United States Patent

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[72] Inventors **Arthur L. Van Ryn;**
Ernest R. Balys, both of Grand Rapids, Mich.

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[73] Assignee **American Seating Company**
Grand Rapids, Mich.

[54] **SEAT UNIT**
2 Claims, 5 Drawing Figs.

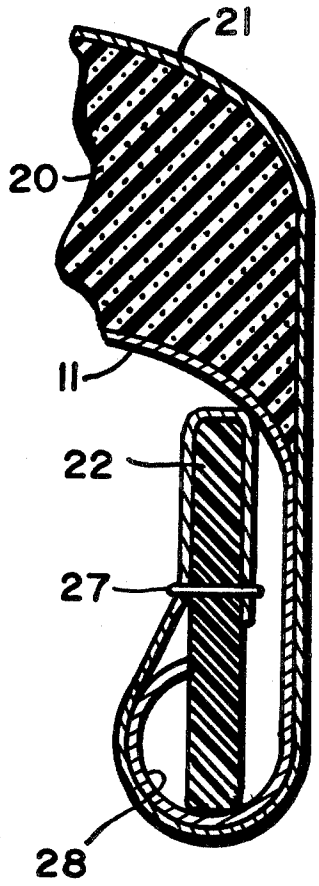
[52] **U.S. Cl.** 297/219, 5/353.1
[51] **Int. Cl.** A47c 31/10
[50] **Field of Search** 297/219, 218, 226, 458, 459, 455, 214, 461; 5/353.1

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Primary Examiner—Francis K. Zugel
Attorney—Dawson, Tilton, Fallon & Lungmus

ABSTRACT: A seat unit for a folding chair wherein the panlike seat is equipped with a foam pad and fabric seat cover removably secured to the underside of the panlike seat.



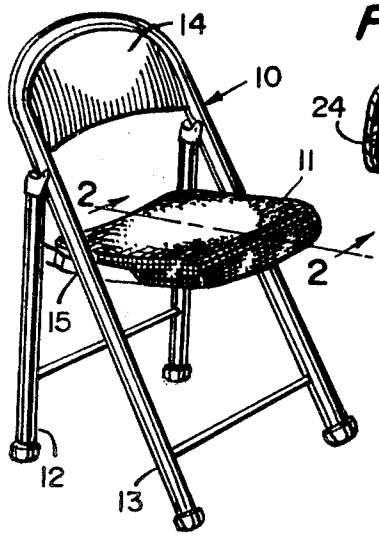
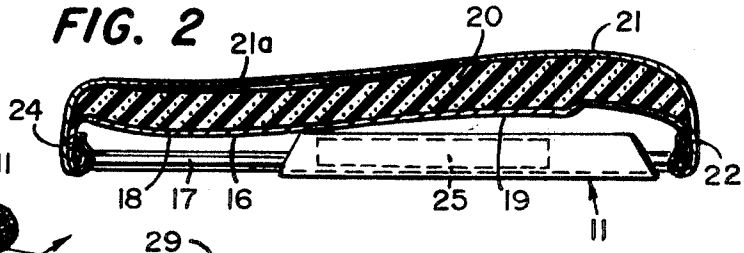


FIG. 1

FIG. 2



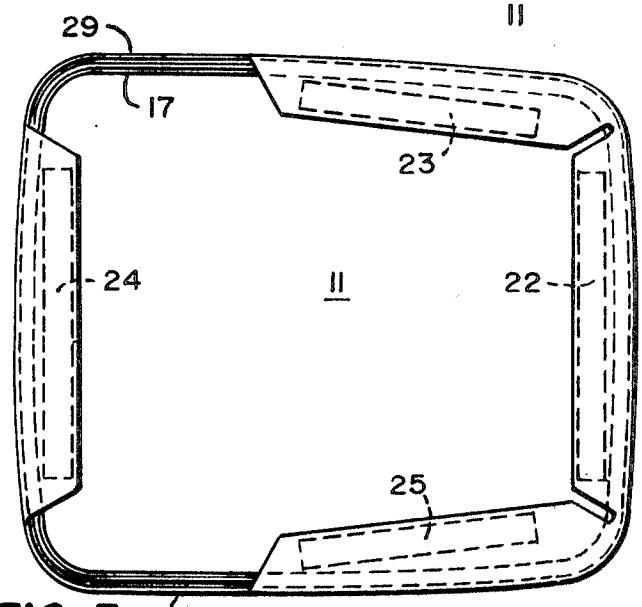


FIG. 3

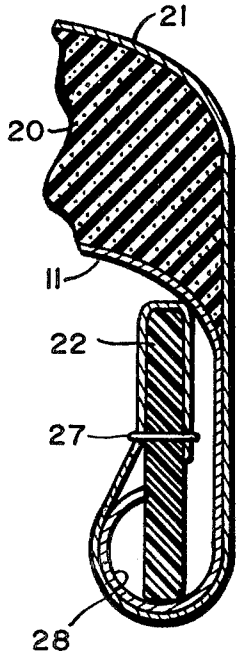


FIG. 5

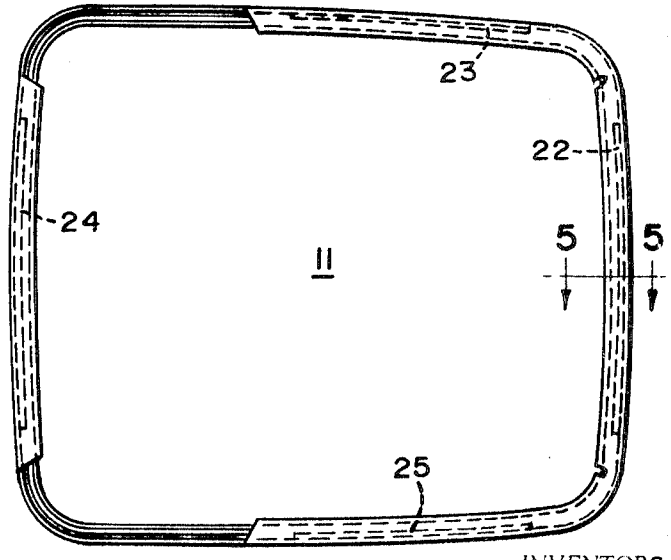


FIG. 4

INVENTORS
Arthur L. Van Ryn
Ernest R. Balys
BY Dawson, Tilton, Fallon, and Lungmus
ATTORNEYS

SEAT UNIT

BACKGROUND AND SUMMARY OF INVENTION

In the past, folding chairs have been employed mainly in utilitarian or institutional type functions. The tops of the seats, if covered at all, have been covered by durable plastic which is permanently affixed. This necessarily limits the texture, appearance and variability of the top covering. According to the instant invention, the drawbacks of the prior art are avoided and a number of heretofore unappreciated advantages are obtained through the combination of a flexible (preferably fabriclike) cover tautly conforming to a foam pad in certain seat areas, and a rigid seat member supporting the pad. The cover is equipped with stiffener means along certain edges to be received within an underlying bead of the rigid seat to produce a secure installation yet one which can be readily changed.

The invention is explained in conjunction with an illustrative embodiment in the accompanying drawing, in which

FIG. 1 is a perspective view of a folding chair to which the instant invention is applied;

FIG. 2 is an enlarged sectional view taken along the sight line 2–2 applied to FIG. 1;

FIG. 3 is a bottom plan view of the seat of FIG. 2 showing cover partially assembled to seat;

FIG. 4 is similar to FIG. 3, with the stiffener elements in place as shown in FIG. 2; and

FIG. 5 is an enlarged fragmentary sectional view of the lower front portion of FIG. 2, taken at 5–5 of FIG. 4.

In the illustration given and with particular reference to FIG. 1, the numeral 10 designates generally a folding chair which is seen to include a seat 11 supported on legs 12 and 13. The chair 10 also includes the conventional back 14, and conventional mechanism as at 15 is provided to pivotally interconnect the seat 11 with the remainder of the chair 10 for folding the seat upwardly to collapse the chair.

Referring now to FIG. 2, it is seen that the seat 11 is essentially an inverted pan having a top 16 and a depending perimetric flange 17. The top 16 is contoured to provide a recessed or depressed portion 18 adjacent the rear which is of a shape to suitably support the ichsial tuberosities of an occupant. Forwardly of the depressed portion 18 is a raised portion 19 which is contoured to support the popliteal area of the chair occupant's thigh.

Overlying the top 16 and essentially conforming thereto in upwardly facing contour is a foam pad 20 which is advantageously constructed of polyurethane foam of a resilient character so as to provide comfortable springiness to the occupant.

Overlying the pad 20 is a cover 21 which advantageously is constructed of flexible material such as a fabric. The fabric can be woven cloth, or plastic or sheeting material of a non-woven character. The cover 21 is equipped with stiffener elements as at 22, 23, 24, and 25 (see FIG. 3). As seen in FIGS. 4 and 5, the stiffener 22 is received within a folded portion 26 of the cover 21, with the folded portion 26 being sewn together and through the stiffener 22 as at 27. It will be appreciated that the showing in FIG. 3 is of the underside of the seat 11 and with the stiffeners of the cover 21 in a position to be inserted into the bead or return flange 28 of the seat 11. FIG. 4 shows the stiffeners inserted into the bead 28.

A consideration of FIG. 3 reveals that the cover 21 is in overlapping relation with the perimetric flange 17 of the seat 11 at the front and rear of the seat and only along the forward portion of the sides. This results in areas 29 and 30 (see FIG. 3) which do not have a portion of the cover extending around the bead 28. This is the one area where the frame of the chair, i.e., the legs 12 and 13, is attached to the seat to permit he folding operation.

In the practice of the invention, we find it advantageous to construct the stiffeners 22—25 of plastic material, such as acrylonitrile butadene styrene, of a width of the order of about one-half inch and a thickness of about one-sixteenth inch, with the fabric connected thereto by a line of stitching approximately midway of the width of the stiffener. As can be appreciated from a consideration of FIG. 5, the bead or return flange portion 28 of the flange 17 of the panlike seat 11 does not provide a snap fit relative to the stiffener, the stiffener being maintained in position by virtue of its inherent stiffness, and the cooperation of the opposite stiffener maintaining the cover 21 in a taut condition. This taut condition is such as to conform the cover 21 to the popliteal area of the seat (as at 19), but results in a slight spacing of the cover relative to the pad 20 as at the area designated 21*a* in FIG. 2. This insures the absence of any draw wrinkles in the cover and provides an additional cushion of air during initial seating in the area of the seat supporting the ichsial tuberosities. Through the development of this advantageous tautness, it is possible to maintain the seat cover in installed condition without the use of cement, staples, or even a clamping action on the part of the flange bead 28.

It is advantageous, however, to secure the foam pad 20 to the seat 11 through the use of a suitable cement so that the pad 20 will be fixed relative to the seat, and removal of the cover 21 for replacement, repair, etc. can be made without disturbing the basic geometry o the seat.

We claim:

1. A seat unit for a chair comprising a seat pan having an integral depending perimetric flange, said flange having an inwardly extending portion defining a generally cylindrical groove interiorly of the depending flange and terminating in a generally horizontal edge facing outwardly toward said depending flange, a resilient foam pad mounted on said pan top, a removable cover for said seat having a flexible panel extending over said pad and in overlapping relation with said return flange portion, and an elongated stiffener in said cylindrical groove having its side in contact with said horizontal flange edge, said cover being secured to said stiffener above said edge and out of contact therewith.

2. The structure of claim 1 in which said cover is formed of woven material and is connected to said stiffener by a line of stitching.