April 17, 1962 R. C. HOWELL, JR 3,030,148

ATTACHMENT FOR PADS OF A CHAIR

Filed May 28, 1958 3 Sheets-Sheet 1

Fig. 1.

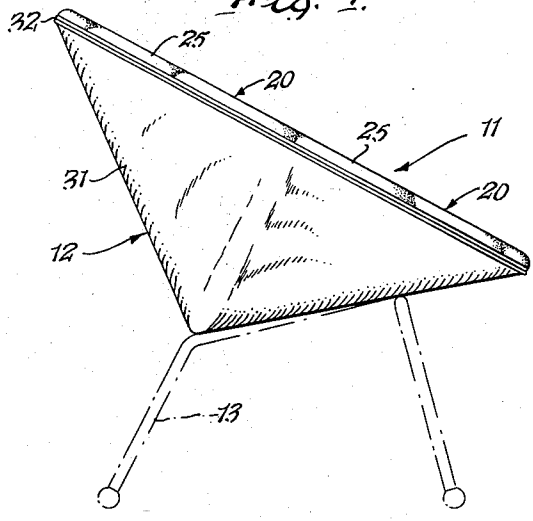
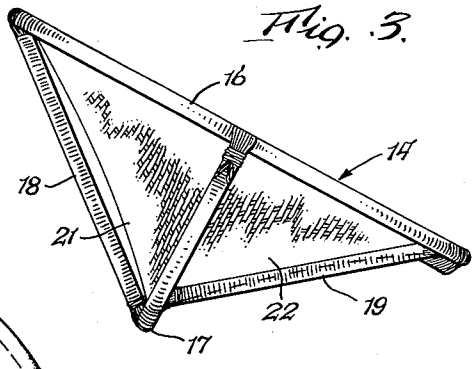


Fig. 3.



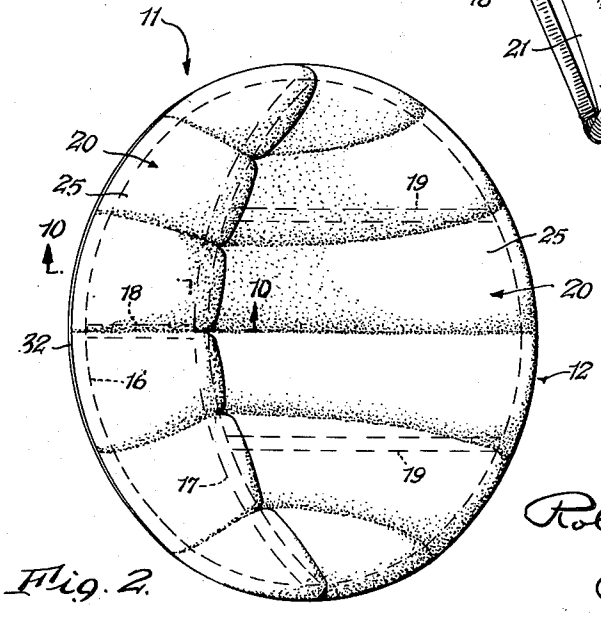


Fig. 2.

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Fig. 4.

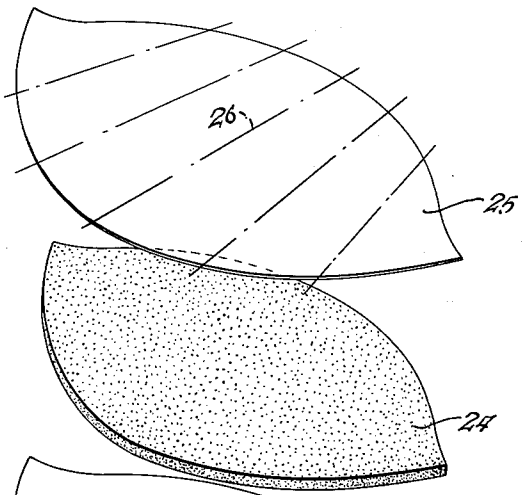


Fig. 5.

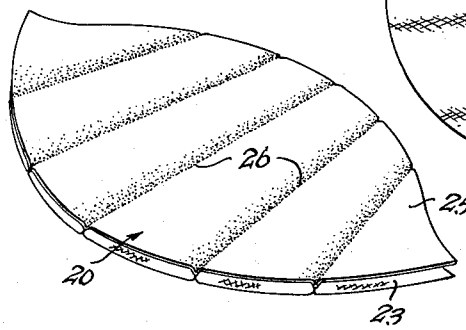


Fig. 7.

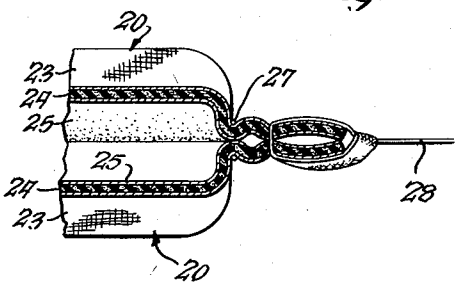
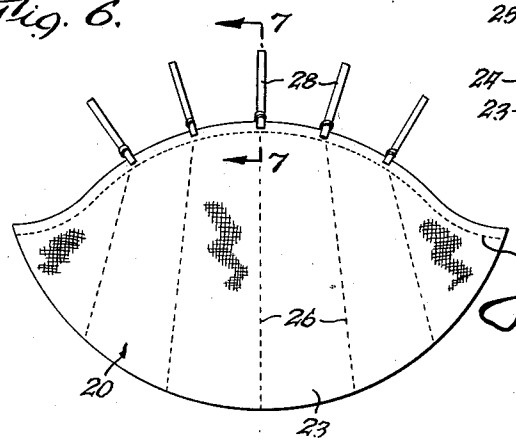


Fig. 6.



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Fig. 8.

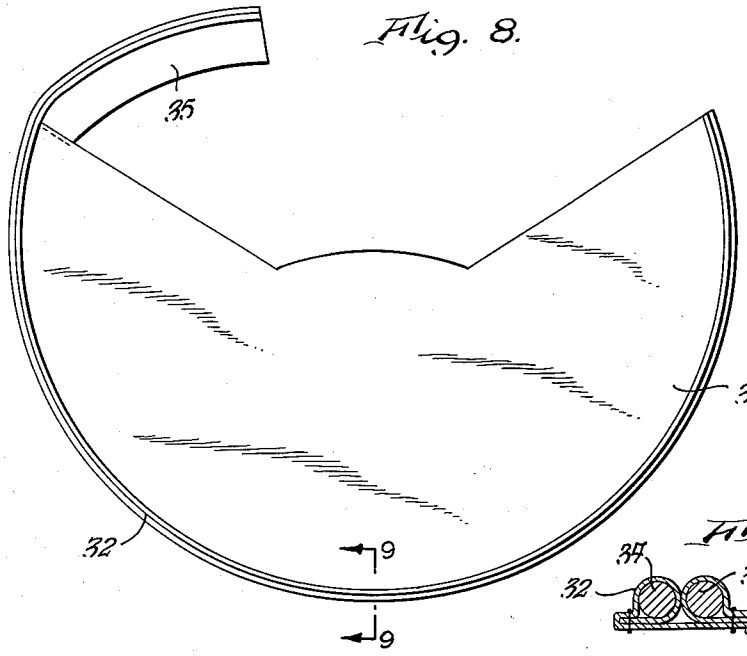
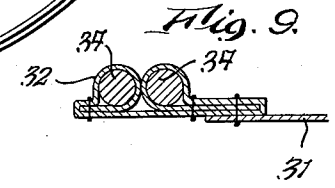


Fig. 9.



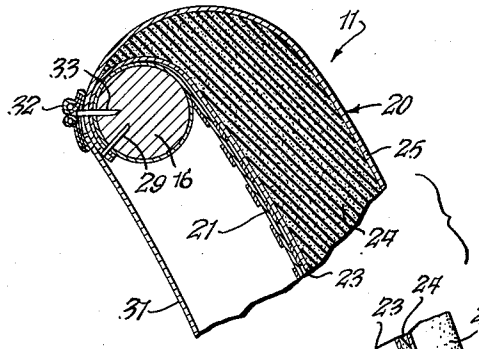
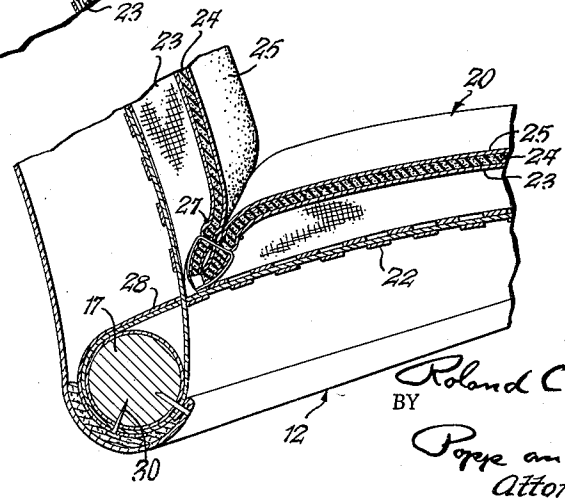


Fig. 10.



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United States Patent Office 3,030,148
Patented Apr. 17, 1962

3,030,148

ATTACHMENT FOR PADS OF A CHAIR

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Filed May 28, 1958, Ser. No. 738,395
7 Claims. (Cl. 297—456)

This invention relates to an upholstered chair, and more particularly to an upholstered basket-shaped chair.

The invention provides for rapid and uniform upholstering, without wrinkles, crevices or over-stressed areas, of basket-shaped chair frames with pads which include a layer of soft, resilient cushioning material protected by a cover. Such basket-shaped chair frames are often made by hand and can vary materially in the shape and dimensions of outline and the shape and dimensions of the seat and back surfaces. The present invention provides for the upholstering of a succession of such basket-shaped frames of varying dimensions and shapes with upholstery covers and cushioning materials pre-cut to identical uniform patterns, but which will fit the wide variations encountered in the shape and dimensions of the chair frame.

Other features of the invention provide a considerable saving in time, labor and material costs, as compared to conventional upholstering, and wherein concentrated seam stresses are avoided.

The principal object of the present invention is to provide an upholstered chair having a smooth, wrinkle-free upholstered surface free from objectionable stresses and reliably secured to basket-shaped chair frames having wide variations in shapes and dimensions.

Another object of the invention is to provide such a chair in which many layers of the upholstering materials can be simultaneously cut to identical pattern by conventional cloth cutting machines and the identical pieces joined to one another and to chair frames of varying dimensions and size to produce the above wrinkle-free and stress-free appearance and form of upholstering. By cutting the upholstering materials identically to pattern a great saving is involved, as compared with tailoring these pieces to each individual basket-shaped chair frame which would be very costly.

Another object of the invention is to provide a simple and rapid attachment for securing the upholstery pads to basket-shaped chair frames of varying forms and dimensions to produce wrinkle-free and stress-free upholstering.

Another object of the invention is to provide such an upholstered chair which is of pleasing and outstanding appearance, both as to the shape and arrangement of the seams, and also as to the finish of all the visible surfaces.

Another object of the invention is to provide such an upholstered chair which is comfortable and luxurious in use, and at the same time is light in weight and low in cost.

Other objects and advantages of the invention will be apparent from the following description and drawings in which:

FIG. 1 is a side view of an upholstered chair embodying the principles of the invention;

FIG. 2 is a plan view of the same;

FIG. 3 is a side view of the basket-shaped frame used in the chair of FIG. 1;

FIG. 4 is an exploded perspective view of certain components forming the upholstery for the seat or back in the chair of FIG. 1;

FIG. 5 is the same as FIG. 4 but showing the components is assembled condition;

FIG. 6 is a plan view of the cover of FIG. 5 with anchoring straps;

FIG. 7 is an enlarged sectional view as seen from line 7—7 in FIG. 6;

FIG. 8 is a plan view of a cover for the underside of the chair of FIG. 1;

FIG. 9 is an enlarged sectional view as seen from line 9—9 in FIG. 8; and

FIG. 10 is an enlarged sectional view as seen from line 10—10 in FIG. 2.

The completed upholstered chair embodying the present invention is indicated generally at 11 and includes an upholstered basket-shaped body or frame indicated generally at 12 and a tubular leg framework indicated generally at 13. The basket-shaped body or rigid frame has a generally round or circular rim defining seat and back surfaces meeting each other along a generally semicircular or arcuate line which terminates at its opposite ends at the rim, the seat and back surfaces being thereby generally in the form of an oval having pointed ends and the seat and back surfaces being generally similar in length and outline, subject, however, to variations, as hereinafter described, in the shape and dimensions of successive chair frames to be upholstered.

The frame or body 12 of the upholstered chair is made from a wood and woven rattan frame indicated generally at 14 and which includes a circular wooden rigid rim frame member 16 and a semi-circular or arcuate wooden rigid frame member 17 which is joined at each end to the rim member 16 and is arranged to extend downwardly normal thereto. A generally vertical back stile 18 is shown as joined at its upper end to the circular rim 16 and at its lower end to the semicircular frame member 17. The frame is shown as including a pair of generally horizontal seat rails 19, each of which is joined at one end to the rim 16 and at its other end to the semicircular frame member 17.

Particularly when hand-made, such a framework can vary greatly in dimensions and form. For example, the circular rim 16 can vary considerably in diameter and can be truly circular or can be oval in any direction or can be egg-shaped in the finished frame. Similarly, the semicircular or arcuate frame member 17 can vary considerably in length and can depart from true semicircular form and be relatively deep or shallow or somewhat lopsided in the completed chair frame.

The chair frame is completed by providing a back surface 21 of flexible material, such as hand-woven rattan or bamboo, which is woven around the upper half of the rim 16 and the semicircular or arcuate frame member 17, this surface thereby being of oval form with pointed ends. Similarly, a seat surface 22 of a flexible material, such as hand-woven rattan or bamboo, is secured at its edges to the lower part of the circular rim 16 and the semicircular frame member 17 so that this seat surface 22 is of substantially the same size and form as the back surface 21. The stile 18 and seat rails 19 are in rear and below, respectively, the woven rattan.

The metal framework 13 providing the legs can be of any suitable form and attached to the basket-shaped frame in any suitable manner, the details of this leg framework and its attachment forming no part of the present invention and hence not being illustrated.

The invention is directed to the upholstery of the basket-shaped frame, as above described, with resilient cushioning material and a cover, the back and seat portions 21 and 22 being upholstered with identical pads indicated generally at 20. Each of these pads comprises a sheet 23 of coarse backing material adapted to lie against the rattan surfaces 21 or 22; a thicker layer 24 of resilient cushioning material which can be of any composition but preferably is in the form of a resilient plastic or latex foam material, and a cover 25. These pieces are preferably all of similar oval form with pointed ends to generally

conform to the back and seat surfaces 21 and 22, but a feature of the invention is that a large number of, say, the covers 25 can be cut from a pile of cover material by means of a cloth cutting machine all to the same form and size and at the same time will ultimately provide a wrinkle- and stress-free cover on the upholstered piece of furniture. This cutting to a pattern also applies to the sheet 23 of coarse backing material and the intermediate layer 24 of resilient cushioning material. Desirably, the intermediate layer 24 of resilient cushioning material is of somewhat smaller size than the layers 23 and 25 so that edges of the latter are available for attachment purposes.

These layers 23, 24 and 25 for each pad 20 are brought together in the manner indicated in FIG. 4 and are joined together by lines 26 of stitching. An important feature of the invention is that these lines 26 of stitching are closely spaced together along one rounding edge of the joined layers 23, 24 and 25 and are spaced further apart along the opposite rounding edge thereof, these lines thereby being in radial or diverging relation to one another and these lines being in symmetrical relationship with reference to the major axis intersecting the pointed ends of the assembled sheets 23, 24 and 25. These lines of stitches 26 produce a succession of arches in both the covers 25 and the coarsely woven backing sheets 23, this providing a limited lengthwise stretchability of the edges of the finished pads in attenuating these arches to greater or less degrees in order to fit to irregularities in the shape or dimensions of the frame 14.

Two pads 20 are used for each chair and these two pads are joined together along corresponding edges by a line 27 of stitching, this line of stitching being along the edges of the pads 20 from which the lines 26 of stitching diverge, and the two pads being secured together with their covers 25 in face-to-face relationship so that the resulting structure is of bag-shaped form with the layers 25 of covering material lining the same and so that the lines of stitching 26 of one pad register with the lines of stitching of the other pad.

Along the edges joined by the stitching 27 a plurality of attaching ties, tapes or cords 28 are affixed to joined pads 20. Each of these ties, cords or tapes 28 is located at the end of each pair of the registering lines 26 of radial stitches, these tie cords or tapes being thereby located at the converging or closely spaced ends of these lines. The ties 28 can be secured in any usual or well-known manner, as by providing a loop in the same as illustrated in FIG. 7.

The upholstery is then placed so that the edges of the pads joined by the stitching 27 and bearing the tapes 28 are arranged adjacent to the intersection or meeting line of the back and seat surfaces 21, 22 of the basket-shaped frame, this being along the semicircular or arcuate frame bar 17. The tapes 28 are then successively drawn through the rattan of the basket-shaped frame 14 alongside semicircular frame bar 17 starting with the center tape and working outwardly toward the two outermost tapes. The ends of the tapes can be conveniently secured to the semicircular frame member 17 by tacks or staples 30. These tapes are passed through the rattan at slightly greater spacing than the spacing of the corresponding ends of the lines of stitching 26 so that the stress upon the pads 20, caused by tightening of the tapes 28, will stretch the seamed edge 27 of the two pads along the meeting line of the seat and back surfaces 21 and 22 of the basket-shaped frame and relieve the pads from all wrinkles, creases or stressed parts which otherwise might occur along the edges of the pads joined by the line 27 of stitching. Also, attaching these ties adapts the stitched edge 27 of the joined pads to variations in the form of the semicircular frame member 17, adjustment of the outward tensioning of the seat pads toward the opposite ends of the semicircular frame member being adjusted to suit the particular shape of the semicircular frame member encountered. It is also important to note that the radial lines of stitching 26 provide a slight excess in the covers 25 and coarse backing sheets 23, this being in the arches produced in these parts by these lines of stitching so that these covers can be stretched slightly to eliminate wrinkles of all kinds along the seams 27.

The two pads 20 so attached along the seamed edges 27 are then spread out along the seat and back surfaces 21 and 22 of the basket-shaped frame 14 and their free edges folded around the circular rim 16 of the chair frame, and these edges can be secured to this rim in any suitable manner, as by the staples 29, care being taken to stress the pads uniformly, both in the direction of the radial stitching 26 and also in the direction of the circular rim 16 so that the pads are attached along their perimeter to the chair frame snugly and free from any wrinkles. It is desirable that the layers 24 of resilient material extend part way around the circular rim 16 of the frame so that those rim parts of the chair against which the user may rest his arms, legs, head or shoulders are resiliently upholstered.

The chair can be completed by covering the underside of the basket-shaped frame 14 with a piece 31 of cloth. This cloth is preferably bi-directional or stretchable in all directions, such as jersey, and is of the laid-out form shown in FIG. 8, having a curved periphery to which a double beaded edging 32 is sewn, the two beads being designated at 34. This edging is of conventional form and hence is not described in detail, the purpose of the two beads being to permit nailing staples 33 between these beads 34, these beads coming together after stapling to conceal the staples. The double beaded edging 32 is continued along the outer edge of a strip 35 attached to one side of the piece 31 and forming a continuation of its periphery. The edging 32 is secured by the staples 33 to the circular rim 16 of the basket frame, the piece 35 extending along the lower front portion of this rim so that the edging 32 extends completely around the rim. The opening left by the cutout portion of the piece 31 accommodates the metal leg structure 13.

The resulting chair has a pleasing appearance and is extremely comfortable, and in particular, has its cover free from unsightly wrinkles or unevenly stressed areas. The upholstering is adapted to basket-shaped frames having wide variations in dimensions and form. Further, the upholstery utilizes materials cut in thick layers and additional savings in cost results from the method in which the ties 28 are passed through the basket-shaped frame and secured to the semicircular frame member 17.

I claim:

1. An upholstered chair, comprising a frame having a rigid rim defining seat and back surfaces having opposite edges which meet each other along a generally arcuate line terminating at opposite ends at said rim and a rigid arcuate frame cross member joined at its ends to said rim and extending along said line, a pair of pads severally conforming to said surfaces and secured together along corresponding edges by a joining seam, said joined pads being arranged to severally cover said surfaces with their other edges arranged adjacent said rim, a succession of fasteners arranged to secure said joined edges of said pads to said frame adjacent said rigid arcuate cross frame member at intervals along said arcuate line, and means securing said other edges of said pads to said frame along said rim.

2. An upholstered chair, comprising a frame having a generally circular rigid rim defining seat and back surfaces having opposite edges which meet along a generally semicircular line terminating at its opposite edges at said rim, whereby said surfaces are of oval form with pointed ends and a rigid arcuate frame cross member joined at its ends to said rim and extending along said line, a pair of pads severally conforming to said surfaces and secured together along corresponding edges

by a joining seam, said joined pads being arranged to severally cover said surfaces with their other edges arranged adjacent said rim, a plurality of fasteners secured to said pads at spaced intervals along said seamed edges and said fasteners being secured to said frame adjacent said rigid arcuate cross frame member along said semicircular line at such spacing as to exert a pull on said seamed edges lengthwise of the seam and away from the center thereof, and means securing said other edges of said pads along said rim.

3. An upholstered chair, comprising a frame having a rigid generally circular rim member, a rigid generally semicircular frame member joined at its opposite ends to said rim member, and means providing seat and back surfaces secured at their edges to and bridging the two spaces between said rim member and semicircular frame member, said means forming each of said seat and back surfaces being thereby of pointed oval form, a pair of pads severally conforming to said surfaces and secured together along corresponding edges by a joining seam, said joined pads being arranged to severally cover said surfaces with said corresponding edges being arranged along said semicircular frame member with their other edges arranged along said rim member, a plurality of flexible ties anchored at spaced intervals to the seamed edges of said joined pads, and extending through said surface forming means along said semicircular frame member, and means securing said flexible ties to said semicircular frame member.

4. An upholstered chair as set forth in claim 3 wherein the flexible ties on opposite sides of the center of the seat frame are under tension in the direction of the ends of said semicircular frame member.

5. An upholstered chair, comprising a frame having a rigid rim defining seat and back surfaces having opposite edges which meet each other along a generally arcuate line terminating at opposite ends at said rim and a rigid arcuate frame cross member joined at its ends to said rim and extending along said line, a pair of pads each having an inner layer of soft, resilient material and an outer layer of cover material, said pads severally conforming in shape to said surfaces and being secured together along corresponding edges by a joining seam, and said joined pads being arranged to cover said surfaces with their other edges arranged adjacent said rim, lines of stitching at spaced intervals through each of said pads extending transversely from said corresponding to said opposite edges thereof and drawing said layers of cover material into a succession of arches along said edges to provide limited stretchability of said edges lengthwise thereof, means arranged to secure said joined edges of said pads to said frame adjacent said rigid arcuate cross frame member at intervals along said arcuate line, and means securing said other edges of said pads to said frame along said rim.

6. An upholstered chair as set forth in claim 5 wherein said lines of stitching of one pad register at said joined edges with said lines of stitching of the other pad, and wherein said fastening means are severally arranged at the registering ends of said lines of stitching.

7. An upholstered chair having a rigid generally circular rim member, a rigid generally semicircular frame member joined at its opposite ends to said rim member, and means providing seat and back surfaces secured at their edges to and bridging the two spaces between said rim member and semicircular frame member, said means forming each of said seat and back surfaces being thereby of pointed oval form, a pair of pads severally conforming to said surfaces and each including a sheet of backing material, a cover, and an interposed layer of soft resilient material, a seam of stitching along corresponding edges of said pads and uniting said pads with their covers in face-to-face relation, said joined pads being arranged to cover said surfaces with their other edges arranged adjacent said rim member, lines of stitching at spaced intervals through each of said pads extending transversely from said corresponding to said opposite edges thereof and drawing said sheets of backing material and covers into a succession of arches along said edges to provide limited stretchability of said edges lengthwise thereof, said lines of stitching through each pad diverging from one another toward said opposite edges of said pads and said lines of stitching of one pad being in register at said joined edges with said lines of stitching of the other pad, means securing said joined edges of said pads at each pair of said registering lines of stitching to said frame at intervals along said semicircular frame member; and means securing said other edges of said pads to said rim member.

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