Nov. 1, 1932. H. J. BURKART 1,886,325

ARTICLE OF UPHOLSTERY AND METHOD OF MAKING SAME

Filed Dec. 7, 1929

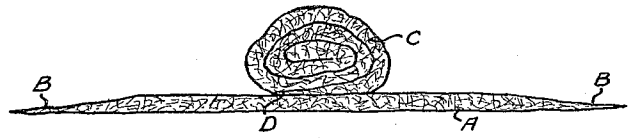


FIG. 1

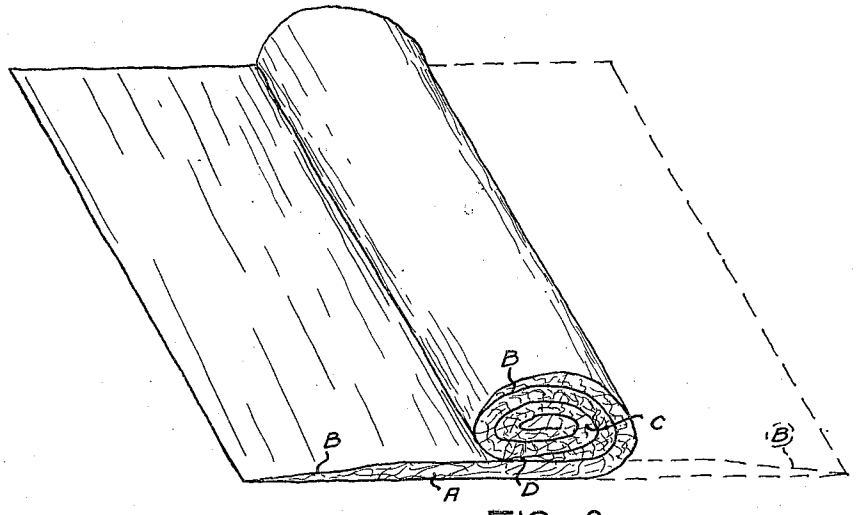


FIG. 2

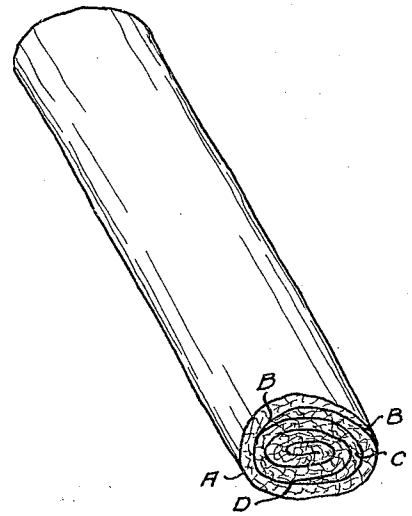


FIG. 3

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ARTICLE OF UPHOLSTERY AND METHOD OF MAKING SAME

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This invention relates to improvements in articles of upholstery and methods of making same, and more particularly to an improved padding for upholstery purposes, adapted to be manufactured in rolled form.

An object of this invention is to improve the form and cushioning qualities of the upholstery material of the types employed in making resilient structures, such as piped cushions and the like.

A further object is attained in an improved method of forming upholstery materials of the class above noted, whereby the material will possess a superior resilience and retain its original form after a substantial period of use.

Yet another object of the invention is to provide an improved article of upholstery of fibrous material, adapted for use in piped cushion structures and the like, and in which a greater proportion of the fibres are arranged to be disposed vertically of the completed cushion structure, whereby more effectively to resist the usual compacting effects.

A still further object of the invention is to provide a new article, including the method of its manufacture, resulting in a high-center piped cushion, the pipes of which approximate a circular cross section and which is particularly constructed to resist any permanent alteration of its original form and cross section.

Further objects and advantages will appear from the following detailed description, considered in connection with the accompanying drawing, in which:

Fig. 1 is an end elevation of parts employed in forming a rolled structure according to the present invention, and showing one of the portions thereof in rolled form; Fig. 2 is an elevation in perspective, showing a wrapper portion partially folded in place over the inner, or core portion, and Fig. 3 is an elevation in perspective of the completed article of upholstery in a form suitable for dispensing to the trade.

The invention is illustrated, and is hereinafter described, by reference to a preferred embodiment, consisting of a composite roll of material, such as cotton batting. It will, however, be understood that the principles embodied in the method and structure to be hereinafter more fully described, may be employed in structures of other form, as well as by the use of a variety of fibrous materials, without departing from the spirit and full intended scope of the invention, as defined by the appended claims.

Referring now by reference characters to the drawing, there is indicated at A, a sheet of fibrous material, such as cotton batting which may be formed by any of the processes customarily employed in the trade, for example, by laying-up the material on a "camel-back" or equivalent member associated with known apparatus for producing materials of this type. By great preference the lateral margins of the sheet A, are of tapered thickness, as indicated at B; these tapered margins being produced by varying the rate of deposition of the material on the camel-back, or by varying the location of such material as it is laid-up, in a manner which will readily suggest itself to those skilled in the art. By preference, both of the lateral margins of the sheet or pad A are formed of tapered thickness, as suggested in Fig. 1, although a desirable article may be produced by thus tapering only one of the margins, as will hereinafter appear.

In forming the roll or padding according to the present invention, there is disposed, for example, lengthwise and centrally of the sheet A, a roll of similar material, such as cotton batting, indicated at C. As will later appear, the roll C serves to form a shaping-core or center of the finished structure and by preference has at least one of its margins, such as D, tapered as indicated, the shaping portion being so rolled that the tapered edge falls on the outside of the rolled core structure. This inner roll or core C consists, by preference, of a plurality of convolutions or folds, as clearly appears in Figs. 1 and 2. The core or center roll thus consists, in the present example in the finished structure, of superposed layers. It will further appear from Fig. 1, that these layers are reasonably closely rolled upon themselves, whereby a substantial proportion of the fibers consti-

tuting the batting of which the core is constructed, lies along the depth of the roll, so as to be disposed along curved lines of a vertical trend, as distinguished from the relatively flat rolled structure at the present time sold in quantities to the trade for manufacturing cushions and like goods, and in which nearly all of the fibers lie horizontally, or at a right angle to the direction of compression in a finished cushion. In forming the core C, that margin of the sheet from which the core is formed, lying innermost of the roll, constitutes the first turn or layer. The material is thereafter closely wrapped upon itself, and by preference is so disposed that the tapered portion D falls on the outside of the core C and closely overlies the layer of material just beneath it. By employing a sheet of cotton batting or like material, having a tapered margin, coherence between adjacent layers of the fiber results on a rolled structure in which the joint, or meeting line of the outside edge with its adjacent layer, practically disappears.

The assembly structure is completed by disposing the core structure centrally upon the sheet A, then laying or folding over one side of the sheet A, snugly about the core C, as appears in Fig. 2, and thereafter folding the opposite side of sheet A about the roll, which thereafter assumes the appearance of the finished article, as seen in Fig. 3. By disposing the core centrally of the wrapper sheet A before folding, the finished roll is definitely assured of having its greatest depth along its center line, and the resulting product becomes in fact a high-center cushion pad, in which the bulk of cushioning material is disposed about a vertical median lengthwise of the roll. While in Figs. 1 and 2, I have shown the portions A and C rolled or folded in the same direction, they may obviously be rolled in opposite directions, or the folds arranged differently in the core C and wrapper A. It is further preferred that in rolling or folding the wrapper A about the core C, that the exposed edges of the rolled material be angularly offset from each other, so that the joints are "broken". This arrangement, best appearing in Fig. 3, minimizes any tendency for the roll to unfold during its distribution and application.

The tapered margin B of the sheet A, which after forming the structure into roll form, falls on the outside thereof, may be pressed into close, cohering engagement with the material immediately under and adjacent the margin. The fibers constituting the adjacent outer layers, are, due to the tapered margin, so intermeshed or interlocked that for practical purposes, there results a union of fibers on or about the outside seam or joint of the roll. A further advantage of employing a tapered margin, such as B, particularly on the edge of the sheet A which is exposed on the finished article, lies in the fact that such an edge is practically imperceptible, instead of being noticeably abrupt, as is the case particularly when the sheet A is of substantial thickness. It has been found in practice that the tapered outside edge portion of the present structure serves not only to provide an almost imperceptible exterior terminus, as the wrapper sheet A is rolled upon itself, but admits of such a union between the fibrous material in the two outside layers of batting, that there is little or no tendency for the structure to become unrolled or unfolded during distribution or during the process of applying the roll of batting, for example, to a preformed cover for a piped cushion. This is of particular advantage to the trade inasmuch as the prevalent practice involves the insertion of batting or the like in rolled form after the individual pipes have been sewed in place in the slip or finish structure. The stuffing of the pipes is usually accomplished with the aid of some form of a device for this purpose, and the operation is seriously impaired or interfered with if, for any reason, the roll of batting tends to unfold itself during the process of its insertion in the pipes.

Certain of the advantages incident to the preferred embodiment of the invention described above, may best be noted by a comparison between the present, and the older prevailing rolls of cotton batting heretofore employed in stuffing piped cushions and like articles of upholstery. The heretofore prevailing form of roll in which fibrous material of this sort is sold, consists of a single strip of batting or the like, folded or rolled upon itself, the strip being of substantially uniform thickness throughout its width and length. A roll of such material is readily flattened under its own weight so as to present a cross-section of a flat, oval contour in which, except for the extreme lateral portions of the roll, all of the fibers lie along slightly curved lines of a general horizontal trend, transversely of the roll. It will appear obvious that when such a roll constitutes the filling material for piped cushions and the like, the slight pressure thereon due to any tension of the cover or finish slip with which the cushion is formed, as well as the pressure to which the cushion is ordinarily subjected in use, will tend still further to flatten the structure, eventually compacting it to a point where its depth is only an irreducible minimum.

The present form of roll, in distinction from the older form described, will serve to form in the first instance, a pipe having a high center or one in which the depth or vertical dimension is substantially equal to the breadth or width. Since the roll or pipe formed thereby is shaped by the core C, a comparatively large proportion of its fibers are, in assembly, disposed on end, and thus

effectively resist the extreme compacting effect heretofore so noticeable in the older roll. The tapered margins further provide a structure in which the outside lapping portion, instead of presenting a relatively abrupt terminus such as heretofore found, provides an imperceptible area of union near the terminus of the exterior fold.

The obvious result of forming a roll of batting or other fibrous material, according to the described form and method, is to produce an article of manufacture having more nearly the form and characteristics desired by the trade, and which further reduces compacting, as well as exhibiting no appreciable tendency to unroll, as the article is handled during its distribution and application for upholstery purposes.

I claim as my invention:

1. As an article of manufacture, a roll of fibrous upholstery material formed of a sheet having a tapered margin, and having portions overlying each other, in which the greater proportion of the fibers are of a trend along the depth of the roll.

2. An article composed of fibrous cushion material including a resilient core and a wrapper therefor, formed of separate pieces of material, said pieces being relatively so disposed to cause the greater proportion of the fibers in the article to assume a direction substantially along the depth of the article.

3. An article of cushioning material formed of superposed layers of fibrous material, including an exposed layer having a portion of tapered thickness, said layers being so related as to direct a greater portion of their fibers along the depth of the roll, and a lesser portion of the fibers along the width of the roll.

4. A roll of cushion material including a resilient shaping member of rolled construction and substantially uniform rounded sectional contour, and a separate resilient wrapper portion, the shaping member having an exposed margin engaging the wrapper intermediate its opposite lateral edges, the wrapper having edge portions preformed for self-securement, respectively, to the shaping member, and to the body of the wrapper.

5. A roll of cushion material including an internal fibrous forming portion folded upon itself, in self-securing relation, and having a tapered external margin, and a separate wrapping portion of substantially uniform sectional contour, having margins each angularly spaced about the roll, with respect to said margin of the forming portion, and spaced from each other so as to lie on opposite sides of the completed roll.

6. In an article of cushioning material, adapted as a filler for piped cushions, a core member of resilient fibrous sheet material rolled upon itself to constitute an internal shaping structure, the exterior edge of the core member being of tapered section and in cohering relation with the adjacent material, and a wrapper member formed of a fibrous sheet separate from the core member, the wrapper being folded about the core and shaped thereby, the exterior edges of said wrapper being tapered, and closely and cohesively overlying opposite sides of the subjacent material to form an article of substantially circular secion, in which the fibers are principally directed depthwise of a completed cushion.

7. The herein described method of forming a high center cushion roll, which consists in so rolling a core or shaping portion of fibrous cushioning material, that the greater proportion of the fibers lie depthwise of the core, and in wrapping the shaping portion in a separate sheet of said material so that the margins of the wrapping sheet lie on opposite sides of the core.

8. The herein described method of forming a cushioning structure, which consists in tapering an edge portion of a pad of fibrous cushioning material, in rolling the pad upon itself with the tapered edge outermost, in bringing the tapered edge into coherence with the body of the rolled structure, in folding the rolled structure in a separate wrapper of fibrous cushioning material so that the greater proportion of the fibers of the structure are disposed along the depth, rather than the width, of the cushioning structure, in tapering the exposed edge portion of the wrapper, and in securing the wrapper by causing said exposed edge to cohere to the adjacent portion of the wrapper.

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