Sept. 22, 1925. 1,554,320

M. E. ALLEN

SEAT CUSHION FRAME

Filed Feb. 25, 1924

Fig. 1

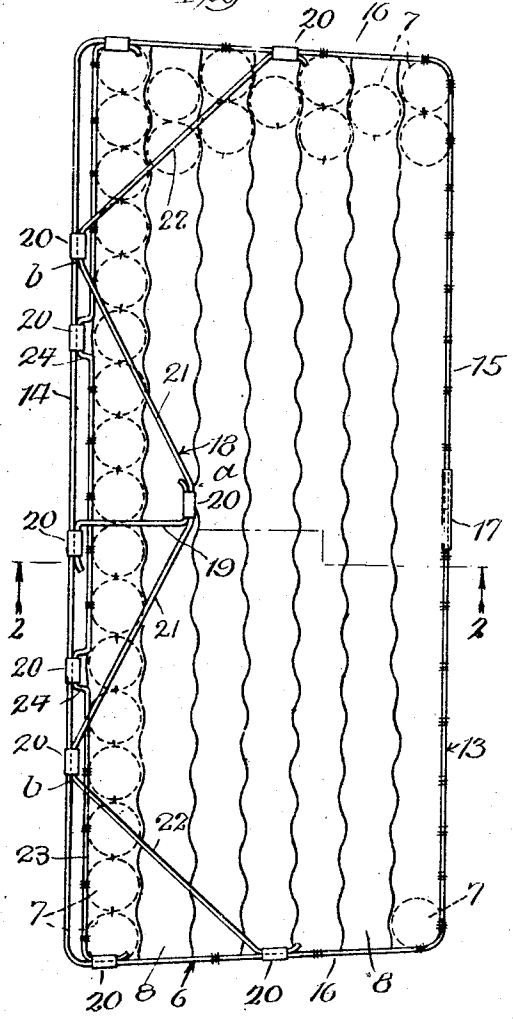


Fig. 3

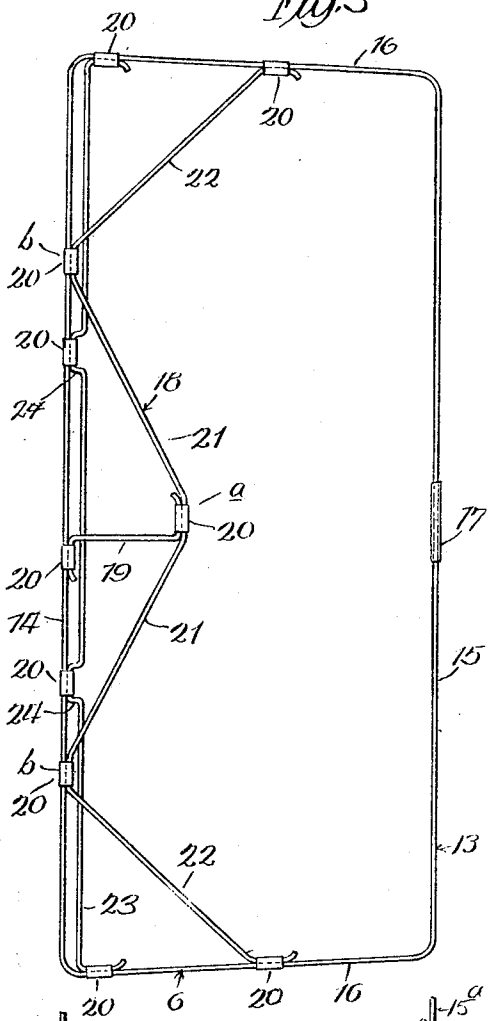


Fig. 5.

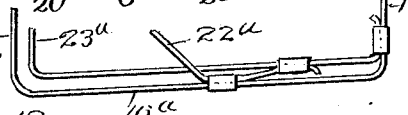


Fig. 2

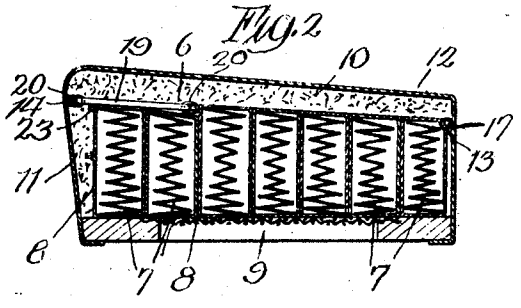
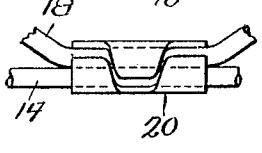


Fig. 4



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UNITED STATES PATENT OFFICE.

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SEAT-CUSHION FRAME.

Application filed February 25, 1924. Serial No. 694,876.

To all whom it may concern:

Be it known that I, MAYNARD E. ALLEN, a citizen of the United States, and a resident of Chicago, Cook County, and State of Illinois, have invented certain new and useful Improvements in Seat-Cushion Frames, of which the following is declared to be a full, clear, and exact description.

This invention relates to seat cushion frames and its principal object is to provide a wire frame, for seat cushions, having certain novel characteristics and arranged to eliminate certain objectionable features now present in the ordinary seat cushions upon the market. As is well understood, a wire frame for defining the border or margin of the seat cushion is employed therein, and in order to maintain a substantially straight line along the front of the cushion various forms of reinforcements have been provided, but these are objectionable, principally because the presence of the reinforcement is felt by those sitting upon the cushion. In accordance with the present invention I have provided a truss or truss-like member for stiffening the front frame member of the wire frame which, because of its peculiar construction, does not interfere with the comfort of the person or persons sitting upon the cushion. Moreover, with a wire frame constructed in accordance with the present invention the ends of the cushion are also held in their normal position thus preserving the normal appearance of the cushion at all times. With these and other objects and advantages in view, this invention consists in the several novel features hereinafter fully set forth and claimed.

The invention is clearly illustrated in the accompanying drawing, in which:

Fig. 1 is a plan of a seat cushion with the cover removed and showing a simple embodiment of the present invention applied to the cushion; Fig. 2 is a vertical cross-section through a seat cushion equipped with a seat cushion frame embodying the present invention, the line of section being indicated at 2—2 in Fig. 1; Fig. 3 is a plan of the cushion seat frame detached from the cushion; Fig. 4 is a detail view, looking from below of a fragment of the frame and one of the fastening members used in connecting the members, and Fig. 5 is a fragmental plan of a modified form of the invention.

Referring to said drawing, which illustrates the invention applied to an automobile seat cushion, the reference character 6 designates a seat cushion frame embodying a simple form of the invention; 7 designates coiled springs such as are used in automobile seat cushions, and in accordance with certain forms of construction, the springs are contained in textile, fabric envelopes 8, arranged in rows running lengthwise of the cushion. The springs rest on a bottom member 9, which usually comprises a board frame and a wire mesh panel, and the top and front of the cushion are provided with padding 10, 11 over which is a cover 12 that is secured to the bottom board 9. The springs of each row are usually clipped or otherwise fastened together, and the springs of the end rows and the end springs of each row are secured to the frame 6 by clips or by sewing or tying them thereto as is customary.

The seat cushion frame 6, which forms the subject matter of this invention, comprises a substantially rectangular wire frame 13, preferably formed of wire and comprising a front member 14, a back member 15 and two end members 16, the ends of the wire being joined together at the back by a sleeve or other connecting piece 17. The wire frame 13 defines the margin or outline of the cushion. Secured to the front member 14 and to the end members 16 of the wire frame 13 is a truss member 18 and a strut 19. Any simple form of connecting means may be employed for fastening the truss member, strut and wire frame together, and for convenience I have illustrated metal clips 20 (see Fig. 4) which are passed around the members at the place where they meet and are bent down tightly thereon to firmly clip the several members together. If desired the parts may be welded together.

Preferably the truss member 18 comprises a piece of wire or rod bent at its middle point, *a*, into two oblique braces or truss members 21, and at *b*, *b*, (which are points intermediate said middle bend and its ends) the wire or rod is bent into other oblique braces or truss members 22, that run to the end frame members 16, where they are secured thereto by the clips 20. Connecting the middle bend, *a*, of the truss member 18 with the front member 14 of the wire frame, is the strut 19, and the end portions of said strut are bent so as to extend parallel with

the front member 14, and said end portions are secured to the front member 14 and the strut 18 by clips 20. Other clips 20 secure the intermediate bends *b*, *b*, of the truss member to the front frame member 14.

Adjacent the front member 14 and slightly to the rear thereof is a supplemental front frame member 23 which runs parallel with the front frame member 14 and extends to the end frame members 16, where its end portions are bent parallel to said end frame members 16 and are secured thereto by clips 20. Intermediate its ends the frame member 23 is provided with U bends 24 which extend to the front frame member 14 and space said frame member 23 away from the front frame member 14. The U bends 24 of the frame member 23 are secured to the front frame member 14 by clips 20. The front row of springs may be secured to the frame member 23 or to the front frame member 14, depending upon the location of the front row of springs, since it sometimes happens that the front row, instead of being located in position to be secured to the front member 14 is located back of it and for this reason a supplemental front frame member 23 is employed to which the front row of springs may be secured. The overhang occasioned by the front frame member 14 is sometimes required to provide a wire frame of the proper dimensions to fit a cushion of a given size and as the coiled springs are usually made of a standard size, it sometimes happens that when nested together, as shown in Fig. 1, the front springs do not extend to the extreme front edge of the frame, in which case they are clipped or otherwise fastened to the frame member 23.

It will be observed that the front member 14, of the wire frame is reinforced by the truss-like member whereby it will maintain its straight line effect although subjected to considerable usage. Moreover, the end frame members 16 are braced and thereby prevented from bulging outward or from being drawn inward. Moreover because of the shape of the truss member 18, persons may sit on either side of the middle of the cushion without being annoyed by the presence of any truss member and when the front edge portion of the cushion is depressed, (as it is when being sat upon) there is no bar or rod located behind the front portion of the cushion which would be swung upward and become noticeable to those sitting upon the cushion.

In the modified or alternative form illustrated in Fig. 5 the supplemental front frame member 23^a is carried back parallel with the end frame member 16^a and secured to the back frame member 15^a. The oblique members 22^a of the truss are carried over the supplemental frame member 23^a and secured to the end frame member 16^a by the clips or otherwise and then bent back to the supplemental frame member 23^a and secured thereto by clips or otherwise. This arrangement provides for an overhang at each end of the wire frame and also provides for an additional brace at each end of the device.

More or less variation of the exact details of construction is possible without departing from the spirit of this invention; I desire, therefore, not to limit myself to the exact form of the construction shown and described, but intend, in the following claims, to point out all of the invention disclosed herein.

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

1. A seat cushion frame comprising a substantially rectangular frame having front, back and two end frame members, a truss member located within the margin of said frame and having oblique end portions running in straight lines from said end frame members to the front frame member and other oblique portions running from the front frame member to a point midway between the end frame members and behind the front frame member, a strut extending from the front frame member to the middle of the truss member, and means for securing together the frame, truss and strut at the several places where they meet, said oblique portions and strut forming the sole brace connections between the front and end frame members.

2. A seat cushion frame comprising a substantially rectangular wire frame having front, back and two end frame members, a wire truss-like member located within the margin of the frame and having oblique end portions running in straight lines from the end frame members to the front frame member and other oblique portions running from said front frame member to a point midway between the end frame members and located back of the front frame member, a strut extending between the front frame member and middle portion of the truss-like member, and metal clips secured around the frame, truss member and strut at the places where they meet, said oblique portions and strut forming the sole brace connections between the front and end frame members.

3. A seat cushion frame comprising a substantially rectangular wire frame having front, back and two end frame members, a supplemental frame member extending parallel with the front frame member and secured to said front frame member and to the end frame members, a truss-like member contained within the margin of the frame and having oblique end portions extending in straight lines from the end frame members to the front frame member and other

oblique portions extending from the front frame member to a point midway between the end frame members and located back of the front frame member, a strut extending between the front frame member and the middle portion of the truss-like member, and metal clips for securing the frame, truss-like member and strut together at the places where they meet, said oblique portions and strut forming the sole brace connections between the front and end frame members.

4. A seat cushion frame comprising a rectangular wire frame, a truss member composed, throughout, of a single rod having oblique portions extending between the front and ends of the frame, a strut, extending between the front of the frame and truss, and fastening means for securing together said frame, truss member and strut, said oblique portions and strut forming the sole brace connections between the front and ends of the frame.

5. A seat cushion frame comprising a rectangular wire frame having front, back and end members, a supplemental frame member paralleling said front and end frame members, and a single piece truss member having oblique portions connected with said front and end frame members, the ends of said truss member connecting said end frame members with said supplemental frame members and bracing said supplemental frame members.

Chicago, February 19th 1924.

MAYNARD E. ALLEN.