

[54] **CHAIR WITH REPLACEABLE UPHOLSTERY COVER**

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[22] Filed: **Dec. 3, 1971**

[21] Appl. No.: **204,658**

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[52] U.S. Cl.297/218, 297/457, 5/353.1
 [51] Int. Cl.A47c 7/02, A47c 23/00
 [58] Field of Search.....297/218, 219, 223, 454-457;
 5/353.1-353.7, 356; 296/461

[57] **ABSTRACT**

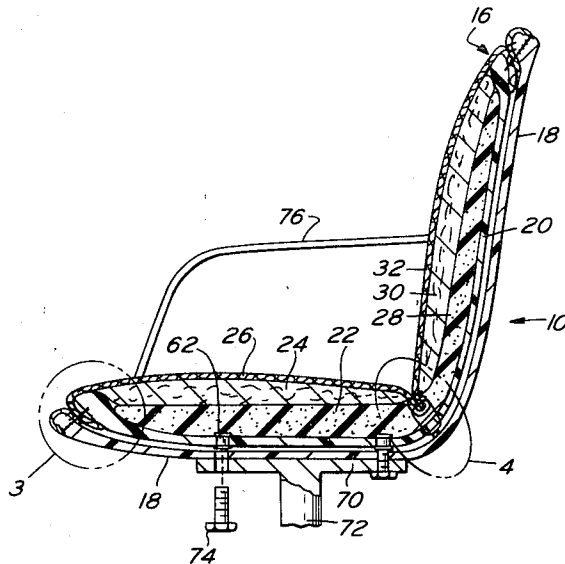
The upholstery cover of a chair is readily removable so that a damaged cover may be rapidly replaced. Either the original cover or any replacement cover may be tufted.

[56] **References Cited**

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7 Claims, 8 Drawing Figures



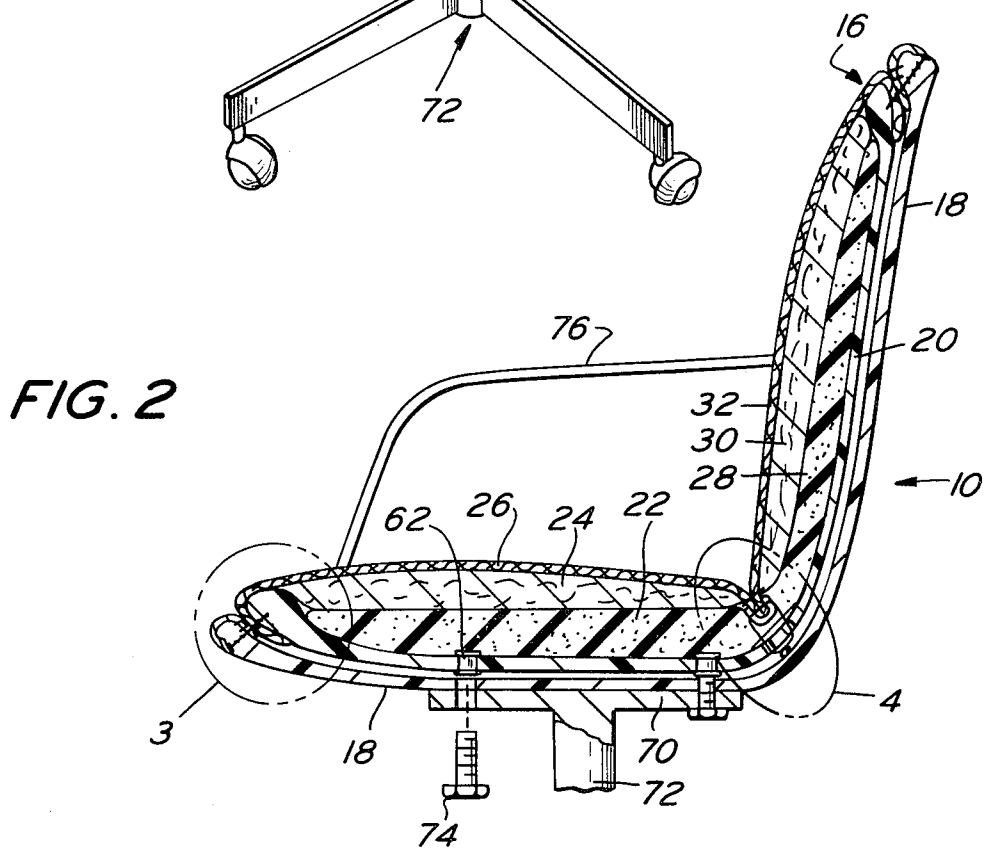
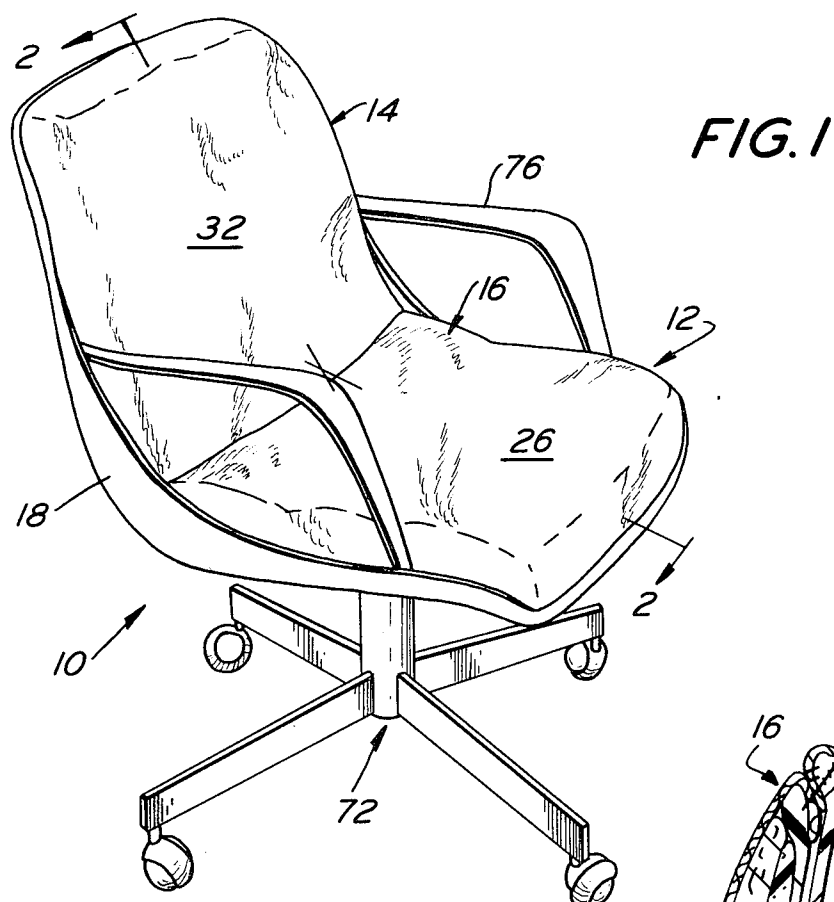


FIG. 3

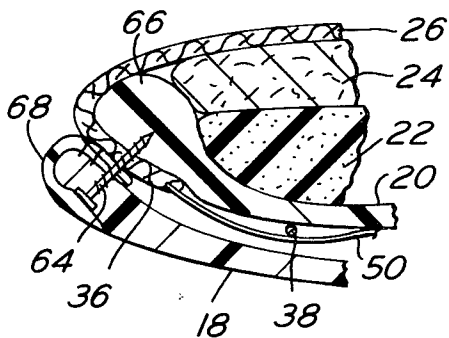


FIG. 4

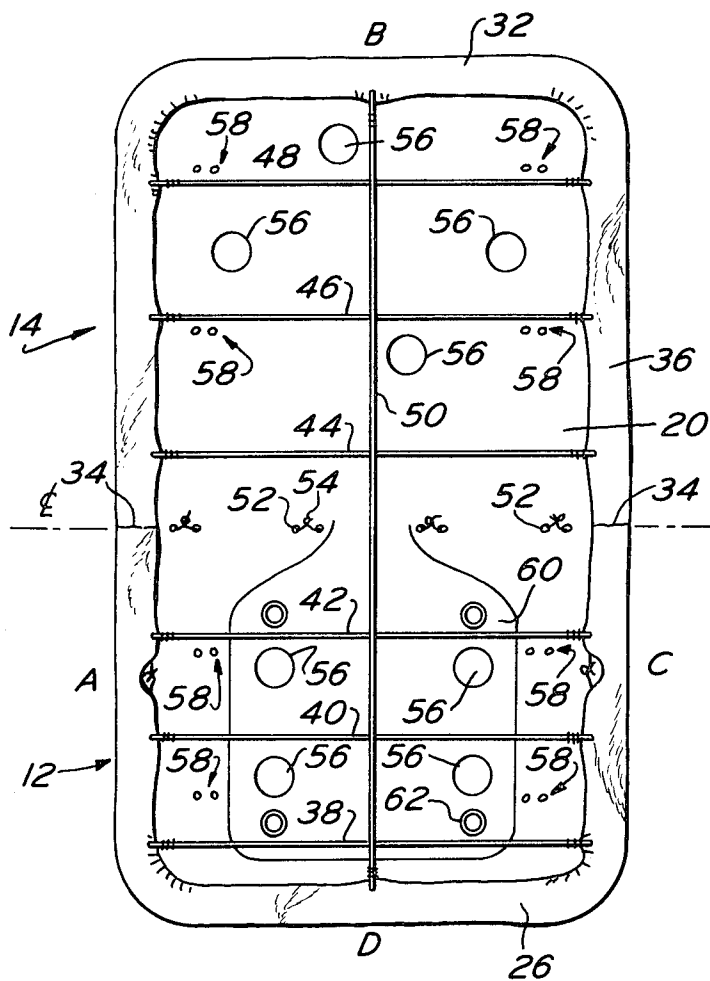
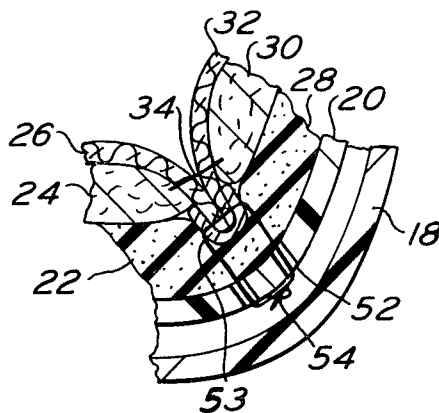


FIG. 6

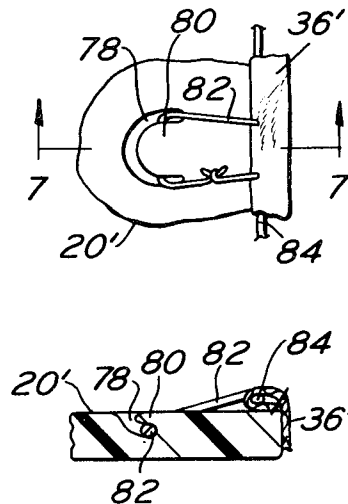


FIG. 7

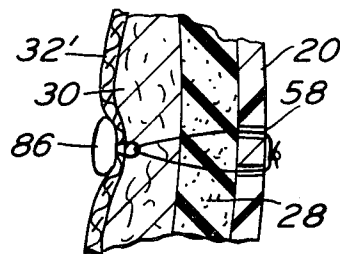


FIG. 5

FIG. 8

CHAIR WITH REPLACEABLE UPHOLSTERY COVER

The chair of the present invention is provided with a replaceable upholstery cover from any one of a wide variety of materials including fabric, vinyl, leather, etc. It is often desirable to replace the upholstery cover. For example, if the upholstery cover is damaged accidentally or by vandals, or if the user merely wishes to change the color or design on the cover, it is not necessary to replace the entire chair in accordance with the present invention.

The present invention is particularly directed to chairs of the double shell type. A chair of this type has a first or outer shell connected to a seat unit. The seat unit includes a rigid inner shell. The upholstery cover has an apron disposed between the shells and releasably held in that position by any convenient means such as strings. In order to replace a cover, it is only necessary to separate the seat unit from the outer shell, untie the string means, and thereby remove the original upholstery cover. Thereafter, a new upholstery cover may be applied and the chair reassembled. No special tools are required.

The seat unit inner shell is preferably constructed in a manner so as to accommodate plain or tufted upholstery covers. Thus, if the original upholstery cover were tufted, it could be replaced by a plain cover or vice versa. The present invention is applicable to chairs with or without arms, chairs having discrete legs, chairs having a swivel support, as well as chairs mounted alongside of one another on a common support.

It is an object of the present invention to provide chairs having upholstery covers which are readily replaceable in a facile manner.

It is another object of the present invention to provide a chair having a cover which may be readily replaced without the use of special tools or skilled labor.

It is another object of the present invention to provide a chair having a replaceable upholstery cover constructed in a manner whereby the fact that the cover is replaceable is not ascertainable from the appearance of the chair.

Other objects will appear hereinafter.

For the purpose of illustrating the invention, there is shown in the drawings a form which is presently preferred; it being understood, however, that this invention is not limited to the precise arrangements and instrumentalities shown.

FIG. 1 is a perspective view of a typical embodiment of the chair of the present invention.

FIG. 2 is a sectional view taken along the line 2—2 in FIG. 1.

FIG. 3 is an enlarged sectional view showing the details within the dotted circle at the lefthand end of FIG. 2.

FIG. 4 is an enlarged sectional view showing the details in the dotted ellipse at the righthand end of FIG. 2.

FIG. 5 is a rear view of the seat unit showing both the seat portion and the back portion.

FIG. 6 is a partial plan view of a rear face of the inner shell showing an alternative means for releasably mounting the replaceable cover.

FIG. 7 is a sectional view taken along the line 7—7 in FIG. 6.

FIG. 8 is a sectional view showing the use of a tufted cover in place of a plain cover.

Referring to the drawing in detail, wherein like numerals indicate like elements, there is shown in FIG. 1 a chair designated generally as 10 which is a typical embodiment of the present invention. As pointed out above, the chair may have any one of a wide variety of different supports and need not have arms as illustrated. The chair 10 includes a seat portion designated generally as 12 and a back portion designated generally as 14.

The chair 10 includes an outer shell 18 and a seat unit 16, each of which has a seat portion and a back portion. The outer shell 18 is semi-rigid and self-sustaining. The outer shell 18 is preferably made from a polymeric plastic material such as high density polyethylene.

The seat unit 16 includes an inner shell 20. Shell 20 is slightly smaller than shell 18 and conforms to the shape thereof. The inner shell 20 is juxtaposed to the outer shell 18. See FIG. 2. The shell 20 is preferably a rigid polymeric plastic such as rigid expanded polystyrene. Other materials having comparable properties may be substituted for the materials of shells 18 and 20.

The seat portion of the seat unit 16 includes cushioning between the inner shell 20 and the cover 26. As illustrated, the cushioning includes a layer of foam polymeric plastic material or rubber 22 adhesively bonded to the upper surface of the inner shell 20 with a layer of padding 24 overlying the same. In a typical chair, the padding 24 would be of a conventional material.

The back portion of the seat unit 16 includes cushioning juxtaposed to the inner shell 20 and a cover 32. The cushioning is preferably a layer of foam polymer plastic material or foam rubber 28, with a layer of padding 30 superimposed thereover. The layers 22 and 28 may be one integral layer, but are preferably two separate layers, each adhesively joined to the inner shell 20. The covers 26 and 32 are preferably stitched together by stitching 34 as shown more clearly in FIG. 4.

Referring to FIG. 5, it will be seen that the covers 26 and 32 have an apron 36 which overlies the peripheral edge of the inner shell 20. As will be apparent from FIG. 3, the apron 36 will be disposed between the inner shell 20 and the outer shell 18. A means is provided to releasably hold the covers in such disposition while maintaining the covers under tension and at the same time being of such a nature so as to preclude detection that the cover is replaceable merely by observation of the chair.

Thus, a plurality of strings 38, 40 and 42 extend from opposite sides of the apron across the seat portion of the inner shell 20. Likewise, a plurality of strings 44, 46, and 48 extend across the back portion of the inner shell 20. A longitudinal string 50 extends from the bottom front portion of the apron to the top back portion of the apron. A greater or lesser number of strings may be utilized depending upon a variety of factors including the nature of the material of the cover. For example, the number of strings shown could be satisfactory if the covers were of leather or suede. Fewer strings could be necessary if the cover were fabric and still fewer strings could be necessary if the cover were of vinyl plastic material.

A hem is provided at the peripheral edge of the covers 26 and 32. A first drawstring extends through the hem from point A to point B to point C in FIG. 5. A second drawstring extends through the hem from point A to point D to point C. At points A and C, the adjacent ends of the drawstrings are drawn tightly and tied together.

At the area where the back portion of the inner shell 20 merges with the seat portion, a series of pairs of holes 52 are provided in the inner shell 20. See FIGS. 4 and 5. Strings 54 extend through overlapping edges of the covers 26 and 32, and overlying reinforcement strip 53 of material such as vinyl, fabric, etc., and extend through the holes 52 where they are tied together as shown more clearly in FIGS. 4 and 5. The strings 52 prevent the adjacent edges of the covers 26 and 32 from pulling away from the inner shell 20.

The inner shell 20 is preferably molded so as to have a plurality of large air holes 56 in the back portion as well as a number of air holes in the seat portion. The air holes 56 in the seat portion are preferably located in the flat area designated 60 in FIG. 5. The inner shell 20 is also preferably molded with a similar arrangement of pairs of tufting holes 58 in the back and seat portions thereof. If the cover is of a non-tufted type, the holes 58 will not be used. If the cover is of a tufted type, drawstrings will extend from the tufts through the holes 58 and have their ends tied together. Since every inner shell has the series of tufting holes in the proper location, replacement of a cover with one of a tufted type may be accomplished at any time.

In the flat area 60, the seat portion of the inner shell is preferably provided with a plurality of threaded inserts 62. As illustrated, four such threaded inserts are provided. The outer shell 18 is provided with a hole aligned with each of the threaded inserts. The chair seat portion is releasably interconnected with a mounting plate 70 having a leg support means 72 of any conventional configuration. The plate 70 has holes aligned with the holes in the outer shell 18 and the threaded insert 62. Bolts 74 join the plate 70 to the threaded inserts 62.

As shown more clearly in FIG. 3, the outer shell 18 is joined to the seat unit 16 in each of the four corners thereof by means of a fastener such as sheet metal screw 64. A U-shaped trim member 68 may be provided on the outer periphery of the outer shell 18 for aesthetic purposes. Trim 68 may be a U-shaped piece of vinyl which is stapled at one end to the inner surface of shell 18. Trim 68 extends around the peripheral edge of the outer shell 18 and is preferably of sufficient length so as to overlie and conceal the head of the screw 64. The trim 68 is sufficiently flexible so that the edge thereof may be bent away so as to expose the head of screw 64. The inner shell 20 terminates at its periphery at a bead lip 66 of sufficient body material so as to accommodate the end portion of the shank on the screw 64.

The chair 10, if desired, may be provided with arms 76. If arms are provided, they are preferably of the type as shown which are wider intermediate their length than they are at their ends. The free ends of the arms 76 are preferably fastened to the adjacent peripheral edge of the inner shell 20 in any convenient manner.

In FIGS. 6 and 7, there is illustrated an alternative means for mounting the cover in a removable manner.

The apron 36', identical with apron 36, is hemmed and provided with a drawstring 84 comparable to the drawstrings described above. The rear surface of the inner shell 20 is provided with recesses 78 at spaced points therealong having a horseshoe shape so as to define integral hook portions 80. Strings 82 extend from the hem 36' and around the hook portions 80 to releasably mounted the cover in a position so that it may be in tension and yet readily removable without the necessity of special tools.

The covers 26 and 32 need not be separate and discrete covers, but may be one integral piece having a central portion overlapped on itself and joined by stitching such as stitching 34. In order to remove a cover, the bolts 74 are removed so as to separate the chair from its support. Thereafter, the trim 68 is peeled back at the appropriate locations so as to permit removal of the four screws 64. Thereafter, the outer cover 18 is no longer interconnected with the seat unit 16. Hence, the seat unit 16 may be positioned so that it lies on any support surface to expose the apron 36 and the drawstrings as shown in FIG. 5. This may be accomplished in several minutes without the need of any special tools.

When applying a cover, the strings are tied so as to be taut. During removal of a cover, it is easier to merely cut the strings, thereby separating the cover from the remainder of the seat unit. Replacement covers are provided with new strings. A new cover may be applied to the seat unit and the strings tied to the old seat unit in a short period of time. Thereafter, the seat unit 16 may be joined to the outer shell 18 by the screws 64 or other fastener means and the thusly reassembled chair reconnected to its support by way of the bolts 74.

While the seat unit 16 has been described above and illustrated in the drawings as being connected to the outer shell 18 by means of four screws 64, it will be appreciated that a greater or lesser number of screws may be utilized as desired. Further, it will be appreciated that other means may be utilized to mechanically interconnect the seat unit 16 to the outer shell 18 so as to supplement the coupling which exists by way of the bolts 74 being threaded to the inserts 62 on the inner shell 20.

If a cover 32' of the tufted type is substituted for cover 32, a string will extend from a loop on the button 86 through the holes 58 in the shell 20 as shown in FIG. 8.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof and, accordingly, reference should be made to the appended claims, rather than to the foregoing specification as indicating the scope of the invention.

I claim:

1. A chair comprising an outer shell of self-sustaining material, a seat unit overlying the outer shell, said seat unit including a rigid inner shell juxtaposed to said outer shell, means coupling said shells to a leg support means, cushioning means over at least a portion of said inner shell, a removable upholstery cover overlying the cushioning, said cover having an apron at opposite sides of its periphery, said apron being disposed between said shells, and string means releasably coupling opposing portions of the apron in a position

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whereby the original upholstery cover may be removed and replaced in a facile manner.

2. A chair in accordance with claim 1 wherein said means coupling said cover apron in a position between said shells includes strings connected to the apron and disposed between said shells.

3. A chair in accordance with claim 1 wherein said means for releasably coupling said cover aprons in a position between said shells includes strings extending through holes in the inner shell.

4. A chair in accordance with claim 1 wherein said means for releasably coupling the apron in position between said shells includes strings extending from the apron around hook portions on the inner shell.

5. A chair in accordance with claim 1 wherein said apron is provided with a hem, and drawstrings in said hem.

6. A chair in accordance with claim 1 wherein said means for releasably coupling the cover apron in position between said shells includes parallel strings extending from the apron on one side to the apron on the other side, and a drawstring in a hem on the periphery of said apron.

7. A chair in accordance with claim 1 wherein said inner shell has sets of holes extending therethrough in its back portion as well as its seat portion to facilitate the use of a cover of the tufted type.

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