E. E. GRAFF.

VEHICLE SEAT.

APPLICATION FILED APR. 17, 1918.

1,307,666.

Patented June 24, 1919.

2 SHEETS—SHEET 1.

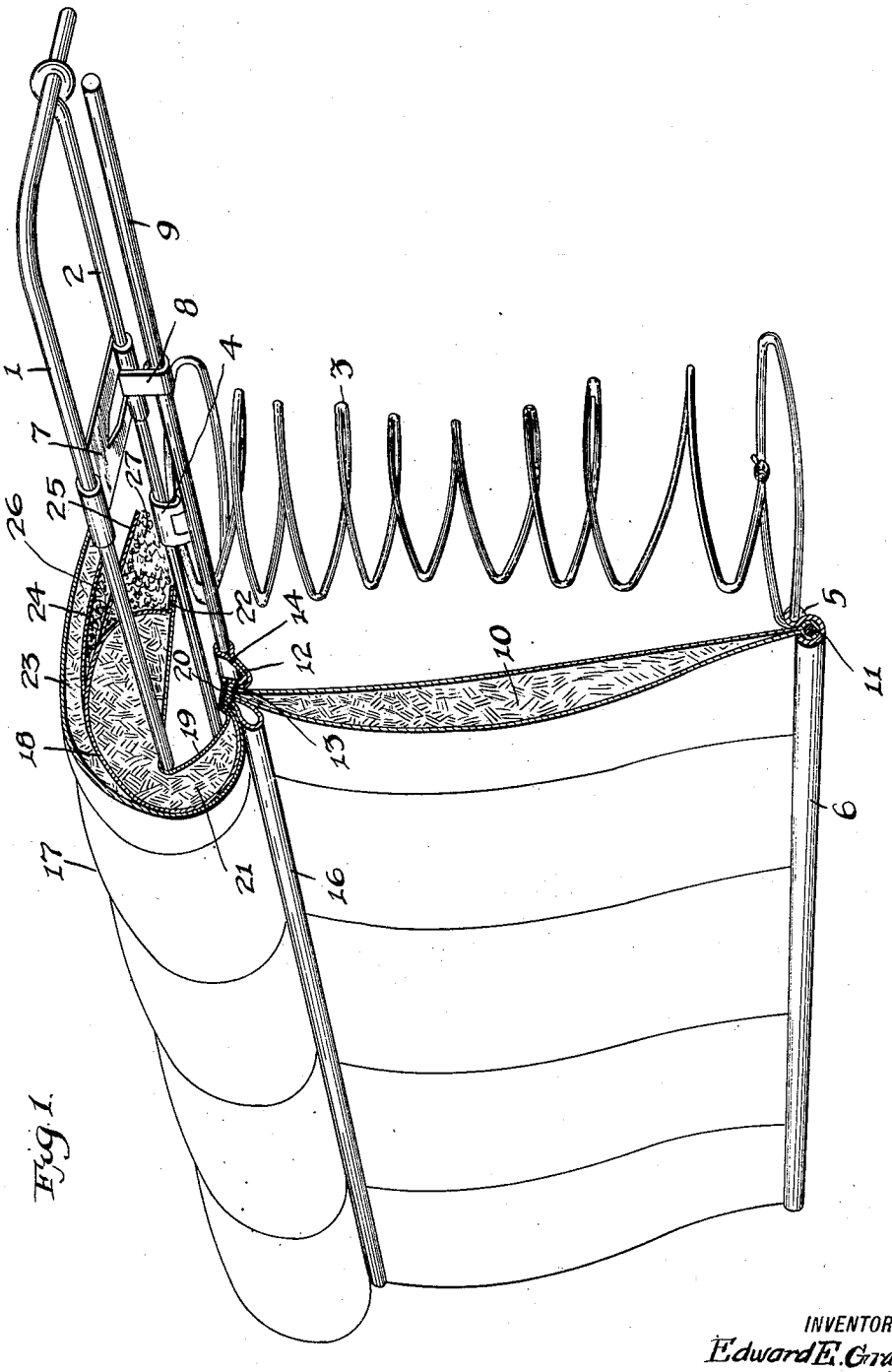


Fig 1.

INVENTOR.
Edward E. Graff
BY
Stewart & Perry
his ATTORNEYS

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2 SHEETS—SHEET 2.

Fig 2.

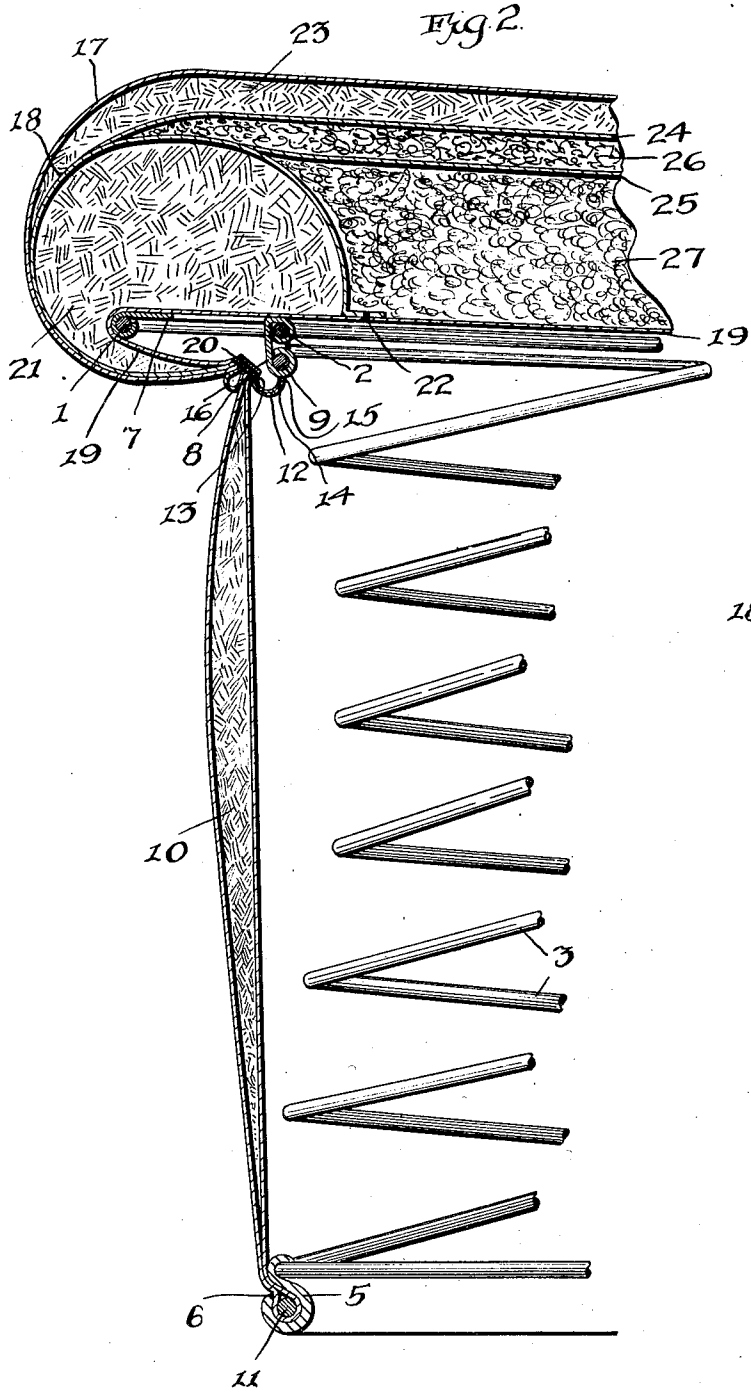
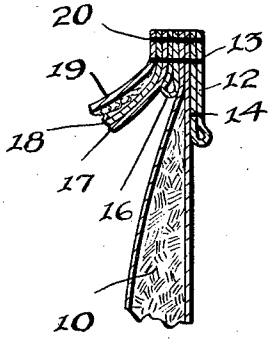


Fig 3.



INVENTOR

Edward E. Graff.

BY

Stuart & Perry

his ATTORNEYS

UNITED STATES PATENT OFFICE.

EDWIN E. GRAFF, OF SOUTH BEND, INDIANA, ASSIGNOR TO THE STUDEBAKER CORPORATION, A CORPORATION OF NEW JERSEY.

VEHICLE-SEAT.

1,307,666. Specification of Letters Patent. Patented June 24, 1919.

Application filed April 17, 1918. Serial No. 229,043.

To all whom it may concern:

Be it known that I, EDWIN E. GRAFF, a citizen of the United States of America, and resident of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Vehicle-Seats, of which the following is a specification.

This invention relates to seats for vehicles and, particularly, to spring seats or cushions for automobiles and similar vehicles.

Among the objects of my invention may be noted the following: to provide means by which a very prominent front roll may be given to the cushions or seats of vehicles; to provide means by which the prominent front roll given to cushions or seats may be made durable and given substantial permanence; to provide means by which cushions with a prominent front roll may be made and formed independently of the frame structure and applied to the latter with great facility; to provide a structure wherein the front wall, piping, front cushion roll, and other structural members of the cushion may be simultaneously stitched together and then applied to the frame and springs with a minimum number of operations; to provide means by which the bottom of the front roll and top of the front wall of the cushion or seat may be connected to, and sustained by, the more rigid portion of the frame structure; and to provide simple and effective structural means by which to accomplish, economically, the foregoing objects.

With the above objects in view and others which will be detailed during the course of this description, my invention consists in the parts, features, elements and combinations thereof hereinafter described and claimed.

In order that my invention may be clearly understood, I have provided drawings wherein:

Figure 1 is a perspective view, partly in section, showing details of construction;

Fig. 2 is a sectional elevation showing the position of the front wall and roll of the seat cushion; and

Fig. 3 is a detail of the front wall and cushion members, including piping, covering and attaching means disposed so as to show the manner in which the several members may be connected together as a preliminary to attaching the same to the seat-frame.

Referring to the drawings, the numerals 1 and 2 indicate usual wires of a standard frame for cushion seats for automobiles, 3 indicating one of the several banks of springs employed to resiliently support the seat, said springs being clipped at 4, in usual manner, to the wire 2, and at 5 to the bottom 6 of the front wall of the cushion. A clip 7 is clamped at one end around the wire 1, and, at its opposite end, around the wire 2, and has a depending member 8 adapted to be clamped about the anchoring or retaining wire 9, it being understood that, in the seat construction, a plurality of clips 7,—usually five,—are properly spaced apart along the length of the frame. The wire 9 has no other connection to the seat-frame structure, although its ends may be anchored, if desired.

The cushion or seat proper and the front wall thereof are made up of several pieces of material or fabric constructed or formed and primarily connected together substantially as shown in Fig. 3; that is to say, the material constituting the front wall is doubled or folded so as to produce a pocket 10 for the filling and provide an edge or piping in which a wire 11 or other stiffening may be inserted, and to which the bottom of the springs 3 is connected. At the free upper edges of the said front wall strip, a narrow folded strip 12 is applied, forming a loop for the reception of the wire 9, the connection being made by several lines of stitching, such as 13 and 20, Fig. 3. The wire may be confined in a pocket of the loop, if desired, formed by a line of stitching 14.

The loop 12 is provided with a plurality of slits or openings 15, through which the depending clip members 8 are inserted before being clamped around the wire 9. Another short folded strip 16 is provided as a piping, beading or finish at the junction of the seat cushion with the front wall, the free edges of which are arranged at the outside of the wall strip at the free edges thereof. The seat cushions and front roll are made from pieces 17, 18, 19 constituting the covering, lining or cushion pocket members and the usual burlap strip or strips extending over the frame and springs, the cotton, hair or other filling being inserted in usual manner. The several pieces 17, 18, 19, the pip-

ing 16, pocket 10 and loop 12, are superposed and placed with their edges all pointing in the same direction, Fig. 3, and then simultaneously stitched together by lines of stitching 13 and 20. This is important, since the bulky seat materials cannot be passed under the machine arm, and the cushions and other members are made independently of the frame and applied thereto after completion. As shown in Figs. 1 and 2, the front roll 21 of the cushion is made very prominent and drawn far forward so as to extend around the front wire 1 of the seat-frame, said cushion being formed by the lining or inner member 18, and the burlap or other inner member 19, the lining 18 being secured to the member 19, as at 22, so as to form a very large pocket for the filling. The prominence of the roll 21 is increased by inserting filling 23 between the cover 17 and the member 18, to which latter a plurality of strips 24, 25 may be secured to form additional pockets for different kinds of filling 23, 26, 27, which may be found desirable. The cushions are now ready to be placed upon and secured to the seat-frame. To that end, the wire 9 is now slipped into the pocket of the loop 12, and the clips 5 are applied to the bottom of the front wall and bottom coils of the front springs. The ends of the extension members 8 are then pushed through the slits or openings 15 in the loop 12, and twisted about wires 9, after which the cushion members are turned over upon the seat-frame and secured upon the latter in the usual manner.

From the foregoing it will be seen that I have provided a cushion seat, the front wall of which is substantially vertical, while the front roll is quite prominent. Such prominence is maintained, under all conditions of use, by anchoring the junction-loop 12 to the auxiliary wire 9, instead of to some part of the seat-frame; and the disposition of the auxiliary wire, adjacent the wire 2, remote from the front of the seat-frame, not only provides a convenient means for attachment of the loop, but enables the junction-seam to be drawn well under the seat-frame and cushion, thus also drawing the front cushion well forward and around the front frame-wire. By this means I can also give any predetermined forward thrust to the front cushion and regulate the prominence of the front wall, since the width of the loop 12 can be varied as described. Furthermore, the piping 16, forming the finish and protection for the seam at the junction of the front-roll with the front-wall of the cushion, is back under the seat where it receives little or no wear and abrasion, thus retaining its good appearance throughout the life of the cushions. It will also be seen that, by providing the supporting wire auxiliary to the seat-frame, as a means of attachment for the front-wall, the latter is anchored and held quite firmly in place and retained substantially in its normal position during the use of the seat. By attaching the loop to the front-wall at 13, below the line of the main seam 20, considerable strain upon the latter is avoided in the use of the seat. The wire and loop, as an anchoring means, are important, since, under pressure upon the cushions, the loop will give to some extent, and, according to its width, will operate more or less to sustain the upper edge of the front wall and prevent the same from being forced outwardly. The auxiliary wire and holding loop also constitute a means which help to retain the good form of the prominent front-roll of the cushion, since the latter is drawn well around and under the front of the seat-frame, but cannot be unduly forced downwardly. This prevents wear and abrasion upon the materials of the seat and undue stress upon the front wire of the frame. In fact, the said front wire is very greatly relieved from bending strain, thus enabling the seat to maintain its shape and form much longer than is possible with prior structures known to me. Another important feature of my invention resides in combining the several cushion members and parts independently of the seat-frame; that is to say, by assembling the cushions and other members thereof and stitching them together as described, I am able to machine-stitch the same as a preliminary to attaching them to the seat-frame, it being impossible to machine-stitch the members together when assembled upon the frame. This saves a great deal of expense, since time is saved, laborious handling of heavy parts is avoided, and assembling is greatly facilitated.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A frame for cushion seats comprising the usual shape-giving and cushion-supporting wires or bars, in combination with an auxiliary wire rigidly suspended from the said frame remote from the front edge thereof.

2. A frame for cushion seats comprising the usual shape-giving and cushion-supporting wires or bars, in combination with an auxiliary anchoring wire, and means for connecting the same to the frame below the latter and remote from its front edge, said means comprising a clip rigidly connected at two points to the frame, and having a member rigidly connected to the auxiliary wire.

3. In combination with a seat-frame and the cushion members thereof, an anchoring means for the front of the cushion members comprising a wire suspended from the frame and a loop connected thereto and to the cushion members.

4. A seat for vehicles comprising a cushion member, a front wall member, a piping between the two at the junction of the one with the other, a sustaining loop adapted in use to extend at an angle to the wall member, and usual linings, all joined together by a single line of stitching along the superposed edges thereof.

5. A seat for vehicles comprising a frame embodying the usual shape-giving bars and an auxiliary bar suspended from the frame remote from the front of the latter; in combination with a cushion seat member, secured to the frame bars, a front wall member joined to the seat member a considerable distance from the front of the latter and well under the same; the seat member being extended outwardly from the wall member upwardly and backwardly around the front of the frame so as to form a prominent, circular, front cushion roll for the seat member; and means for anchoring the two cushion members to the auxiliary bar.

6. In combination with a seat frame having an auxiliary bar suspended therefrom remote from its front edge; a plurality of cushion members, one of which is in the form of a prominent front roll, a portion of which extends backwardly under the cushion toward the auxiliary bar; and means for connecting said members to the frame, including a device connected to the auxiliary bar and to said backwardly extending cushion portion, for holding the front roll cushion member closely bent about the front of the frame.

7. In combination with a seat frame having an auxiliary bar suspended therefrom remote from its front edge; a plurality of cushion members, including a front wall member; and means for connecting said members to the frame including a device connected to said auxiliary bar and to the cushion members, for sustaining the front wall cushion member in a substantially vertical position with its front edge well under the said frame.

8. In combination with a seat frame having an auxiliary bar suspended therefrom remote from its front edge; a plurality of cushion members comprising a seat cushion and a front wall cushion, the junction between the two being located well back under the frame toward the rear of the latter and remote from the front edge of the frame; and means for securing the cushion members at their junction to the auxiliary bar.

9. In combination with the frame of a vehicle seat having an auxiliary bar suspended therefrom remote from its front edge; a cushion seat comprising a front wall cushion member and a seat cushion member, the cushion of the latter being extended well forward around the front edge of the frame and backwardly toward the rear of the latter and connected to the wall member under the frame; and means for securing the cushion members at their point of connection to the auxiliary bar.

10. A vehicle seat comprising a supporting frame, a seat member and a front wall member, the seat and wall members secured together, a supporting member dependent from said frame parallel with the front part of said frame and to the rear thereof with supporting means interposed between said supporting member and the point of union between said wall and seat members.

11. A vehicle seat comprising a frame, with a front bar and rear supporting means, a seat and a front wall said seat and wall united at the top of the wall and the front edge of the seat and means interposed between said frame at a point to the rear of said front bar, and the point of union between said wall and seat to support said wall in a substantially vertical position to the rear of said front bar, and to confine the front edge of said seat beneath and behind said front bar.

12. A vehicle seat comprising a frame with a front bar and rear connections, a bar parallel with said front bar and means to support said bar dependently from said frame at a point to the rear of said front bar, a front wall and seat cushion, the top of the wall and the front edge of the seat cushion secured together and means interposed between said dependent bar and the point of union between said wall and seat cushion to support the wall and seat at such point of union to the rear of said front bar substantially as described.

Signed by me, at South Bend, Indiana, U. S. A., this 13th day of April, 1918.

EDWIN E. GRAFF.

Witnesses:
JOHN F. COTTER,
ALMA RHEAD.