Jan. 27, 1925. 1,524,037

F. B. KING

SEAT STRUCTURE

Filed June 21, 1919 3 Sheets-Sheet 1

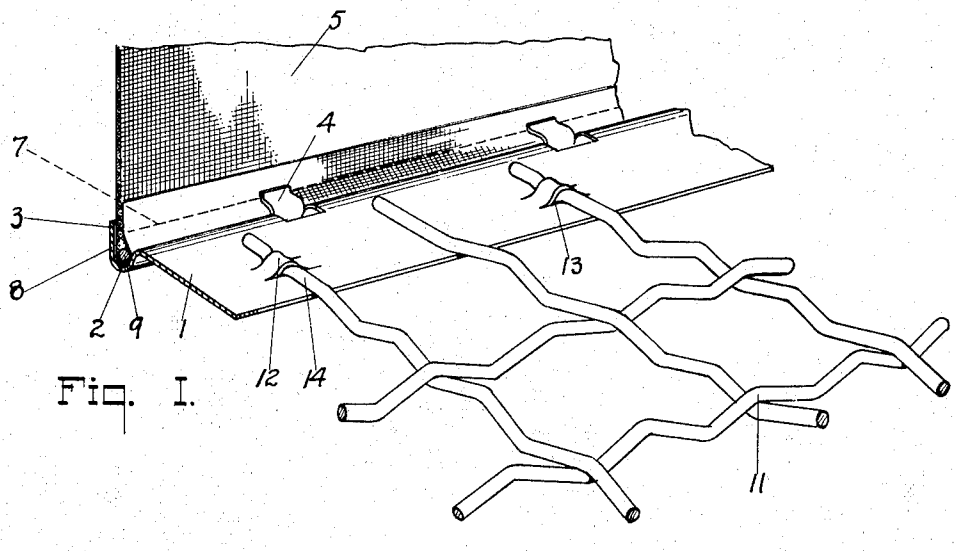


Fig. I.

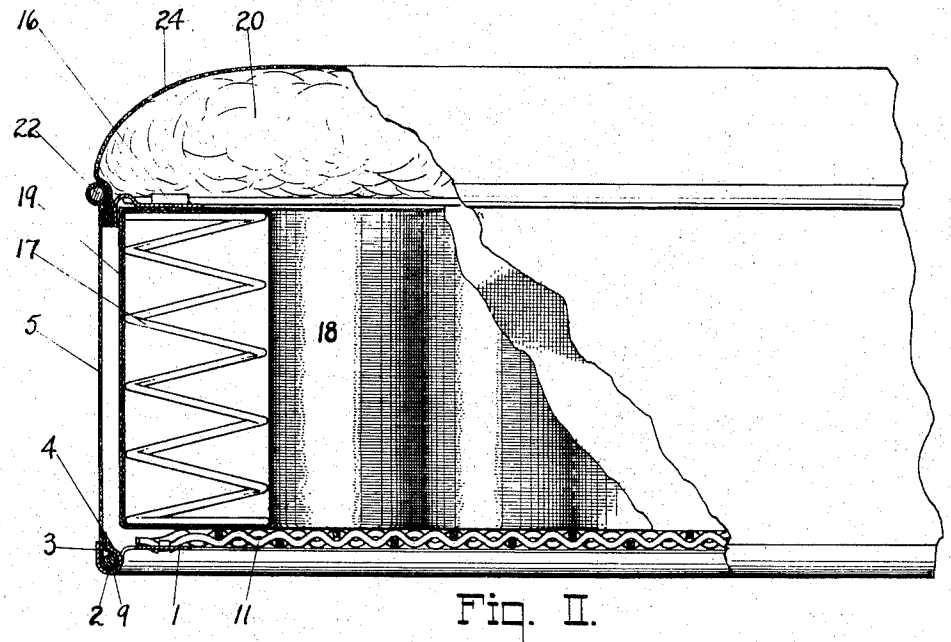


Fig. II.

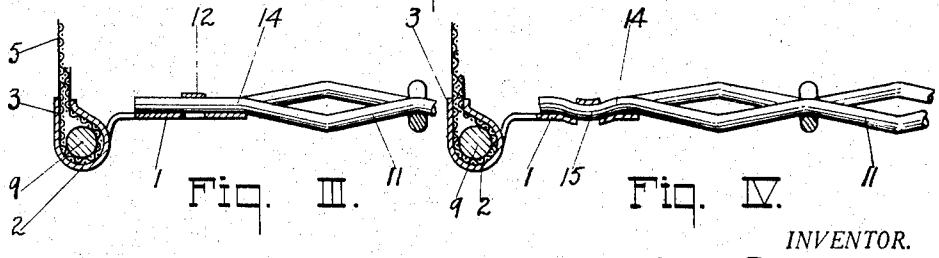


Fig. III. Fig. IV.

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SEAT STRUCTURE

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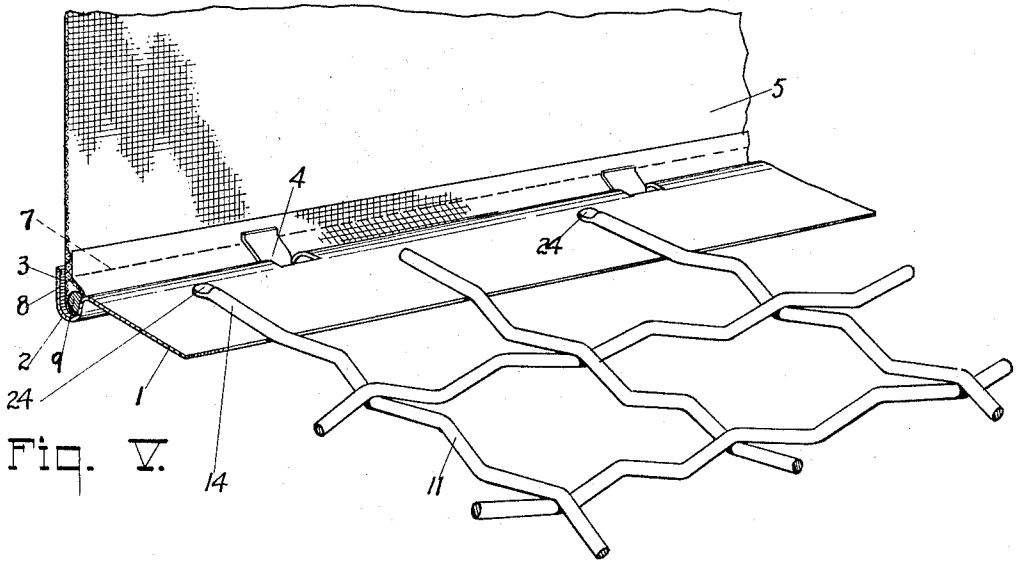


Fig. V.

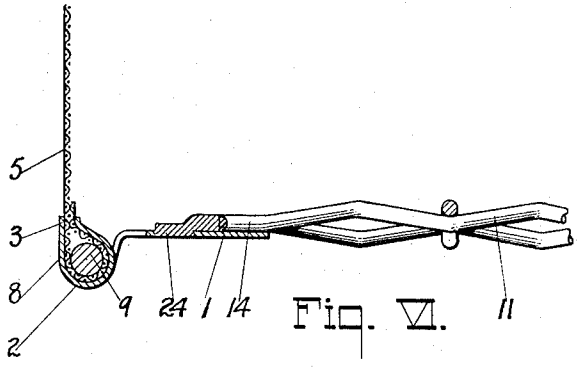


Fig. VI.

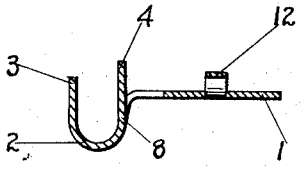


Fig. VII.

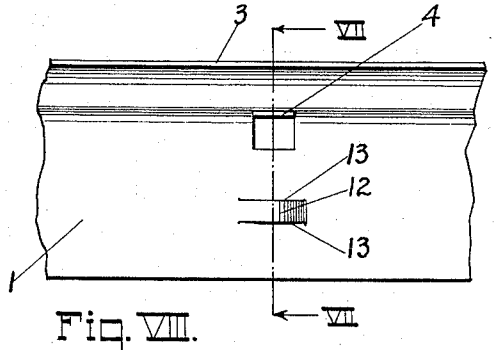


Fig. VIII.

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SEAT STRUCTURE

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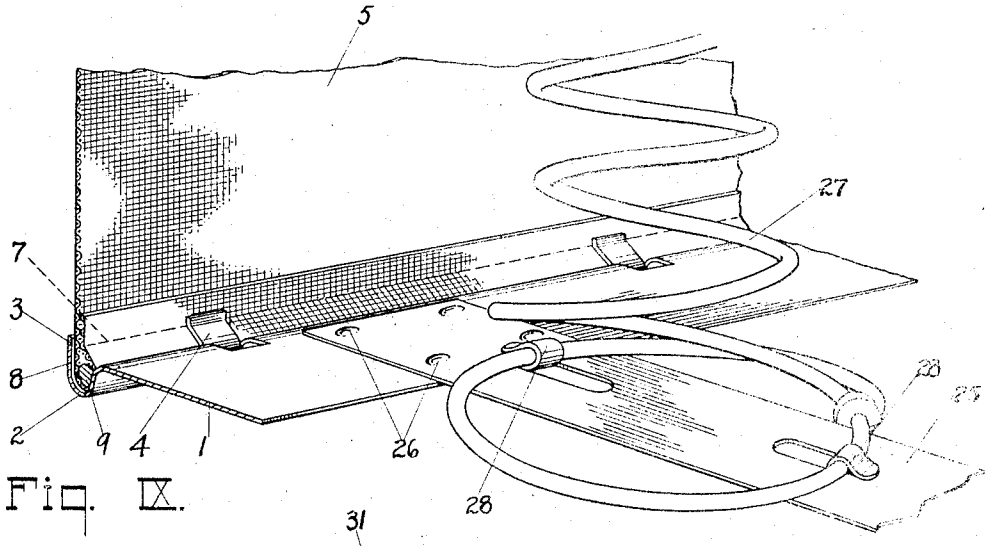


Fig. IX.

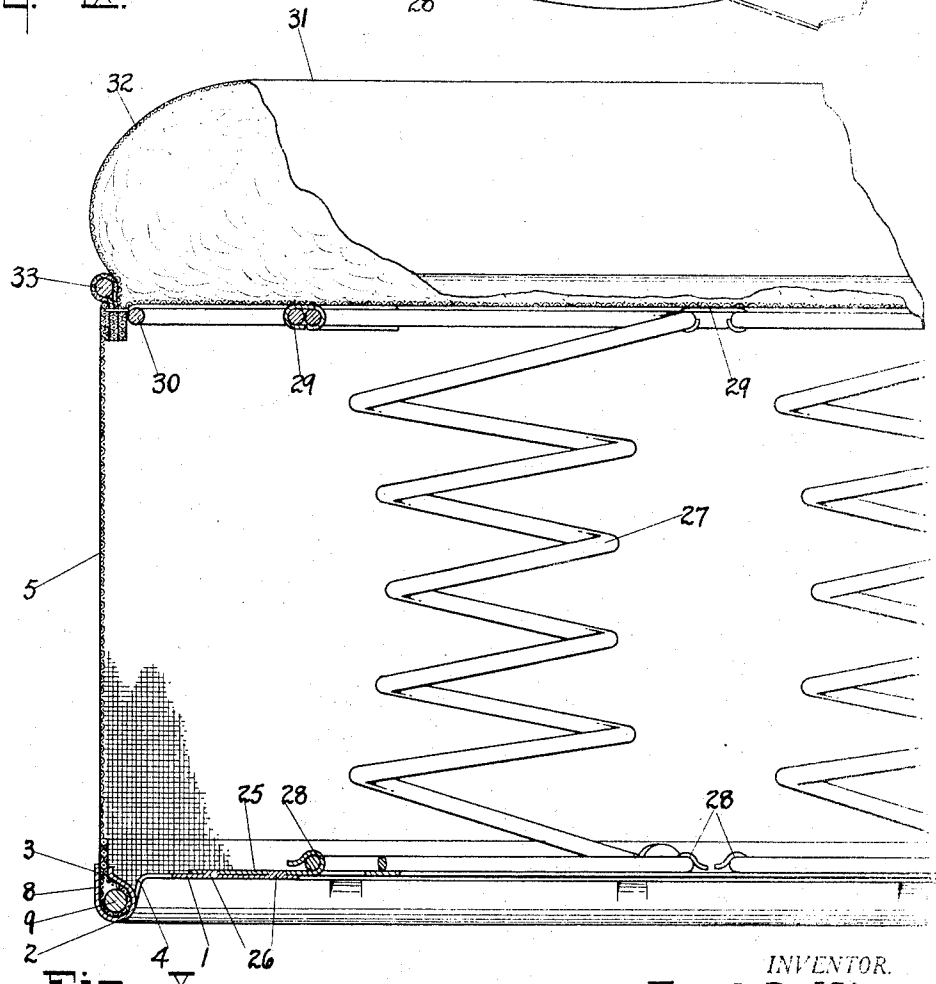


Fig. X.

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Patented Jan. 27, 1925. 1,524,037

UNITED STATES PATENT OFFICE.

FRED B. KING, OF TOLEDO, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE WILLYS-OVERLAND COMPANY, OF TOLEDO, OHIO, A CORPORATION OF OHIO.

SEAT STRUCTURE.

Application filed June 21, 1919. Serial No. 305,892.

To all whom it may concern:

Be it known that I, FRED B. KING, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Seat Structures, of which I declare the following to be a full, clear, and exact description.

This invention relates to seat structures and the method of making the same, being particularly directed to an improved method and means for securing one edge of an apron to the border frame portion of the seat, and means for firmly securing the base portion of the seat to the border frame.

One object of the invention is to provide a new and improved method of attaching one edge portion of an apron to a border frame.

A further object of the invention is to provide new and improved means for securing one edge portion of an apron to the border frame in such a manner as to retain the same in position relatively thereto.

A further object of the invention is to provide an improved means for securing the ends of the wires which form the base portion of the seat to the border frame in such a manner as to produce a rigid structure.

Further objects of the invention relate to economies of manufacture and details of construction as will hereinafter appear from the detailed description to follow.

The objects of the invention are accomplished in one instance by the devices and means described in the following specifications, but it is evident that the same may be varied widely without departing from the scope of the invention as pointed out in the appended claims.

A structure constituting one embodiment of the invention, which may be the preferred, is illustrated in the accompanying drawings forming a part hereof in which:

Fig. I is a detail view, partially in section, illustrating the means employed for retaining the lower edge portion of the apron in position relative to the seat frame, and a new and improved means for securing the ends of the wires forming the base of the border frame.

Fig. II is an elevational view of a seat structure, certain of the parts being broken away in order to better illustrate the relative position of the elements.

Fig. III is a detail view, partially in section, illustrating the form and relative location of the parts when the ends of the wires are first inserted under the loop formed in the border frame.

Fig. IV is a detail view, partially in section, illustrating the position of the parts after the ends of the wires positioned within the loops formed in the border frame are bent to prevent disengagement of the wires from the frame.

Fig. V is a detail view, similar to Fig. I, except that it illustrates a different method of securing the wires forming the base of the seat to the border frame from that illustrated in Fig. I.

Fig. VI is a detail view, partially in section, illustrating the manner of securing the ends of the wires to the frame as shown in Fig. V.

Fig. VII is a detail sectional view, taken along the line VII—VII of Fig. VIII.

Fig. VIII is a detail top plan view of a portion of the border frame.

Fig. IX is a detail perspective view of a portion of the seat structure, illustrating the manner of securing the base portion to the border frame when springs of the hour glass type are to be employed.

Fig. X is a transverse sectional view, further illustrating the structure shown in Fig. IX.

Referring to the drawings, similar reference characters designate corresponding parts throughout the several views, and the sectional view is taken looking in the direction of the small arrows at the ends of the section line.

In the embodiment of the invention illustrated herewith 1 indicates a border frame which may be rectangular in outline, or of any other desired form, depending upon the shape of the seat. The frame 1 is provided with a groove 2 preferably formed near one edge portion thereof and an upstanding flange 3 is provided adjacent one side of the groove 2 and extending upwardly somewhat above the main portion of the border frame 1. Positioned adjacent the opposite side of the groove are a plurality of upwardly extending tongues 4 which are preferably struck up from the base portion of the frame, and which prior to the assemblage of the parts occupy the position illustrated in Fig. VII of the drawings.

An apron 5 of the usual construction ex-

tends downwardly from the seat cover to a point adjacent the border frame, and the fabric of which the apron is constructed is bent back upon itself and is stitched to the main portion of the apron along the line indicated by the reference character 7 in Fig. I, so as to form a pocket 8 in the lower edge of the apron within which is preferably positioned a cord or wire 9 so as to provide a bead upon the lower edge portion of the apron.

The base of the seat is preferably constructed of a wire mesh 11 the opposite end portions of certain of the wires being inserted within loops 12 stuck up from the base portion of the frame after parallel slits 13 have been formed therein. After the ends of the wires 14 have been positioned within the loops 12 they are preferably bent as illustrated at 15 in Fig. IV so as to prevent the ends of the rods from becoming disengaged from the frame. The line of stitching 7 formed in the lower edge of the apron is positioned at such a point as to be below the upper edge of the upstanding flange 3 when the tongues 4 are bent over into contact with the apron, thus preventing a smooth and unbroken outer surface to view.

When the several parts of the seat are assembled in suitable position with respect to each other to make a complete seat, a top border frame 16 similar in shape to the lower border frame 1 is positioned above the border frame 1 and separated therefrom by means of a plurality of springs 17 arranged in pockets 18 suitably spaced from each other, the several springs being surrounded by a casing 19 of suitable construction. Positioned above the top border frame and supported by the several springs is a seat cushion 20 provided with a covering 21 having a bead 22 extending there around, and from which there extends in a downward direction the apron 5 previously described.

Figs. V and VI illustrate a modified form of securing means for attaching the base to the border frame. In the modification illustrated in these figures, certain of the wires 14 of the woven base 11 are spot welded to the frame as indicated at 24 whereby the woven base is firmly secured to the border frame in such a manner as to provide a firm support for the remaining portions of the seat.

The woven base 11 is preferably employed in connection with springs of the type wherein the separate springs are enclosed in a pocket of which the material is stitched together between the springs, thus separating each spring from the adjacent spring and serving to properly retain the several springs in upright position.

The modification illustrated in Figs. IX and X comprises a border frame of the construction previously described, and the means for connecting the same to the lower edge of the apron the same as that illustrated in the other figures of the drawing and previously described. In the structure illustrated in Figs. IX and X, the base comprises a plurality of metal bars 25 the end portions of which are firmly secured to the base frame by being spotwelded thereto as at 26. In this form of the seat structure a plurality of hour-glass springs 27 are employed, each of which has the base portion thereof secured to one of the bars 25 by means of tongues 28 struck up from the bars 25 and bent over the wire forming the spring. The upper end portion of the springs 27 may be connected together in any suitable manner as by means of links 29 while a top border frame of wire 30 may be provided for the purpose of giving form to the seat and serving as a means for assisting in retaining the upper end portions of the springs in proper position relative to each other. A seat cushion 31 provided with a cover 32 is supported directly from the upper ends of the springs, and a bead 33 is preferably provided which extends around the edge of the cover 32 and from which the apron 5 depends as in the form previously described.

It will be understood from the above description that this form of seat construction is adapted to be used in connection with any of the forms of springs ordinarily employed and provides a simple and effective means for firmly securing the lower edge portion of the apron to the base frame in such a manner as to give the seat a neat and finished appearance, while at the same time firmly securing the apron against becoming separated from the border frame. In the means illustrated in Fig. I for securing the base to the border frame by passing certain of the wires through loops formed integral with the frame and bending the wires to retain the same against removal from the loops a simple form of fastening means for the base is provided which permits of the parts being readily and quickly assembled and securely retained in position relative to each other.

While the form of structure herein shown and described is admirably adapted to fulfill the object primarily stated, it is to be understood that various changes in form, proportions, and minor details of construction may be resorted to within the scope of the appended claims and that I do not wish to limit myself to the specific design and construction shown and described, except in so far as I have included certain limitations within the terms of the following claims, in which it is my intention to claim all novelty inherent in my invention broadly as well as specifically.

What I claim as new and desire to secure by Letters Patent is:

1. In a seat structure, a border frame provided with a plurality of loops struck up from the base portion thereof, a base formed of wire mesh, the ends of certain of the wires forming the mesh being positioned in the loops and bent so as to prevent longitudinal movement of the wires relatively to the loops and a cushion connected with said border frame.

2. In a seat structure, a border frame provided with a plurality of loops thereon, and a wire mesh base for supporting a cushion, certain of the free ends of the wires of said base being positioned in said loops and bent to prevent their being withdrawn.

3. In a seat structure, a frame comprising a flat metal plate having an upturned edge with a groove adjacent thereto, lugs struck upwardly from said plate, a plurality of transverse tie members having certain of their free ends secured by bending them beneath said lugs, springs disposed upon said tie members, a cushion upon said springs having a depending apron provided with a bead on its lower edge disposed within said groove, and integral clamping members upon the plate bent into engagement with the apron on the side opposite that engaged by said upturned edge.

4. In a seat having a supporting spring structure and a depending apron, a border frame comprising an inwardly projecting flange portion for carrying said spring structure, an outer portion forming an upturned flange, and an intermediate trough-shaped portion for receiving the edge of said apron and constituting a support for said flanged portions, said inwardly projecting flange being spaced above the bottom of said trough-shaped portion.

5. In a seat having a supporting spring structure and a depending beaded edged apron, a border frame having an inner flange portion for carrying said spring structure, an outer upstanding flange and an intermediate downwardly projecting grooved portion constituting a support for said flanged portions and receiving the beaded edge of said apron, said inner flange portion being spaced above the bottom of said grooved portion, and tongues struck up from said frame to secure said apron thereto.

In testimony whereof, I affix my signature.

FRED B. KING.