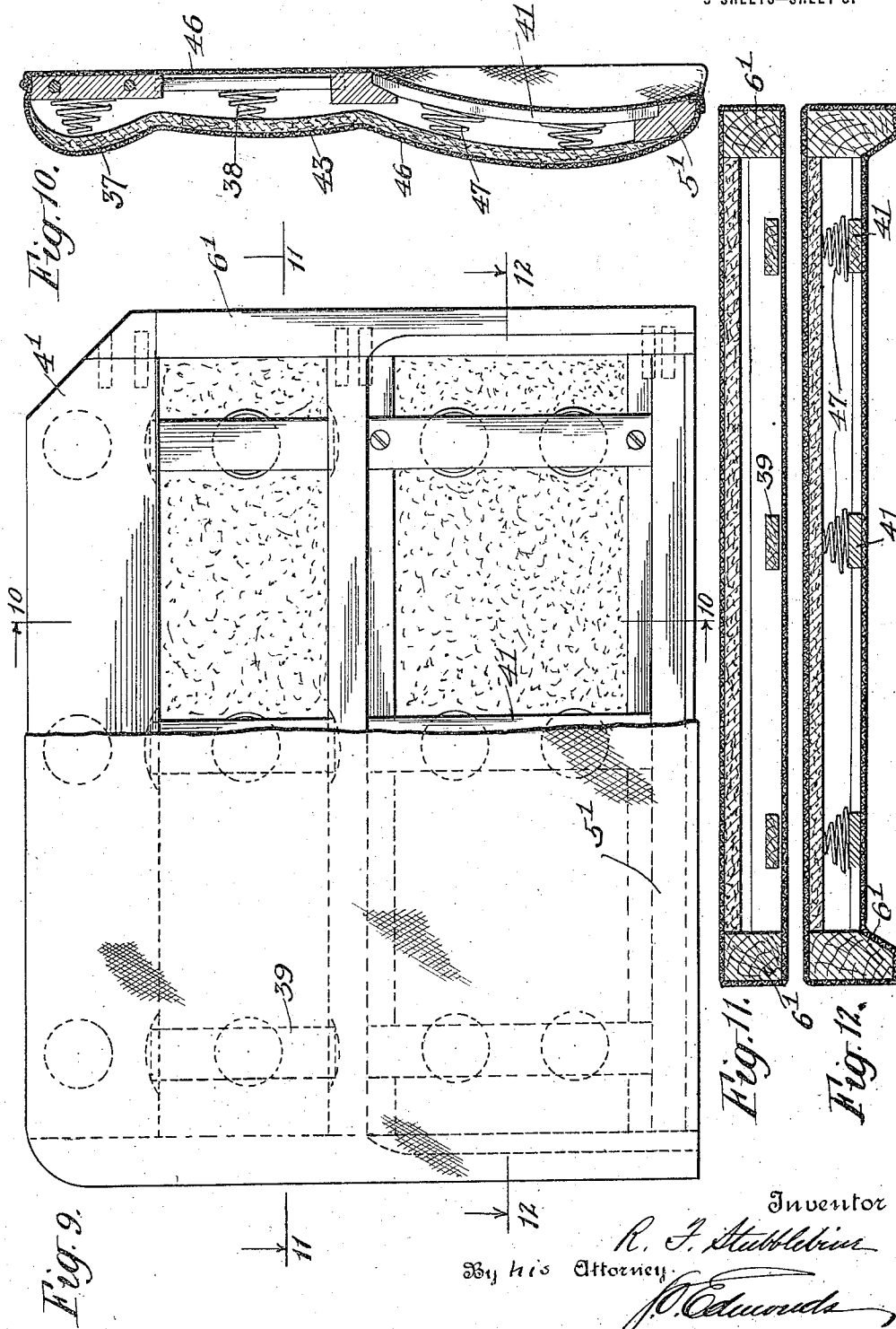


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CAR SEAT.  
APPLICATION FILED MAY 20, 1916.

Patented Dec. 18, 1917.  
3 SHEETS—SHEET 3.

1,250,698.



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# UNITED STATES PATENT OFFICE.

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## CAR-SEAT.

1,250,698.

Specification of Letters Patent.

Patented Dec. 18, 1917.

Application filed May 20, 1916. Serial No. 98,714.

*To all whom it may concern:*

Be it known that I, RAYMOND F. STUBBLEBINE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia 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 stationary car-seats and my object is to provide a construction in which the back is recessed at the rear to give increased knee room for occupants of the seat to the rear. My improved back construction is applicable to structures which may or may not be provided with springs, in accordance with the particular design used. In any case, the upright end members or rails of the back frame are provided with outer portions of full depth from front to rear and inner portions of less depth, or intermediate members of less depth are provided, so that when the cover is extended about the rear of the back and secured to the inner surfaces of the end rails and spread over the inner portions or intermediate members, a recessed portion is formed between the end rails. In this construction the end rails may be provided with reinforcing strips or portions on their inner sides, to constitute the inner portions referred to, extending only part way from front to back of the outer portions of the end rails, or the end rails may be inwardly beveled. In the springless type of back an upright center stretcher may be employed over which the covering is stretched at the rear to maintain the shape of the back at the center of the recessed portion. The ratan or other covering is shaped around the rear of the end rails and usually is secured at the inner angle thereof by brass beading.

In case the invention is applied to a spring back of the type having a head-roll and bustle, a row of slats is usually used to support the covering at the rear over the recessed portion. Curved slats are preferred as giving the most knee room at the point of the back where most space is needed, but straight slats may be used, or other supporting means employed as will be obvious.

My invention comprises various combinations of parts and details of construction embodied in the structure briefly described

above, as will appear more fully in the following specification and appended claims. 55

In order that a clearer understanding of my invention may be had, attention is hereby directed to the accompanying drawings forming part of this application and illustrating certain embodiments of my invention. In the drawings, Figure 1 represents a side elevation of a stationary back and a seat-cushion mounted on a support; Fig. 2 is a rear elevation of the back, the support therefor not being shown; Figs. 3 and 4 are enlarged vertical and longitudinal sections taken on lines 3—3 and 4—4, respectively, of Fig. 2; Fig. 5 is a rear elevation of a back of the head-roll type; Fig. 6 is a vertical transverse section taken on line 6—6 of Fig. 5; Figs. 7 and 8 are longitudinal horizontal sections taken on lines 7—7 and 8—8, respectively, of Fig. 5; Fig. 9 is a rear elevation of a back of the head-roll type, showing a modified form of construction; Fig. 10 is a vertical transverse section taken on line 10—10 of Fig. 9; and Figs. 11 and 12 are horizontal longitudinal sections taken on lines 11—11 and 12—12, respectively, of Fig. 9. 60 65 70 75 80

Referring first to Figs. 1 to 4 inclusive, the back may take the form shown at 1, this being secured to the vertical arms 2 of the supporting standard, which may have integral horizontal portions 3 on which the seat-cushion 4 is mounted. The back, as illustrated, has a frame comprising the top and bottom rails 4<sup>A</sup> and 5 of wood, and the end rails 6, 6, also of wood. These frame members are joined together at their ends in an appropriate manner. The rear surfaces of the end rails are preferably in a vertical plane, as is indicated by the line 7, while the front surfaces of the end rails are curved in the lengthwise direction of the rails, as is indicated by the line 8 in Fig. 3, to give the desired curvature of the front from top to bottom of the completed back. 85 90 95

The thickness of the end rails from the outside to the inner surfaces of the same may be about the same as is usually employed in stationary seats. Reinforcing strips 9 are, however, secured to the inner surfaces of the end rails adjacent the forward ends of the same, that is, reinforcements 9 extend from the front edges of the 100 105

end rails only part way to the rear surfaces of the end rails. Strips 9 may be considered as the inner portions of the end rails and may, of course, be integral with the end rails if desired. The forward surfaces of strips 9 are curved lengthwise in the same manner as end rails 6, so as to be parallel thereto at all points, while the rear surfaces of strips 9 curve lengthwise in the manner shown by the line 10, the rear surfaces of strips 9 being in alinement with the rear surface of the bottom rail at the bottom and in alinement with the rear surface of the top rail at the top. The bottom rail 5 it will be observed is located a substantial distance in front of the top rail, the end rails projecting rearwardly at the bottom into the same vertical plane as the rear surfaces of the top rail.

A center stretcher 11 is also used, this being a wooden member alined with the reinforcements 9, 9 and shaped the same at its front and rear surfaces as the reinforcements 9, 9. The covering material 12 is drawn over the frame, the covering material being drawn at the ends from the front toward the rear and around the rear and inner surfaces of the end rails to the plane of the rear surfaces 10 of reinforcements 9. A strip of brass molding 13 is positioned against the covering material in the angle at each end of the frame between the inner surface of the end rail and the rear surface of the reinforcement or inner portion 9 of the end rail, this molding being secured through the covering material to the rail to securely hold the covering material at these points and to give a desirable finish.

The back described has no springs therein, as I depend, in this form of my invention, entirely upon stretching the material over the frame to give the same the desired curvature and resilience. The covering material is preferably ratan, in which case there need be no direct attachment of the material to the center stretcher 11, the ratan being stretched by dampening and drying the same and holding it in a form until it is able to maintain its shape permanently without tacking to the member 11. Other forms of covering material which are well known may be employed in place of ratan in which case the same may be secured to the center stretcher in various ways, such, for example, as by forming a plait or loop in the material which is tacked to the center stretcher after which the material is tacked at the ends to the end rails in the manner disclosed in application of John E. Kilburn, Serial No. 87,336, filed March 28, 1916. The ratan or other covering material may comprise a forward portion and a rear portion secured one over the other at the top of the top rail and the bottom of the bottom rail, as is indicated at 14, 14 in Fig. 3. The front covering may curve inwardly somewhat from the center

stretcher toward each end rail, as is shown in Fig. 4, thus adding to the comfort of each of two occupants of the seat when each sits at one side of the middle of the seat as is desirable.

In Figs. 5 to 8 inclusive, I have illustrated a form of seat back of the head-roll and bustle type which is comprised within my invention. In this form the end rails 6', 6' are given a front curvature, such as is shown in Fig. 6, to form the desired head-roll portion 34, neck portion 35 and bustle portion 36 of the back. The extreme rear surface 7' of the end rails is vertical as in the form of back previously described, the bottom rail 5' being located forwardly of the top rail 4' as in the other instance. Springs 37 may be mounted in the head-roll portion upon the top rail 4'; and in the neck or center section 35 springs 38 are shown mounted on the vertical slats 39 which are secured at their upper and lower ends to the top rail 4' and the horizontal center rail 40, which latter is secured at its ends to the end rails 6'.

The lower vertical slats 41 are preferably curved as illustrated and extend from the bottom rail 5' to the center rail 40, the upper rear surface of the bottom rail and the lower rear surface of the center rail 40 being appropriately cut out to receive the ends of these slats, which latter may be appropriately secured thereto as by means of screws 42. In the seat illustrated, padding or filling 43 is employed, there being no springs in the lower or bustle section 36. Accordingly, an appropriately curved plate 44, which may be of sheet steel, ratan or other material is placed upon slats 41 to support the padding in the bustle portion of the back.

In the back illustrated, the end rails are not provided with separate inside portions or reinforcing strips, such as those illustrated at 9 in Fig. 4, the end rails instead being made sufficiently thick from outside to inside at their forward edges, the inner edges of the rails being beveled, as is shown at 45 in Fig. 8, from the extreme rear of each rail into vertical alinement with the rear surfaces of slats 41 at each point in the length of the latter, the inclination of the bevel thus gradually increasing from a slight angle just below the center rail 40 to a steep angle adjacent the bottom rail 5'. The padding 43 and the outer covering or ratan 46 are secured upon the front of the frame, the covering 46 also being shaped around the rear of the structure and fastened to the inner surfaces of the end rails at the forward edges of the bevels thereof, and also to the rear surfaces of the top and bottom rails and of the slats 41 if this is necessary.

The curved slats 41 illustrated are desirable as giving the most knee room at that point of the back where most space is needed, but it is obvious that straight slats may

be employed in lieu of the curved slats, or equivalent construction used.

The construction illustrated in Figs. 9 to 12 inclusive is substantially the same as that illustrated in Figs. 5 to 8, except for the fact that springs 47 are mounted on the curved slats 41 in place of the thick felt padding 43 used at this point in the construction previously described. Accordingly, supporting sheet or plate 44 of the former construction illustrated in Fig. 6 is not necessary. In other respects this construction may be substantially the same as that illustrated in Figs. 5 to 8.

It is to be understood that my invention is not strictly limited to the exact details of construction described, but is as broad as is indicated by the accompanying claims.

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

1. In a car-seat, the combination of a back frame having top and bottom rails, end rails and a vertical stretcher intermediate the end rails, said end rails having outside portions and inside portions extending only part way from the front toward the rear of the outside portions, and a covering extending about the frame, shaped in at the rear to the angle between the inner face of the outside portion and the rear face of the inside portion of each end rail, and contacting the rear surface of said stretcher, substantially as set forth.

2. In a car-seat, the combination of a back frame having top and bottom rails and end rails, and means intermediate the end rails affording rear intermediate surfaces located forward of the extreme rear surfaces of the end rails, in the same horizontal planes, and a covering extending about the frame, shaped around the end rails at the rear, secured to the inner surfaces thereof, and extending tautly between said end rails in contact with said rear intermediate surfaces, substantially as set forth.

3. In a car-seat, the combination of a back frame and a covering stretched about the same, said frame having upright end portions of full depth and intermediate portions of less depth, from front to back, and said covering being secured to the inner surfaces of said end portions, and extended over said intermediate portions, to provide a recess in the rear of the back adapted to provide increased knee room for an occupant of the seat to the rear, substantially as set forth.

4. In a car-seat, the combination of a back frame and a covering stretched about the

same, said frame having upright end portions of full depth and intermediate portions of less depth, from front to back, and top and bottom rails, the bottom rail being in a plane forward of that in which the top rail is located, said intermediate frame portions increasing gradually in depth from a point adjacent the bottom of the frame to a point above the same, below the top rail, and said covering being secured to the inner surfaces of said end portions, and extended over said intermediate portions, to provide a recess in the rear of the back adapted to provide increased knee room for an occupant of the seat to the rear, substantially as set forth.

5. In a car-seat, the combination of a back frame and a covering stretched about the same, said frame having upright end portions of full depth and intermediate portions of less depth, from front to back, and top and bottom rails, the bottom rail being in a plane forward of that in which the top rail is located, said end portions having front surfaces curved lengthwise to give a desired contour to the front of the seat, and said intermediate portions having their front surfaces similarly curved and their rear surfaces shaped to form a recess in the rear lower portion of the back between said end portions, and said covering being shaped about the rear of the frame to conform to the shape of the rear surfaces of said frame members, substantially as set forth.

6. In a car-seat, the combination of a back frame and a covering stretched about the same, said frame having upright end portions of full depth and intermediate portions of less depth, from front to back, a bottom rail and a longitudinal rail above the bottom rail, the rear surface of said bottom rail being forward of the plane of the extreme rear surfaces of said end portions and the rear surface of said upper longitudinal rail being substantially in the plane of the extreme rear surfaces of said end portions, and said intermediate portions having their rear surfaces extend from the rear plane of said bottom rail to the rear plane of said upper rail, and said covering being shaped about the rear of the frame to conform to the shape of the rear surfaces of said frame members, substantially as set forth.

This specification signed and witnessed this 18th day of May, 1916.

RAYMOND F. STUBBLEBINE.

Witnesses:

WM. J. EARNshaw,  
E. M. FIELDS.