FIG. 6.

FIG. 7.

FIG. 8.

FIG. 9.

FIG. 10.

FIG. 11.

INVENTOR.

ROBERT M. LE BARRE

BY WHITMORE HOLLAND

B. GLASS

ATTORNEYS
UPHOLSTERED CUSHIONS AND EQUIPMENT FOR UPHOLSTERING THE SAME

Application May 20, 1957, Serial No. 660,727.

6 Claims. (Cl. 155—182)

The present invention relates to improvements in a covered or upholstered cushion and like structure and equipment for upholstering the same, whereby the covering or upholstering material, usually as made up in opencasted or sheath form, is properly positioned easily and quickly with its edges in registered alignment with the body in different ways to secure the cover; and in accordance with still other embodiments, the holding strip in question may have the cover or upholstering material attached thereto by fastening means of sliding zipper type.

The foregoing as well as other objects will be made more apparent as this description proceeds, especially when considered in connection with the accompanying drawings, wherein:

Fig. 1 is a perspective view, partially broken away, illustrating a conventional foam rubber or like cushion having a welt type securing strip applied thereto, in accordance with one embodiment of the invention, the thickness of the fabric material in this view being considerably exaggerated for clarity, as it is in other views;

Fig. 2 is a fragmentary view in vertical section along line 2—2 of Fig. 1;

Fig. 3 is a fragmentary perspective view of the welted securing strip in a flat condition;

Fig. 4 is a perspective view similar to Fig. 1, showing a modified adaptation of the invention, covering member having a welt type securing strip applied thereto, in accordance with one embodiment of the invention, the thickness of the fabric material in this view being considerably exaggerated for clarity, as it is in other views;

Fig. 5 is a fragmentary view in vertical section along line 5—5 of Fig. 4;

Fig. 6 is a perspective view, partially broken away and in vertical section, showing a further modification of the invention, as well as the method of inserting a cushion body or the like in a cover with the assistance of an assembling sleeve;

Figs. 7 and 8 are, respectively, fragmentary views in perspective of further modified adaptations of the principle of Fig. 6;

Fig. 9 is a fragmentary perspective view of a still further form;

Fig. 10 is a fragmentary perspective view of yet another modification employing snap fasteners as the covering means;

Fig. 11 is a fragmentary vertical section on line 11—11 of Fig. 10;

Fig. 12 is a fragmentary plan view of a cushion body having snap fastener securing type means applied thereto in another modified way;

Fig. 13 is a fragmentary section on line 13—13 of Fig. 12;

Fig. 14 is a fragmentary perspective view, partially broken away, of an upholstering or covering member having a snap fastener strip applied thereto for securing the cushion snap fastener means of Figs. 12 and 13;

Fig. 15 is a perspective view illustrating cover-securing strip means equipped with slide fastener provisions to secure a cover;

Fig. 16 is a fragmentary view in vertical section on line 16—16 of Fig. 15;

Fig. 17 is a fragmentary plan view of a modified type of slide fastener type securing strip for the purpose;

Fig. 18 is a fragmentary plan view of yet another slide fastener form;

Fig. 19 is a fragmentary view in enlarged scale along line 19—19 of Fig. 18; and

Fig. 20 is a fragmentary side elevational view, partially broken away, showing the application of the principle of the invention, as embodied in any of the alternative forms mentioned above, to an inner spring type cushion or like padded body.

Referring to Figs. 1, 2 and 3, the reference numeral 10 generally designates a conventional cushion, pad or the like of rectangular outline, which is fabricated in its entirety of foam rubber, polyurethane foam or similar plastic composition. The reference numeral 11 generally designates a fabric securing strip having an outwardly projecting, rounded welt 12 formed thereon in any conventional way. The strip 11 may be of any desired, suitably sturdy fabric or like material, resistant to stretch in nature. Its width may vary as desired, i.e. from a minimum, say 1", to a width sufficient to enable its
parallel longitudinal edges 13 to be overlapped substantially on the upper and lower surfaces of the cushion body 10.

In this form the welt 12 is located on the longitudinal center line of the strip 11, being coextensive in length therewith. The welted strip 11, as shown in Fig. 1, is formed in a U-shaped or instance, the front wall free and exposed. Strip 11 may, if desired, be stitched in this outline prior to application to the cushion body, or it may be progressively wound about the cushion wall surfaces.

The strip is preferably secured to the body by a layer 14 of a suitable adhesive, as of the latex type, and it is applied over an adequate area, either on the cushion 10 or on the inner side of the strip 11, to enable a firm, displacement resistant union, without possibility of dislodging the strip in a way which might produce a visible protrubrance, if not actually defeating the main purpose of the invention as described above.

With the locating and securing strip thus applied, the upholstery cover or like material, usually in the form of an open-ended sheath 15 of which only a fragment is shown in Fig. 1, is slipped onto the welted or welt-free end 10 of the cushion body 10, so as to fully encase the latter, with the welt margins 16 of the cover 15 properly located in reference to edge margins on body 10. The welting 12 of strip 11 provides a means for performing this operation easily and quickly, being distinctly felt by the operator sliding his hand along the same from the outside of the cover sheath 15; and the cover, once properly located, is then anchored to the strip by stitching 17 along the welt 12. There is no visible projection at the sole exposed wall of the cushion, other than the wels of its landing 10.

Needless to say, the exact three sided type of strip 11 depicted in Fig. 1 may be departed from, if desired, i.e., the strip may be of less width, it may be applied to less than three cushion walls, its welt 12 may be omitted from one or more, or may be differently positioned, etc.

The modified embodiment of the invention shown in Fig. 4 differs only from that of Figs. 1-3 in regard to the number and location of the wels thereon, accordingly corresponding reference numerals designate corresponding parts. Here, the locating and securing strip 17 is provided with two parallel wels 18, each located in laterally inwardly spaced parallel relation to one of the side edges 19 of the strip. Their spacing from one another equals the wall height of the cushion body 11.

The strip 17 is applied and secured to the cushion 10 in the same way as the form of Figs. 1-3, with the wels 18 running along the upper and lower edge margins of cushion body 10. As applied, the operator can readily and quickly locate the outer cover 20 on the pad and the cover, which in this case may itself possess or be free of wels, is then stitched at 19 to the strip 17 along the wels 18 of the latter. Considerations referred to in connection with Figs. 1-3 regarding the extent of the cover, its wels, etc., also apply to the embodiment of Figs. 4 and 5.

Referring now to Fig. 6, a further alternative form is shown in which parallel strips 21 of a latex type or other suitable adhesive are applied along the inner surface of a fabric locating and securing strip 22, which strip is then stitched along a wall of the upholstery cover 23. The width of the strip 22 shown in Fig. 6 is sufficient to extend around the upper and lower edge margins of a cushion body 24. In the illustrated embodiment, the strip 22 may provide wels 25, similar to the wels of Figs. 4 and 5, to which the cover 23 may be anchored, as by lines of stitching 26.

Fig. 6 also illustrates a typical way of applying the strip bearing cover 23 to the cushion body 24. The latter is inserted in a sheet metal sleeve of rectangular cross section, being compressed as thus inserted. The sleeve 27 is then slipped into the cover from an open sheath end thereof, so as to properly shape the latter, and the cushion body is then pushed forwardly against the adhesive coated strip 22. So engaged, it is adhered to the securing strip and its displacement relative to the cushion body 24 is thereby prevented. Obviously, the adhesive may be applied over the entire area of the fabric strip, or less, and by ways other than tripping.

Fig. 7 shows a modified form of the adaptation of Fig. 6, in which a plain, unwelted fabric locating and securing strip 30, also with a width sufficient to cover the top and bottom of a cushion body, is provided. The strip 30 carries one or more adhesive stripes 31, or other type coating, on its inner surface for adhered securement to the cushion body, and the upholstery or like outer cover 32, itself provided with an edge welt 33, is stitched at 34 along the margin of the fabric strip 30, on either side of the welt 33 of the cover.

Fig. 8 shows a further modification identical to the forms of Figs. 6 and 7, hence identified by corresponding numerals, except that a fabric, adhesive bearing securing strip 36 of lesser width is applied along the horizontal central line forward strip-free end 10 of the cushion body 10, so as to fully encase the latter, with the welt margins 16 of the cover 15 properly located in reference to edge margins on body 10. The welting 12 of strip 11 provides a means for performing this operation easily and quickly, being distinctly felt by the operator sliding his hand along the same from the outside of the cover sheath 15; and the cover, once properly located, is then anchored to the strip by stitching 37 along the welt 12. There is no visible projection at the sole exposed wall of the cushion, other than the wels of its landing 10.

Needless to say, the exact three sided type of strip 11 depicted in Fig. 1 may be departed from, if desired, i.e., the strip may be of less width, it may be applied to less than three cushion walls, its welt 12 may be omitted from one or more, or may be differently positioned, etc.

The reference numeral 45 designates a conventional snap fastener element, preferably the female element; and there are a plurality of such fastener elements applied to a cushion body 46 in space alignment adjacent and along an edge margin thereof. Each element 45 is appropriately secured to a length 47 of rubber band material of round section and is secured thereto and the opposite end of band 47 is appropriately secured to a further headed element 48 on the opposite surface of the body 46. Head element 48, if desired, may be a snap fastener element identical with the element 45.

In the product of the prepared cushion according to Figs. 10 and 11, the resilient bands 47, with anchoring elements 45, 48 at their opposite ends, are positioned transversely of a cushion forming mold (not shown), the bands 47 being under slight tension. Upon pouring of the foam composition constituting the body 46 into the mold, the bands are integrally bonded and molded therein, and when the cushion is removed from the mold they contract to draw the elements 45, 48 into body 46 somewhat, simulating the effect of tufting.

An upholstery cover having male snap fastener elements suitably secured thereto for engagement with the elements 45, 48 when applied (for example in the general way shown in Fig. 14) is then slipped on the body 46 and the male and female snap fasteners engaged.

Figs. 12, 13 and 14 illustrate another snap fastener type of cover anchoring device. In this form, an elongated strip 50 having female snap fastener relative to the cover is provided. The strip 50 may be of fabric, being adhesively or otherwise secured to body 52, or it may be of a material to bond to the body in the molding thereof, as in Figs. 10 and 11.

Fig. 14 shows a fabric upholstery cover having an anchor strip 53 secured thereto by stitching 54, the strip
53 carrying a series of male snap fastener elements 55. These are engaged with the cushion body elements 51 when the cover is applied, and the wetting 56 of the latter is properly held in place.

If desired, the strip 53 may have a welt formation thereon, as in other modifications.

Referring now to Figs. 15 and 16, yet another class of modification of the principles of Figs. 1 through 9 and Figs. 10 through 14 appears. In this type, a fabric securing strip 58 carries opposed parallel slide fastener tapes or strips 59, 59 of known sort, the tapes being over-lapped on one another and secured to the strip 58 by stitching 60. Strap 58 is in turn adhered to one or more wall surfaces of cushion body 62.

The locking elements or lugs 61 of the tapes face the top and bottom of the cushion body, and coating welted cover or upholstery material 63 is equipped with zipper fastener tapes on its inner surface. The cover material may be made as a single unit having fastener tapes 64 stitched to its inner side to mate with the elements 51 of the securing tapes 59, 59 when applied. Alternatively, two coating cover sections may each carry a marginal strip 58 to engage one of the tapes 59, 59.

Fig. 17 shows a further modification of the slide fastener principle, in which a special type of slide fastener element is employed. Here, a medial anchor tape or strip 66, secured to the cushion body by adhesive or otherwise, is provided with substantially spaced slide fastener lock lugs or elements 67, uniformly oriented thereon, and the respective facing edges of two upholstery or cover sections are also equipped with slide fastener tapes 69, whose lugs 70 alternate longitudinally in mating with the coating lock members 67 of the cushion-carried securing tape 66. It is evident that as a further modification the cover could be a single unit, with opposed fastener tapes stitched along a wall panel.

Fig. 18 illustrates yet a further modified slide fastener type in which a special slide fastener element 72 mounted on a tape 73 and appropriately applied to a cushion body has transversely aligned, uniformly oriented locking lugs or elements 74 projecting from the opposite sides. The slide element 72 is flexible and may be suitably clamped, adhered (as in the previous forms), or otherwise mounted to the tape 73, and slide fastener lock elements on the opposed fabric cover sections 76, or on a single cover unit interlock with the center elements 75.

The embodiments of Figs. 15–19, the zipper tapes may be applied to securing strips which are either provided with locating welt formations, or not, as in Figs. 1, 4 or 6.

Fig. 20 of the drawings depicts, in a general way, an application of the invention, in any of the above described alternative embodiments thereof, to an inner spring type of cushion 78. Appropriately tied coil springs 79 of this cushion are covered with a suitable padding 80, and an external casing 51 is applied and clinched to the bottom frame 82, or otherwise secured in any conventional fashion. Indeed, the cushion unit may be of any desired spring type, as distinguished from a molded cushion body, as in the preceding figures.

The reference numeral 83 designates a securing strip mounted to the padding 80, as by adhesive, and upholstering material may be applied to this strip in accordance with any of the various modified arrangements hereinabove described.

The drawings and the foregoing specification constitute a description of the improved sewed welt for cushions in such full, clear, concise and exact terms as to enable any person skilled in the art to practice the invention, the scope of which is indicated by the appended claims.

What I claim is:

1. Cushion structure comprising a cushion having a longitudinally extending edge margin, and means on said cushion for the releasable fitting and securement thereof of a sheath-like cover, said cover having longitudinal edge portions disposed adjacent one another and paralleling said cushion edge margin when so fitted, said means comprising at least one elongated member permanently secured to said cushion to extend parallel to said edge margin thereof, said fastened member having means for releasable holding engagement on at least one of its opposite transverse sides with one of said edge portions of said cover, thereby to hold said cover substantially anchored in both transverse directions relative to said cushion edge margin.

2. Cushion structure in accordance with claim 1, in which said elongated member is a slide fastener device having elements releasably mating with and resisting transverse shift of slide fastener elements on said one of said cover edge portions.

3. Cushion structure comprising a cushion having vertically spaced and longitudinally extending edge margins, and means on said cushion for the releasable fitting and securement thereto of a cover of box-like outline, said cover having longitudinal edge portions disposed adjacent one another and between and paralleling said edge margins when so fitted, said means comprising an elongated slide fastener device permanently secured to said cushion to extend between and parallel to said edge margins thereof, said device having elements for releasable holding engagement on at least one of its opposite transverse sides with mating elements on said one of said edge portions of said cover, thereby to hold said cover substantially anchored in both transverse directions relative to said cushion edge margins.

4. Upholstered cushion structure comprising a cushion having a longitudinally extending edge margin, a sheath-like cover having a longitudinal edge and formed to encase and snugly conform to all surfaces of said cushion when fitted to the latter, with said cover edge in predetermined parallel relation to said edge margin of the cushion, and means for the removable securement of said cover to said cushion, as thus fitted, with said cover edge anchored in predetermined fixed and parallel relation to said edge of the latter, said respective cushion and cover elements having releasable holding engagement with one another to anchor said cover against substantial shift of said edge in either transverse direction relative to said cushion edge margin.

5. Upholstered cushion structure comprising a cushion having vertically spaced, longitudinally extending edge margins, a box-like cover having longitudinal edges and formed to encase and snugly conform to all surfaces of said cushion when fitted to the latter, with said cover edge in predetermined parallel relation to said edge margin of the cushion, and means for the removable securement of said cover to said cushion, as thus fitted, with said cover edges anchored in predetermined fixed and parallel relation to and along said cushion edge margins, said means comprising an elongated slide fastener device permanently secured to said cushion to extend longitudinally of said edge margins thereof and at least one further elongated element secured on said cover in parallel relation to said edge of the latter, said respective cushion and cover elements having releasable holding engagement with one another to anchor said cover against substantial shift of said edge in either transverse direction relative to said cushion edge margin.

6. Upholstered cushion structure comprising a cushion having vertically spaced, longitudinally extending edge margins, a box-like cover having welt formations along longitudinal edges thereof and formed to encase and snugly conform to all surfaces of said cushion when fitted to the latter, with said cover edge welt formations
in predetermined parallel relation to said respective edge margins of the cushion, and means for the removable securement of said cover to said cushion, as thus fitted, with said welt formations anchored in predetermined fixed and parallel relation to and along said cushion edge margins, said means comprising an elongated slide fastener device permanently secured to said cushion to extend longitudinally of and between said edge margins thereof and further elongated slide fastener elements secured on said cover member in parallel relation to said respective edges of the latter, at least one of said cover fastener elements having releasable holding engagement with said device to anchor said cover against substantial shift to said cover welt formations in either transverse direction relative to said cushion edge margins.

### References Cited in the file of this patent

**UNITED STATES PATENTS**

<table>
<thead>
<tr>
<th>Patent Number</th>
<th>Inventor(s)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,178,885</td>
<td>Buff et al.</td>
<td>Nov. 7, 1939</td>
</tr>
<tr>
<td>2,326,441</td>
<td>Cunningham</td>
<td>Aug. 10, 1943</td>
</tr>
<tr>
<td>2,440,891</td>
<td>Beckhold</td>
<td>May 4, 1948</td>
</tr>
<tr>
<td>2,630,587</td>
<td>Brown</td>
<td>Mar. 10, 1953</td>
</tr>
<tr>
<td>2,831,534</td>
<td>Thaden</td>
<td>Apr. 22, 1958</td>
</tr>
</tbody>
</table>