Nov. 7, 1939. C. H. MENGE 2,178,670

CUSHION

Filed July 23, 1937

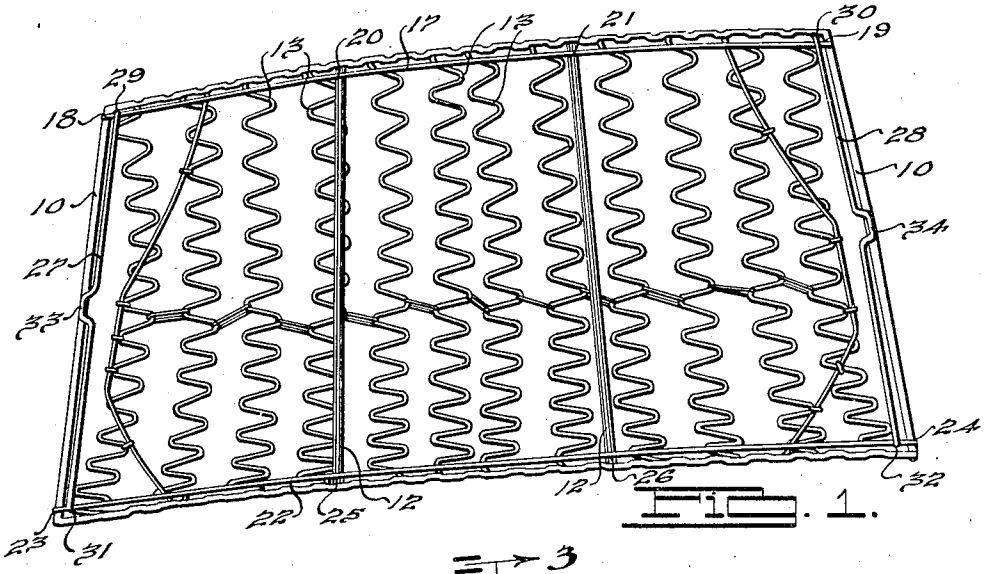



FIG. 1.

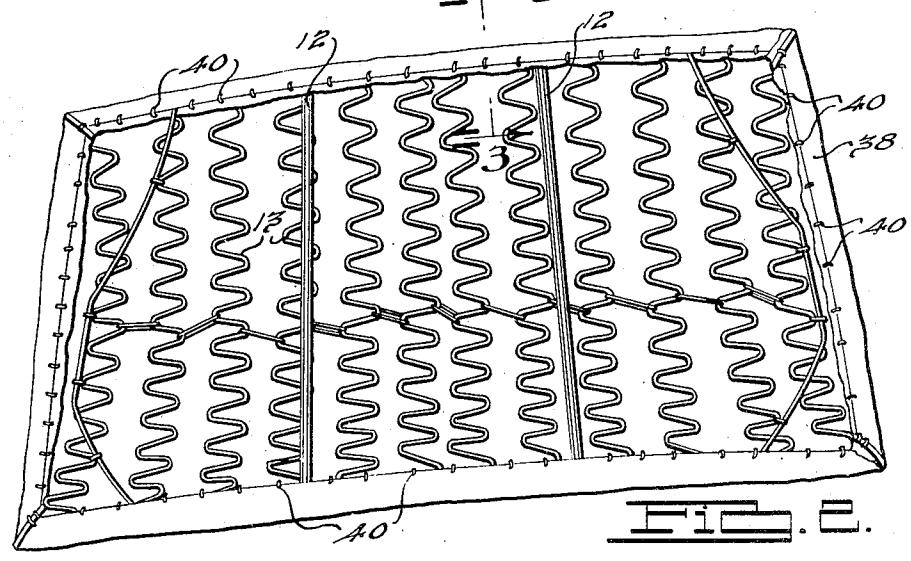



FIG. 2.

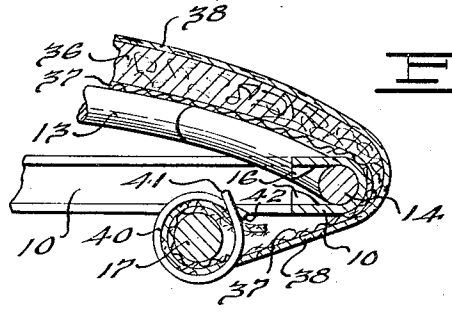



FIG. 3.

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Patented Nov. 7, 1939 2,178,670

# UNITED STATES PATENT OFFICE

2,178,670

## CUSHION

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Application July 23, 1937, Serial No. 155,273

2 Claims. (Cl. 155—180)

The present invention relates to cushions, particularly of the type used for either seat or back cushions of automobiles or furniture.

It is the principal object of the present invention to provide an improved means for securing the edges of a sheet of upholstery material to the cushion.

Another object is to provide means for securing the edge of a sheet of upholstery material directly to the metallic framework of a cushion of the type mentioned.

Another object of the invention is to eliminate the use of tacks and tacking strips commonly used to secure upholstery to seat and back cushions.

Other objects and advantages of the invention will become apparent from the following specification, the accompanying drawing, and the appended claims.

In the drawing:

Figure 1 is a perspective view of a suitable framework of the type used in the back cushions of automobiles;

Fig. 2 is a perspective view showing the under side of the completely assembled back cushion; and

Fig. 3 is a section taken on the line 3—3 of Fig. 2.

In the drawing, the invention is shown as applied to a cushion frame and spring assembly of the general type shown in the prior copending applications of Clarence H. Menge, Serial No. 44,697, filed October 12, 1935, which matured into Patent No. 2,116,402, on May 3, 1938, and Serial No. 147,065, filed June 8, 1933. Briefly, this cushion framework comprises a marginal frame channel member 10 which extends entirely around the periphery of the cushion and suitable cross-members 12 which are integrally secured, as by welding, at their ends to the marginal channel member 10. In the construction shown, the springs are of the sinuous type formed of a plurality of wire elements, each spring element 13 being composed of a plurality of similar adjacent later convolutions, all lying in substantially the same surface. The ends 14 of the spring elements, which extend transversely of the length thereof, are positioned within the channel member 10, as shown best in Figure 3, whereupon the inner margins of the channel member are crimped at 16 over the end portion 14 to secure it permanently in position. The particular form of spring and method of securing the same to the channel member forms no part of the present invention but is covered by the above mentioned prior copending applications, to which reference may be had for further details of construction.

In accordance with the present invention, a substantially straight relatively heavy wire 17 is welded at its ends at 18 and 19 to the channel members 10 at opposite sides of the cushion frame. In order to provide greater stiffness, the intermediate portions of the wire 17 are likewise welded to the transverse frame members 12 at 20 and 21. At the opposite or forward edge of the frame, a similar wire 22 is welded at 23 and 24 to the side channel members 10 and at 25 and 26 to the transverse frame members 12. At the sides of the frame are secured a pair of similar wires 27 and 28, welded respectively to the rear wire 17 at 29 and 30 and to the front wire 22 at 31 and 32. In order to reinforce the wires 27 and 28, they are provided intermediate their ends with offset portions 33 and 34, respectively, which are welded to the side frame channel members 10. The wires 17, 22, 27, and 28 are preferably secured at the under side of the cushion frame and are spaced inwardly from the marginal channel members 10, as best shown in Figures 1 and 3.

The cushion is provided with a suitable layer of padding 36, which is carried by a backing layer 37 and a layer of finish upholstery fabric 38 overlies the padding 36. The padding layer 36 is preferably formed of substantially the same size as the cushion frame, while the backing layer 37 and the upholstery layer 38 are of somewhat greater size, with the result that when the upholstery is stretched over the frame, the marginal portions of the backing and upholstery layers 37 and 38 may be wrapped around wires 17, 22, 27 and 28, and secured thereto by means of clips 40, which are of the hog ring type. These clips pierce the double thickness of both layers 37 and 38 in the area at which they overlap each other, and the clips entirely surround the wires 17, 22, 27, and 28, thus securing the marginal edges of these layers firmly to the frame.

It will be noted that the clips or hog rings are so formed upon assembly that their ends 41 and 42 cross each other at an angle. Accordingly, the projecting end 42, for example, prevents withdrawal of the opposite end 41 from the material, and vice versa. There is thus provided an exceedingly simple and effective means for securing the margins of the upholstery material to the frame. This arrangement is exceedingly effective in view of the fact that a large portion of any tension forces exerted upon the uphol-

stery material are absorbed by friction between the upholstery layer and the wires 17, 22, 27, and 28, thus materially reducing any tendency of the material to tear loose from the clips 40.

While the invention is shown as applied to a cushion frame of the type disclosed in the prior copending applications mentioned above, it is apparent that the improved means for securing the margins of the upholstery material to a cushion frame is equally applicable to any other of the known types of cushion frames. It is apparent that variations in the arrangement disclosed may be indulged in without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. In a cushion construction, a frame having an elongated element extending inwardly from an edge thereof, a layer of upholstery material stretched over said frame with a marginal portion thereof wrapped about said element, and wire rings surrounding said element and passing through a double thickness of said layer to form the sole means for holding the material in wrapped relation with respect to said element.

2. In a cushion construction, a frame having a portion defining a marginal edge for the cushion, a wire secured to said frame and extending along said marginal edge inwardly thereof, and a sheet of upholstery material stretched over said frame and having an edge extending over said marginal portion of the frame and wrapped around said wire, and U-shaped clips of wire disposed over said wire in position to pierce a double thickness of said material when clamped thereon to form the sole means for securing said material to said frame.

CLARENCE H. MENGE.