

L. A. YOUNG.
UPHOLSTERY SPRING CONSTRUCTION.
APPLICATION FILED SEPT. 25, 1919.

1,329,068.

Patented Jan. 27, 1920.
4 SHEETS—SHEET 1.

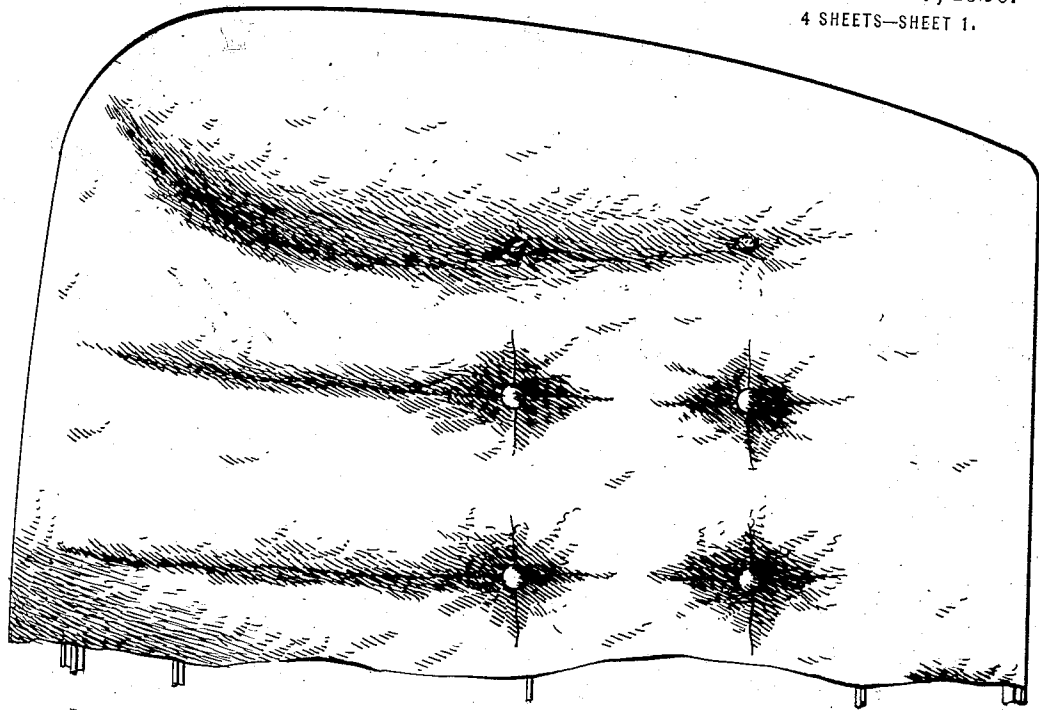
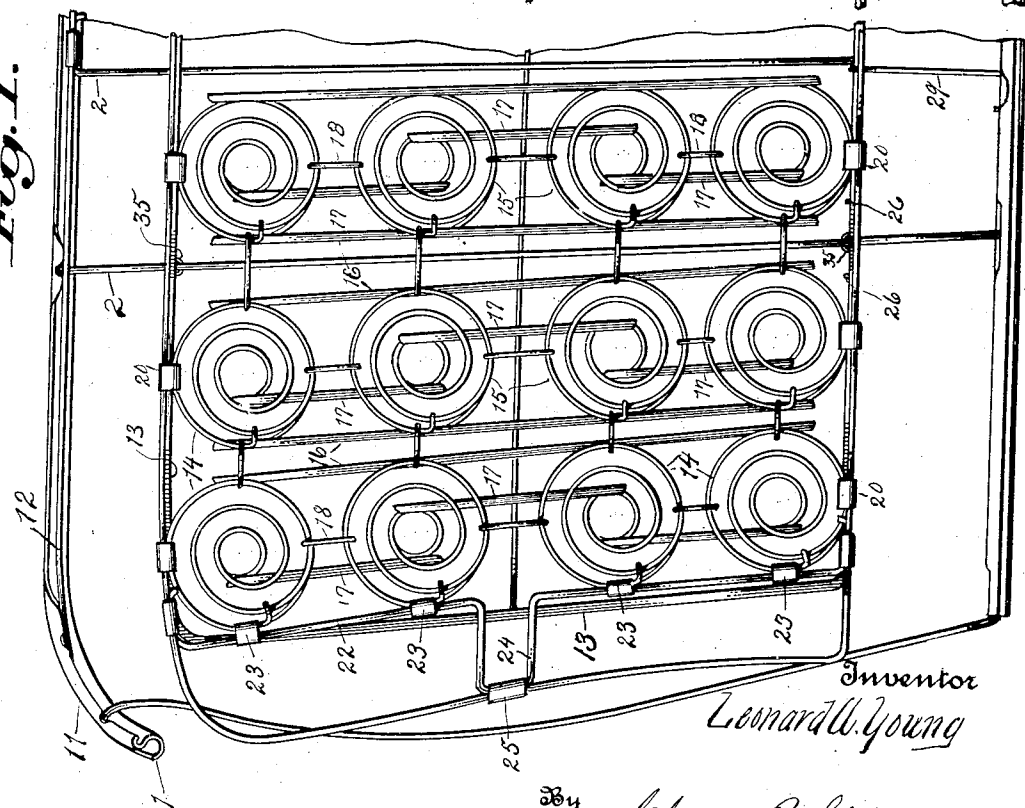


Fig. 1.



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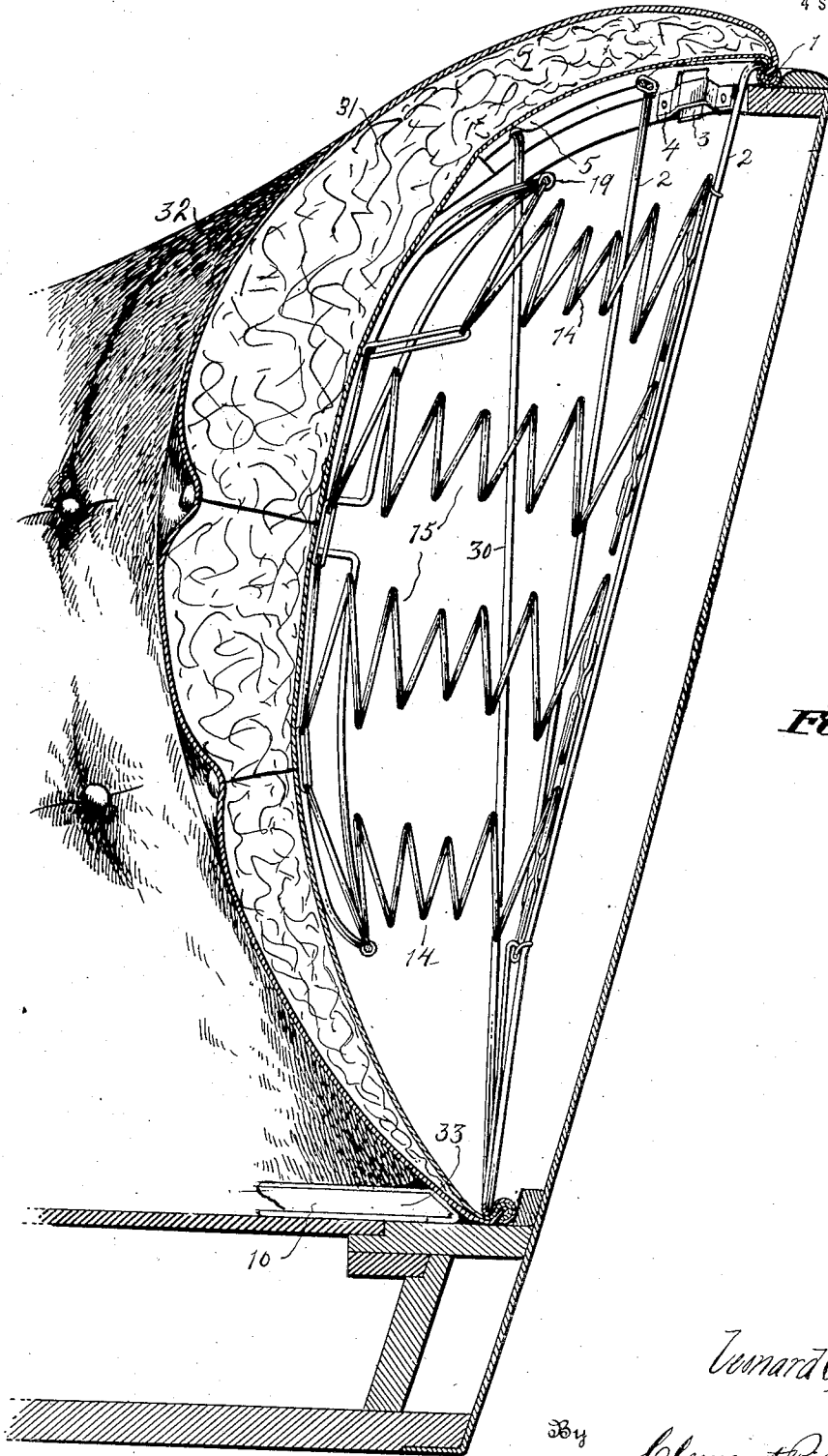


Fig. 2.

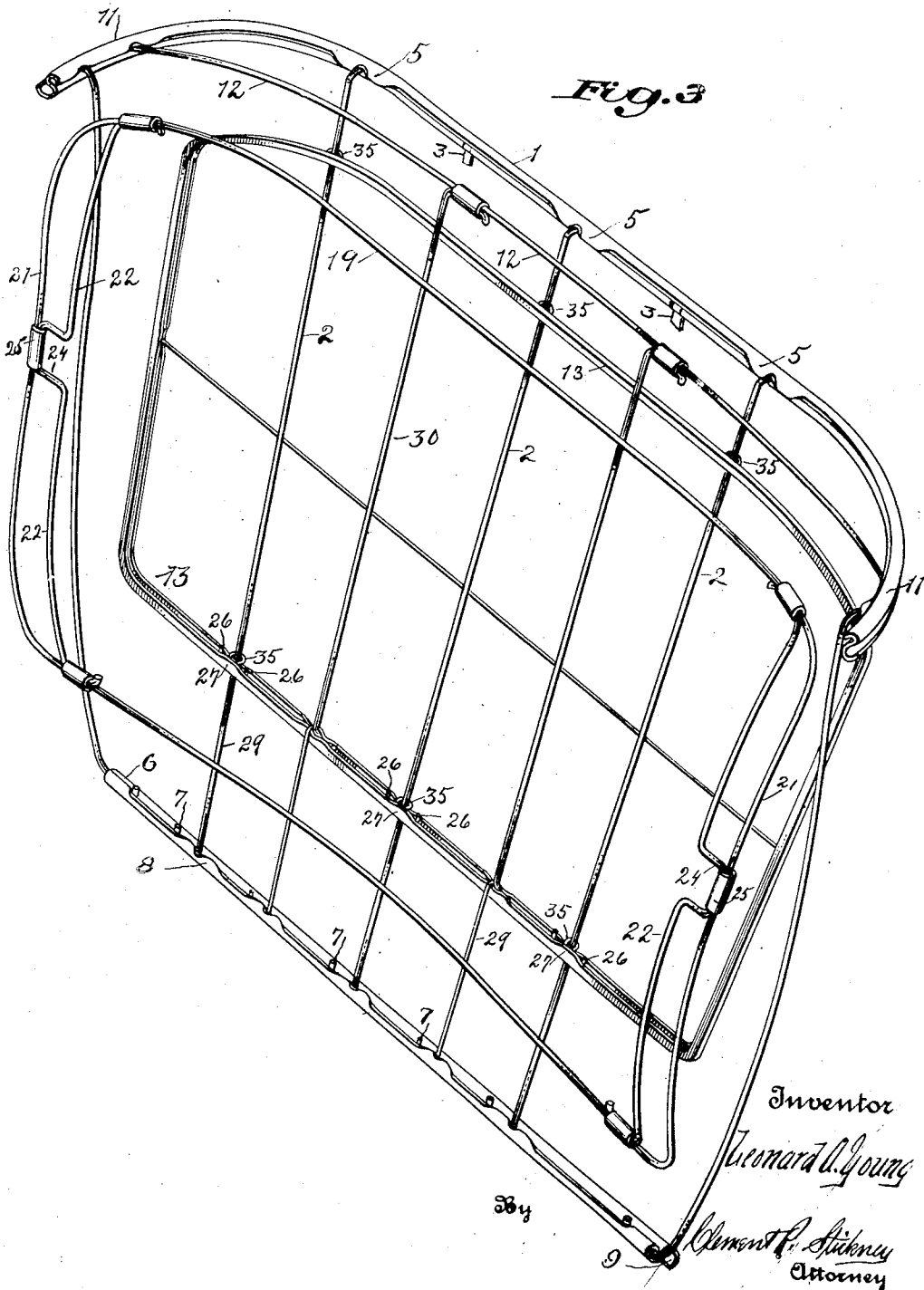
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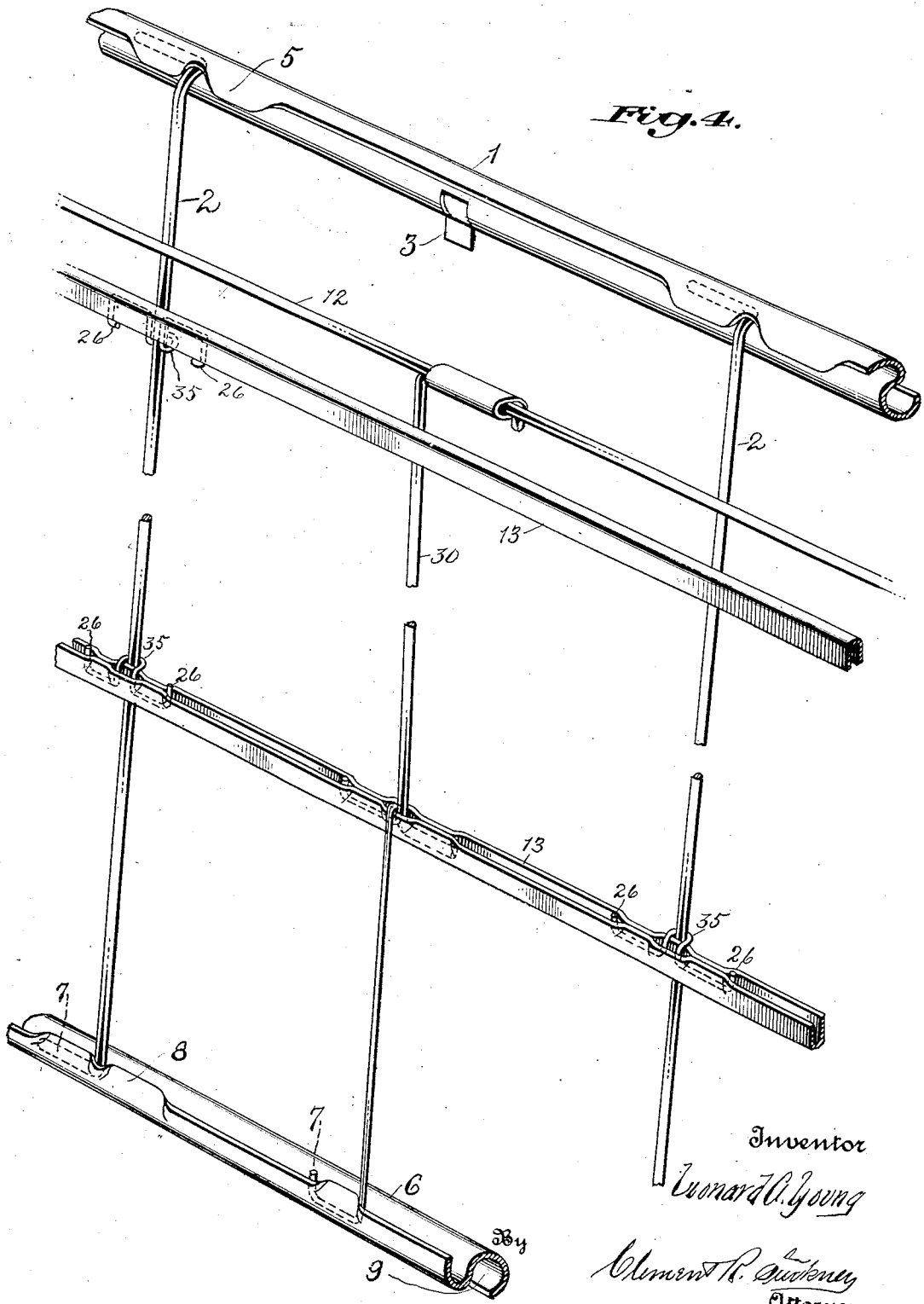


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4 SHEETS—SHEET 4.

FIG. 4.



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UPHOLSTERY-SPRING CONSTRUCTION.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LEONARD A. YOUNG, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Upholstery-Spring Constructions, of which the following is a specification.

In the appliance of cushion backs to vehicles or the like, it is desirable that the structure be so arranged that the upholstery trimmer can quickly and easily place the same in the vehicle body or furniture frame after the structure itself has been assembled and completed so as to form a unit.

It is further desirable that the component parts of the structure be arranged so that the body springs with their connecting and supporting parts may be assembled in a unit separate from the base which must conform to the particular shapes of the seat back frame or tonneau for which it is designed. That is, the supporting base of the spring back of a vehicle tonneau for example, must conform to the particular design of that particular vehicle while the body spring unit need not, and can be made up in quantities for application to any one of a number of bases that are themselves usable only each for its particular place.

This invention relates to back spring structures and to an arrangement thereof whereby a base is provided that is applied readily and quickly to the particular support for which it is intended while the body springs form unitary structures that are made in stock and are applicable each to any one of a number of bases that are individual in dimensions and form, the base and body spring structure with the applied upholstery when united being adapted to be detachably mounted in a tonneau or the like.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings:—

Figure 1 is a view in front elevation, partially broken away to give clear view, of a base and back spring unit assembled in a structure that embodies features of the invention;

Fig. 2 is a view in transverse section there-through;

Fig. 3 is a view in perspective of the base and of the rim and frame of the body, the springs of the structure being omitted; and

Fig. 4 is a view in detail of a preferred means for securing certain of the parts together.

Referring to the drawings, one preferred form of base includes an upper strip 1 that is of substantially S-section or that at least is provided with a longitudinal inner groove and a longitudinal outer channel the first for the reception of the end portions of the transverse members 2 of the base and the latter for the retention of the marginal portion of an applied upholstery cover.

Retention of the end portions of the bars 2 is obtained by squeezing the upper flange 5 of the strip 1 upon the inserted bent end parts of the bars. A bottom strip 6 is preferably of the same S-section as the strip 1, at least in so far as it provides an inner groove for the reception and the retention of the lower end portions 7 of the members 2 by bending over and clamping down the flange 8, and an outer groove indicated at 9 for the upholstery cover margin, completes the base. The upper member 1 is bent or curved to conform to the supporting rail or part of the tonneau to which it is applied while the lower strip 6 is likewise designed to seat upon the frame of the tonneau and be retained there as by a ledge member of suitable angle section indicated at 10. Where the end portions or arms of the strip 1 are curved as shown at 11, a brace bar 12 spans the interval between them and acts as a support to the upper edge portion of applied upholstery.

What may be termed a back spring unit is applied to this base which latter, as clearly indicated, may be made to conform to any one of various types and designs of seat back frames or tonneaus. This back spring unit consists of a base rim frame 13, preferably of channel section members, to which marginal body springs 14 of the usual upright spiral type, either conical or hour glass are secured by inserting the base turns in the channel of the strip and the clenching of the channels down upon the turns. Intermediate body springs 15 are connected to and supported on the base frame by suitable means as for example by U-strips 16 in which the base turns of the marginal springs 14 are secured. Other stay members 17 and clips 18 prevent local side motion of the springs.

An upper rim frame 19 connects the top turns of the body springs to which it is se-

cured as by clips 20. If the rim frame extends beyond the body springs, so that the end rail 21 thereof lies at considerable distance from them, an intermediate bar 22 may be applied, the latter being secured by clips 23 to the springs and have an off-set portion 24 that is connected as by a clip 25 to the end rail 21.

The back spring unit rests upon the members 2 of the base holding members 35 uniting the parts. In preferred construction, the holding member 35 is a clip having a central loop with out-turned angle arms 26 that lie in the channel of the strip 13 and are firmly locked by compression of the flanges as at 27 between the sides of the loop and out-turned end portions 28 of such arms. As a further means of preventing motion between the base and the body unit, anchor strips 29 connect the frame 13 with the lower base rail 6, the end portions of the angle strips being clenched between the flanges of the members to which they are secured. As a further means to stay the structure, transverse braces 30 connect the bar 12 with the farther side of the frame 13.

The usual filling 31 and cover fabric 32 is placed on the assembled structure and the marginal portions of the cover are held in the grooves of the S-strips 1 and 6.

Suitable provision is made for securing the assembled structure to the supporting frame of the tonneau. This may take the form of depending lips 3 struck from the body of the strip 1 and adapted to slip into or behind suitably designed socket plates 4 that may be screwed, nailed or otherwise fastened to the upper part of the tonneau, while the retaining flanged bar 10 or the like acts as a retaining ledge behind which the lower margin of the structure is placed.

One feature of the construction is the adaptability of the same to quantity production where the back is being applied to tonneaus, base frames are made up each conforming to a particular tonneau. The body spring units are standardized, within limits, to the general dimensions of the base and can be used interchangeably with any of these bases. As a consequence, back springs may be made up in stock quantity and be used with several different sizes or forms of bases, each form for a particular type of tonneau. The assembled structures, fully trimmed, are readily slipped into position in the tonneaus and as readily removed for cleansing and the like. When the body units are placed each upon a base, upholstery is quickly applied to the assembled structure in the shop and the latter is readily and easily shipped to any place desired and anchored in position in the tonneau without further trouble on the part of the person fitting out the vehicle.

Obviously, changes of the details in con-

struction may be had without departing from the spirit of my invention and I do not care to limit myself to any particular form or arrangement of parts.

What I claim is:—

1. A seat back comprising a main frame conformed to a supporting back and provided with means along its margins for retaining upholstery covering, and a back spring unit structure mounted on the main frame and provided with upholstery, the cover of which is secured to the retaining means of the main frame.

2. A seat back comprising a main frame having upper and lower marginal members connected by transverse members and adapted to be mounted on a supporting body to which it conforms, a back spring structure forming a body unit mounted on the main frame, upholstery on the coverings of the structure having the margins thereof secured to the marginal members of the main frame.

3. A seat back comprising a main frame provided with an upper channel member and a lower channel member conforming to the support on which the back is to be placed and connected by transverse members, and a back spring structure adapted to be mounted on the transverse members and provided with upholstery, the covering of which is secured to the channel members of the main frame.

4. A seat back comprising sheet metal upper and lower members held by transverse members in spaced relation and transversely bent to retain the transverse members and to provide channels for receiving upholstery covering and a back spring structure adapted to be mounted on the main frame and provided with an upholstery covering, the margins of which are secured in the sheet metal members of the back frame.

5. A seat back comprising a main frame having marginal channeled members of sheet metal, and transverse members holding the former in spaced relation by engagement in the channels thereof and a back spring structure, the body springs of which are connected to form a unit independent of the back frame on the members of which the structure, as a whole, is mounted together with applied upholstery, the covering of which is in engagement along its margins in the channel members of the back frame.

6. The combination of a vehicle tonneau with a back frame having upper and lower members conforming to the interior face of the tonneau back on which they are supported and transverse members secured to the other members in spaced relation, a back spring structure forming a unit applied to the back frame independently of the tonneau back and upholstery applied on the

back spring structure including a covering, the margins of which are secured to the marginal portions of the main back frame.

7. The combination of a vehicle tonneau with a back frame having longitudinal members, curved to conform to the interior of the tonneau back against which they are secured and held in spaced relation by transverse members, a marginal stiffening member between the end portions of the upper longitudinal member, back body springs united in a unitary structure and mounted on the main back frame and applied upholstery on the back springs including a covering, the margins of which are secured to the longitudinal members of the back frame.

8. A seat back for vehicles comprising a main frame having upper and lower longitudinal members curved to conform to the tonneau back of the vehicle on which they are adapted to be secured and provided with upholstery covering receiving channels, transverse members connecting the longitudinal members, an upper marginal stiffening member connected to end portions of the upper longitudinal member, a back unit structure, the body of which is mounted as a whole on the back frame, and upholstery including a covering, the marginal portions of which are secured in the channels of the longitudinal back frame members.

9. A seat back for vehicles comprising a main frame having a double channeled upper longitudinal member and a double chan-

neled lower longitudinal member, respectively conforming to the back of a vehicle on which they are adapted to be secured, transverse main frame members; the end portions of which are secured in corresponding channels of the upper and lower frame members, a back spring structure mounted as a unit on the transverse members of the back frame, an upper marginal stay member connected to end portions of the upper longitudinal main frame member, upholstery applied against the face of the back spring structure and overlying the stay member, and covering for the upholstery, the marginal portions of which are engaged in other channels of the longitudinal frame member.

10. In a seat back structure, a main frame consisting of an upper S-section channel strip, a lower S-section channel strip, transverse members, the end portions of which are secured in the corresponding grooves of the S-strips, a back spring structure consisting of body springs and inter-connecting members forming a unitary structure bodily mounted on the back frame, a stay member secured at the end portions in a groove of the upper S-strip and in a groove of a strip of the back spring structure, upholstery mounted on the body springs and overlying the stay member and a covering for the upholstery, the margins of which are secured in the grooves of the S-strips.

In testimony whereof I affix my signature.

LEONARD A. YOUNG.