

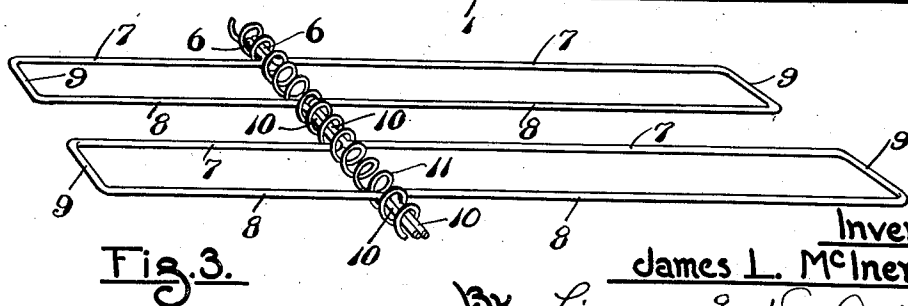
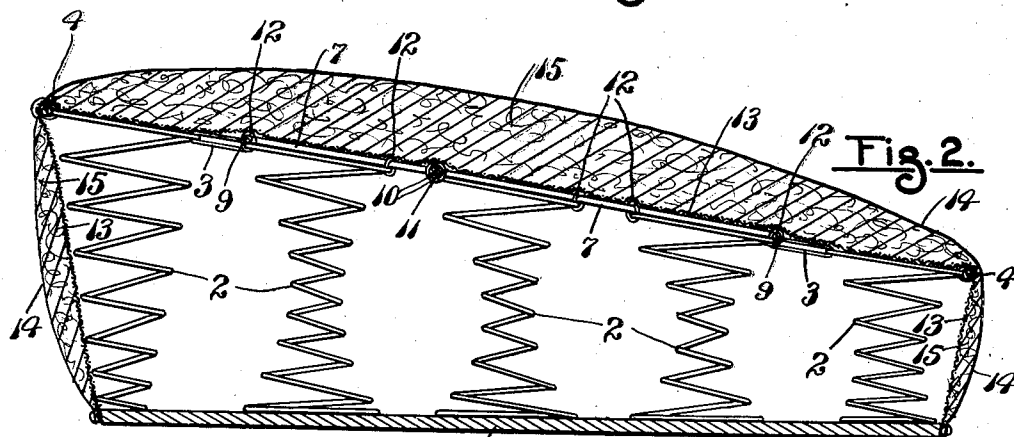
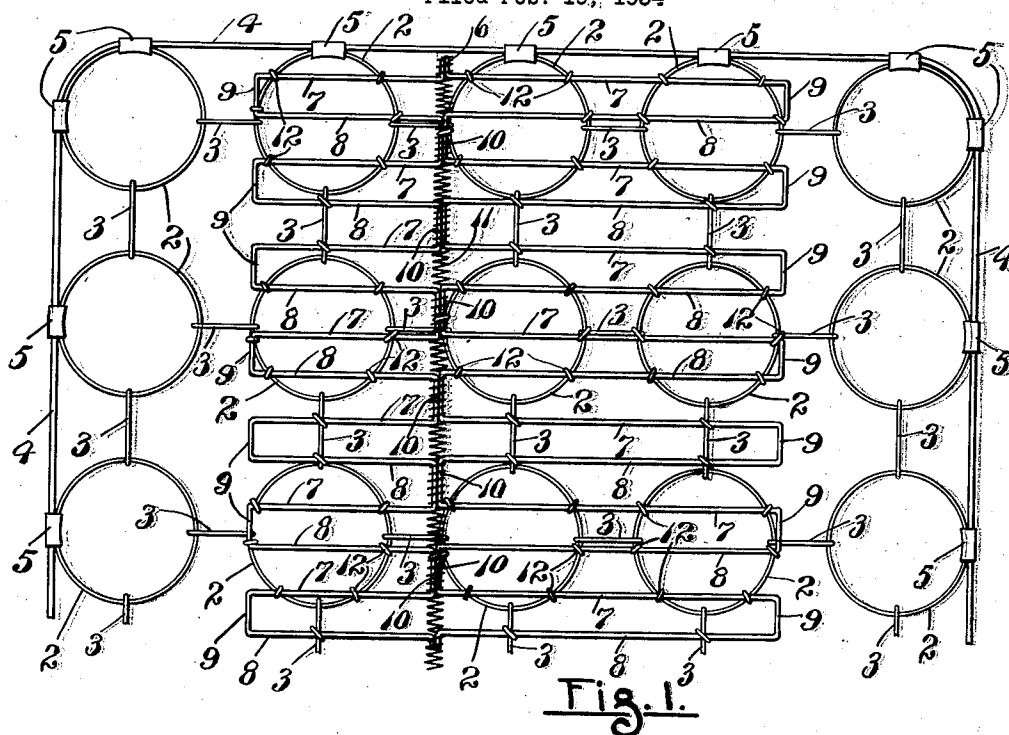
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AUXILIARY CONSTRUCTION FOR SEATS, MATTRESSES AND THE LIKE

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AUXILIARY CONSTRUCTION FOR SEATS,
MATTRESSES, AND THE LIKE

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3 Claims. (Cl. 155-179)

This invention relates to a seat construction and particularly to a seat spring construction adapted for use in automobile seats or seats of a similar character.

In seats of such character, particularly in automobiles, the weight of the persons sitting on the seat is ordinarily applied substantially in restricted areas of the seat, and at points between the front and back edges of the seat. The upper covering of the spring structure in the seat has beneath it and between the springs padding of a soft nature which under repeated pressure may be forced downwardly into the openings in the springs, or between adjacent springs, and this will occur even though there may be a fabric layer between the upper side of the spring structure and the padding. Such action eventually results in the formation of a marked depression in the seat and with a forcing of the upholstering padding downwardly partially into the spring structure.

Various means have been resorted to in an attempt to correct this undesirable feature in seats, particularly in automobiles, but those which have been in any degree successful are expensive and in many cases not altogether perfect. It is an object and purpose of the present invention to provide a very simple, novel and economical means for maintaining the upholstery firm and in its original condition without sinking partially into the seat structure so that the seat maintains its form after long and extensive use. The construction for attaining these results, together with others not at this time mentioned, may be understood from the following description, taken in connection with the accompanying drawing, in which,

Fig. 1 is a plan of one end of a spring structure particularly adapted for an automobile seat, having my invention applied thereto.

Fig. 2 is a transverse vertical section through a completed automobile seat having my invention therein, and

Fig. 3 is a fragmentary perspective view of the auxiliary member which is applied directly to the upper side of a spring structure at a point between its front and rear sides underneath the upper upholstery of the seat.

Like reference characters refer to like parts in the different figures of the drawing.

In the construction of a seat, a base 1 of suitable rectangular form is provided above which a spring structure is placed and mounted. The spring structure includes a plurality of vertically positioned coiled springs 2, the upper coils

at least of which are connected by longitudinal ties 3, best shown in Fig. 1. A wire frame 4 surrounds the outer springs at their upper ends and touches the upper coils thereof, being secured thereto by suitable metallic clips 5. In ordinary and usual practice the coiled springs are disposed in a plurality of longitudinal rows, the coils of each row being spaced a short distance apart in the length of the seat and the rows of springs being spaced apart in the width of the seat as fully shown in Fig. 1. In such figure there are five longitudinal rows, and it is over the three intermediate rows that the device of my invention is shown as placed.

The device which I have provided to be placed over and connected to intermediate longitudinal rows of the springs and at the upper ends thereof is formed from wire, preferably in two members. Each of these members, beginning at one end of the wire, is formed with an outturned end portion 6 and then bent into a consecutive series of spaced apart connected loops, each having parallel sides 7 and 8 connected at their outer ends by a cross member 9 and at their inner ends by a cross member 10. The spacing of the wires 7 and 8 from each other is sufficiently narrow that padding or a fabric above which padding is placed is supported by the wires 7 and 8 and does not press downwardly between such wires.

The two members are located together, as shown in Figs. 1 and 3, with the end portions 6 and the connecting portions 10 of the two members in longitudinal contact and with all the parts 6 and 10 in longitudinal alinement. The members are then connected together by screwing a helical coiled wire 11, coiled substantially in the form of an elongated spring, which may be applied, beginning at one side, by a turning motion about the longitudinal axis of the member 11, thereby readily threading over and around all of the parts 6 and 10 and connecting the two members of the structure together. When thus connected each member with respect to the other member has a free turning movement about the longitudinal axis of the helical coil 11.

The auxiliary structure thus described is located above the intermediate longitudinal rows of coiled springs 2 and rests upon the upper end coils thereof and also upon the ties 3 between the upper coils of the springs. In such position a connection of the wires 7, 8, 9 and 10 is made to the upper coils of springs 2 and to ties 3 at some or all points where the same cross the coils

and ties. Such connections are indicated at 12 in Figs. 1 and 2.

In completing the seat a fabric cover 13 may be placed over the spring structure and extend downwardly at the front and back and ends of the seat as shown in Fig. 2, being secured to the base 1. Between the outer fabric cover 14 and the inner fabric 13, (which may be a coarse fabric such as burlap or the like) suitable upholstery padding 15 is placed as shown in Fig. 2. The manner of covering the spring structure and the padding used is in no way novel in the present disclosure and need not be further described.

When a weight such as the weight of a person sitting on the seat is applied, it is ordinarily applied at a part of the central upper portion of the seat. With the structure described, the weight will come upon the auxiliary member described which lies above and is connected to the upper coils of the intermediate longitudinal rows of coiled springs. It is applied ordinarily nearer the front edge of the seat than the rear edge, or approximately along the line of the longitudinal axis of the helical coiled member 11. For this reason the front spring member of the auxiliary construction described has its sides 7 and 8 shorter than the sides 7 and 8 of the rear members, though it is to be understood that the dimensions or lengths of both members may be varied as the particular seat to which the auxiliary construction is applied requires. The application of the weight substantially at the points indicated permits a free pivotal movement of the two wire members with respect to each other, that is, a downward movement of the inner ends where connected by the member 11. At the same time the wire from which the auxiliary member is made is of a flexible resilient character and each of the wires 7 and 8 may bend downwardly under the influence of weight applied as much as may be necessary without carrying the bending effect through to any great extent to either side of the portions of the parts 7 and 8 directly affected by the weight. Furthermore, the wire will return to its original position when the weight is removed.

With such a structure a very practical and economical seat for automobiles or the like is produced. The upholstery does not sink into the open upper ends of the springs 2 or into the spaces surrounded by portions of the upper coils of the springs 2 and the ties 3, but such upholstery is held against downward sinking or working into such spaces by reason of the relatively close positioning of the members 7 and 8 of the auxiliary construction described.

The construction is simple and very readily, easily and economically manufactured and ap-

plied to ordinary coiled spring constructions of seats used in automobiles or the like.

The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. In a seat, a supporting bottom, a spring structure carried on and above said bottom, upholstery over said spring structure, and an auxiliary supporting means for said upholstery located lengthwise of the seat and between its front and back and between the spring structure and said upholstery, said auxiliary supporting means comprising two parts, each formed from a single length of wire bent into a consecutive series of spaced apart loops having sides alternately connected at their ends, said parts being located with the said connections at one end of each immediately adjacent each other, and means pivotally securing said connections together, whereby said parts of said auxiliary supporting means may have pivotal movement with respect to each other about an axis lengthwise of the seat, the pivotal axis of said auxiliary supporting means being located so as to be positioned at that point which is normally below the center of gravity of the person utilizing said seat.

2. A combination of elements as recited in claim 1 in which the pivotal securing means is located closer to the front edge of the seat than to the rear edge for the purpose described.

3. In a seat, a supporting bottom located substantially horizontally, a spring structure carried on and above said bottom, upholstery over said spring structure, and an auxiliary supporting means for said upholstery located lengthwise of the seat and between its front and back and between the spring structure and said upholstery, said auxiliary supporting means comprising two parts, each formed from a single length of wire bent into a consecutive series of spaced apart loops having sides alternately connected at their ends, said parts being located with the said connections at one end of each immediately adjacent each other, one of said parts having its loops materially longer than those of the other part, and means pivotally securing said connections together, whereby said parts of said auxiliary supporting means may have pivotal movement with respect to each other about an axis lengthwise of the seat, the pivotal axis of said auxiliary supporting means being located so as to be positioned at that point which is normally below the center of gravity of the person utilizing said seat, said part having the materially longer loops extending toward the rear of the seat.

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