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REINFORCED SEAM CONSTRUCTION

Filed Nov. 27, 1959

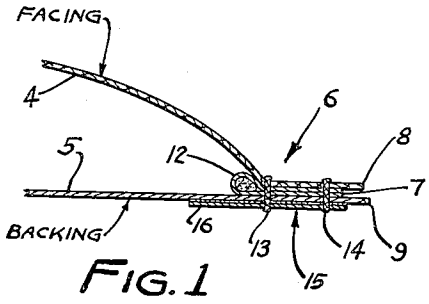


FIG. 1

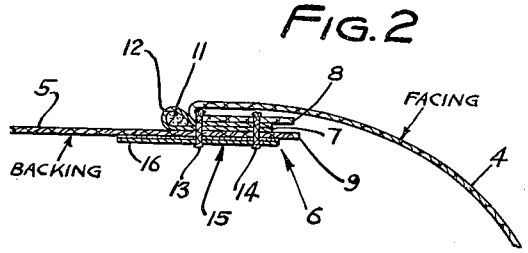


FIG. 2

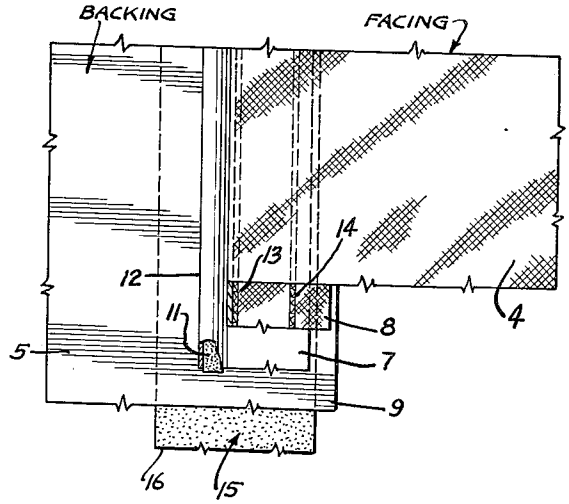


FIG. 3

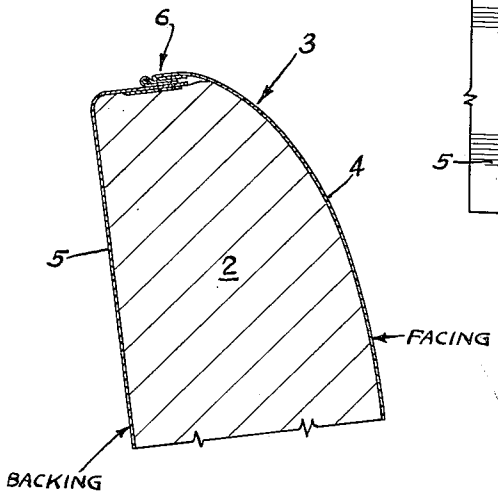


FIG. 4

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REINFORCED SEAM CONSTRUCTION

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This invention relates to new and useful improvements in reinforced seams, and more particularly to a seam having means embodied therein for resisting lateral pulling strains exerted in the seam, thereby to prevent tearing of the sewn fabric or material along the stitches of said seam.

Automobile seat covers, as now generally constructed, usually comprise two different kinds of fabric, one overlying the seat cushion and front side of the back rest, herein referred to as the "facing," and the other overlying and covering the back side of the back rest, herein referred to as the "backing." The facing is usually made from a highly wear resistant material such as one of the many synthetic materials now available as, for example, "nylon." This material is also highly resistant to tearing even when subjected to severe pulling strains and stresses when in use.

The manufacture of automobile seat covers is a highly competitive one, and it is therefore of utmost importance that the manufacturing cost be maintained at a minimum to meet competition, and without jeopardizing the quality and usefulness of the composite seat cover.

Seat covers and other articles made from two or more pieces of fabric or sheet material, usually have the various pieces thereof sewn together by suitable stitching such as now commonly used in the industry. Such conventional seams may be adequate in the construction of certain articles, but they have not proven entirely satisfactory in the construction of automobile seat covers, largely because they tend to weaken the fabric, particularly the plastic backing sheet, to the extent that the backing sheet frequently tears along the seam securing it to the facing along the top edge of the back rest, when an individual sits down in the seat because of the severe pulling strains often imposed in the material from which the seat cover is constructed.

As hereinbefore stated, most seat covers are usually constructed of two different fabrics or materials, a facing material which overlays and covers the seat cushion and the front side of the back rest; and a backing sheet which overlays and covers the back side of the back rest of the front seat. The backing sheet usually made from a less expensive material such as plastic, which is pleasing to the eye and may readily be kept clean. The facing and backing sheets are usually joined together along the top edge of the seat back rest by suitable stitching in the form of a smooth flat seam extending the length of the seat back.

An important object of the present invention, therefore, is to provide an improved reinforced seam for stitching together the overlapping edge portions of the facing and backing sheets of a seat cover whereby the backing sheet is not likely to tear along said seam when subjected to lateral pulling stresses.

A further object of the invention is to provide a reinforced seam construction comprising two or more rows of stitching for securing together the overlapping marginal edge portions of two pieces of fabric or other sheet material, said stitching normally being concealed within the composite seam and having means associated therewith for preventing tearing of the sheet material when subjected to pulling strains, when the article is completed.

A further and more specific object of the invention resides in the construction of a reinforced seam for joining together two pieces of sheet material such as the facing and backing of a seat cover, wherein an adhesive coated binding tape is embodied in the seam and has a longitudinal edge portion extending laterally from the stitching of said seam and adhesively secured directly to the backing sheet, whereby pulling strains imposed in the backing sheet along said seam will be taken up by said tape and thereby prevent tearing of the backing sheet along said seam.

A further object of the invention is to provide a reinforced seam construction for seat covers comprising dual rows of stitches, and including an adhesive coated binding tape having one side edge portion secured in position by said rows of stitches, and having its opposite edge portion extending laterally from said stitching and being adhesively secured directly to the backing sheet, whereby said binding tape will resist pulling strains imposed in the backing sheet to the extent that tearing of the backing sheet from ordinary use of the seat cover is substantially eliminated.

Other objects of the invention reside in the simple and inexpensive construction of the seam and in the manner in which the reinforcing tape is embodied therein; in the manner in which the reinforcing tape is laterally off set from the dual rows of stitches to reinforce the backing sheet against tearing; in the provision of a reinforced seam for seat covers which is not bulky or unsightly; which is neat and attractive in appearance; and which offers the utmost in strength and which will not cause the backing sheet to tear along said seam even when subjected to severe pulling strains.

These and other objects of the invention and the means for their attainment will be more apparent from the following description taken in connection with the accompanying drawings.

In the accompanying drawings there has been disclosed a structure designed to carry out the various objects of the invention, but it is to be understood that the invention is not confined to the exact features shown, as various changes may be made within the scope of the claim which follows.

In the drawings:

FIGURE 1 is a fragmentary sectional view showing the marginal edge portions of two fabrics disposed in overlapping relation and secured together by the reinforcing seam herein disclosed;

FIGURE 2 is a view similar to FIGURE 1, but showing the material constituting the facing of the seat cover folded over into the position assumed when embodied in a seat cover;

FIGURE 3 is a plan view of FIGURE 2; and

FIGURE 4 is a view showing a portion of a back rest with a seat cover fitted thereover and showing the reinforced seam along the top edge of the back rest.

In the selected embodiment of the invention herein disclosed, there is illustrated in FIGURE 4, for purposes of disclosure, a portion of a back rest or lazy back 2 of a conventional automobile seat. A seat cover, generally designated by the numeral 3, is shown fitted over the back rest 2. The seat cover as shown comprising a facing or front sheet 4, and a rear backing or second sheet 5, secured together along the top edge of the back rest by a reinforced seam, generally designated by the numeral 6.

Automobile seat covers have become extremely popular in recent years as a protection for the usual upholstering of auotmobile seats. Such covers are usually made of two different materials, the facing which overlays the cushions of the seat, and the backing which is attached to the facing along the top edge of the back rest and extends downwardly over and covers the back side of the back rest. The facing is usually constructed of a highly wear resistant material such for instance as "nylon," or one of the many other synthetic materials

now readily available on the market. The backing sheet 5 is usually constructed of a more inexpensive material such as plastic, which is very attractive in appearance and does not readily become soiled from finger prints, etc. This latter material, however, does not offer the resistance to tearing that the facing material does, and in the past there has been a tendency for the backing sheet to tear along the seam 6 which joins the backing sheet to the facing.

An important feature of the present invention resides in the unique construction of the connecting seam 6 between the facing and backing sheets, whereby there is little danger of the backing sheet tearing along said seam when the seat cover is subjected to severe pulling strains, as when an individual sits down in the seat and perhaps presses against the back rest in so doing, which may impose severe pulling strain in the material from which the seat cover is made. To strengthen the seam 6 and to present a more finished and attractive appearance in the finished product, a reinforcing element, generally designated by the numeral 7, is interposed between the marginal overlapping edge portions 8 and 9 of the facing and backing of the seat cover, as best illustrated in FIGURES 1 and 2.

The reinforcing element 7 is formed from a strip of sheet material folded upon itself with a filler material 11 interposed between the plies thereof to provide in effect a cylindrical bead 12 which conceals the stitching between the facing and backing sheets 4 and 5 when said sheets are stitched together by seam 6, as will be noted by reference to FIGURE 2. The marginal edge portions 8 and 9 of the facing and backing sheets are stitched together by dual rows of stitches 13 and 14, which pass through said edge portions and the dual plies of the reinforcing element 7, as clearly illustrated in FIGURES 1 and 2. When the facing sheet 4 is folded over seam 6 from the position shown in FIGURE 1 to that shown in FIGURE 2, the bead 12 is clearly visible and conceals the row of stitches 13 and thus presents a very neat and attractive appearing seam.

A seam such as above described, while neat and attractive in appearance, has one weakness in that the backing sheet 5 has a tendency to tear along the stitch holes of the seam 13 when a pulling strain is exerted in the facing or sheet 4, as frequently occurs when an individual sits down in the seat.

The seam 6 shown in the present invention eliminates this objectionable feature in that it is so constructed that the backing sheet is not likely to tear along the seam 13 when in use, thereby greatly prolonging the useful life of the composite seat cover. To thus reinforce the seam 6 against tearing, a strip of adhesive coated binding tape, generally designated by the numeral 15, is embodied in the construction of the seam. Tape 15 is seated against the bottom face of the marginal edge portion 9 of the backing sheet 5, whereby it becomes firmly united thereto by its adhesive coated surface and the rows of stitches 13 and 14, which it will be noted to reference to FIGURES 1 and 2, pass through all of the plies of material, including the dual plies of the reinforcing finishing element 7 and the marginal edge portions 8 and 9, of the facing and backing sheets 4 and 5, respectively, and also the reinforcing binding tape 15.

The marginal edge portion 16 of the binding tape 15, it will be noted, is extended laterally from the row of stitches 13, and is firmly bonded to the underside of the backing sheet 5 by the adhesive applied thereto and by pressure. The marginal edge portion 16 of the binding

tape being extended a considerable distance from the row of stitches 13 positively eliminates tearing of the backing sheet along the needle holes of the row of stitches 13, and thus greatly strengthens the backing sheet whereby it is not likely to tear, even if the seat cover is more or less roughly treated.

The novel seam construction, herein disclosed, adds very little to the cost of constructing the composite seam. The adhesively coated binding tape 15 is completely concealed from view, as it is secured to the underside of the seam and the backing sheet, as will be understood by reference to FIGURES 1 and 2. The binding tape may be coated on its underside with a heat softenable adhesive whereby the tape may readily be handled in the construction of tthe seam, and when sewn into place by the rows of stitching 13 and 14, may be fused to the underside of the backing sheet by the application of heat and pressure thereto, whereby it becomes, in effect, integrally fused to the backing sheet thereby to provide a very strong joint between the backing and facing sheets.

The novel seam, herein has been found extremely practical and durable in the construction of automobile seat covers, as it provides a secure joint between the facing and backing panels or sheets which is not likely to tear when said sheets are subjected to pulling strains, as frequently occurs in the use of automobile seat covers.

It is apparent tthat many modifications and variations of the invention as hereinbefore set forth may be made without departing from the spirit and scope thereof. The specific embodiments described are given by way of example only and the invention is limited only by the terms of the appended claim.

I claim as my invention:

A seam for securing together the overlapping marginal edge portions of two sheets of flexible material, one of said sheets being of a relatively strong tear-resistant material, and the other of a relatively weaker material subject to tearing along a seam, an elongated reinforcing element folded longitudinally upon itself about a cord-like filler to provide a bead-like edge along one side of said folded reinforcing element, said reinforcing element being interposed between the overlapped edge portions of said sheets of flexible material, a binding tape underlaying the overlapped edge portions of said sheets, a row of stitches securing together the overlapped edge portions of said sheets, said elongated reinforcing element and said binding tape, adjacent to the beaded edge of said reinforcing element, and said binding tape having one of its marginal edge portions extending laterally from said row of stitches a substantial distance, said extending tape portion being adhesively secured to the back of said sheet of weaker material, whereby when said sheet of tear-resistant material is subsequently folded outwardly in a direction away from said sheet of weaker material, said tape will resist tearing of said sheet of weaker material along said row of stitching, and the bead-like edge of said reinforcing element is exposed between the two sheets and completely conceals the row of stitching.

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