Nov. 26, 1963 G. C. MULHAUSER, JR 3,111,689

PADDING SHELL CHAIRS

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Fig. 1

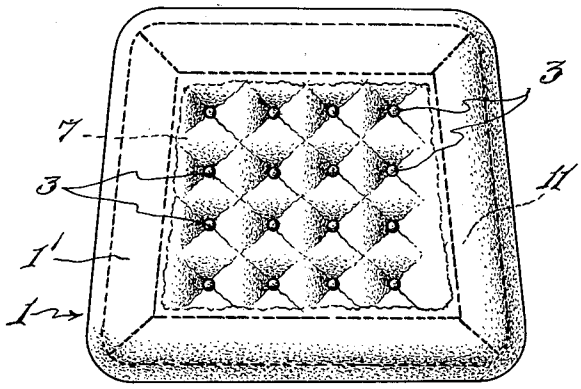
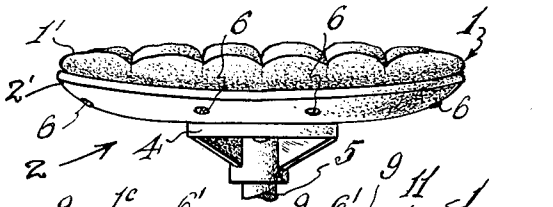


Fig. 2



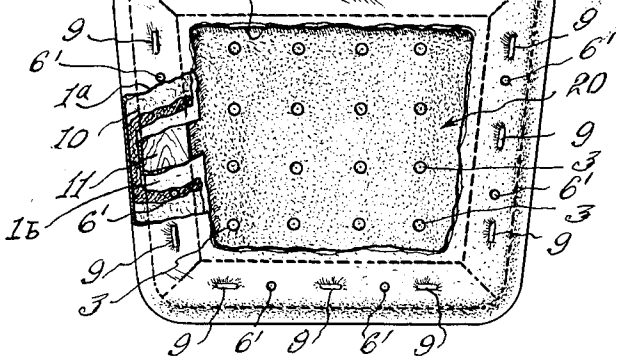


Fig. 3

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Fig. 4

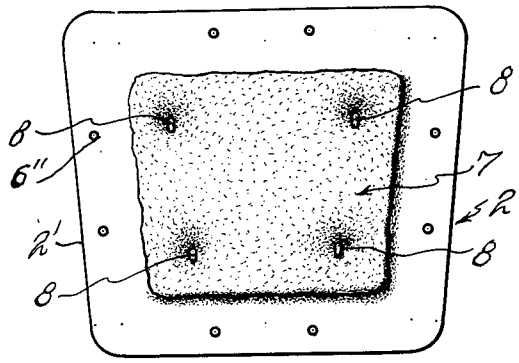
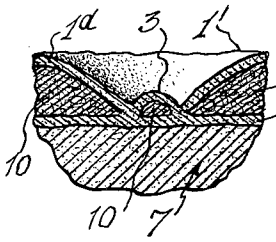


Fig. 7



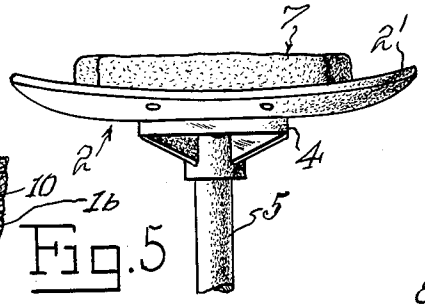
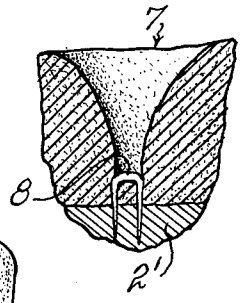


Fig. 5

Fig. 8



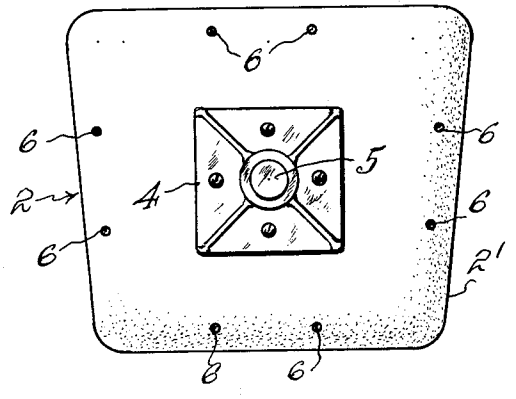


Fig. 6

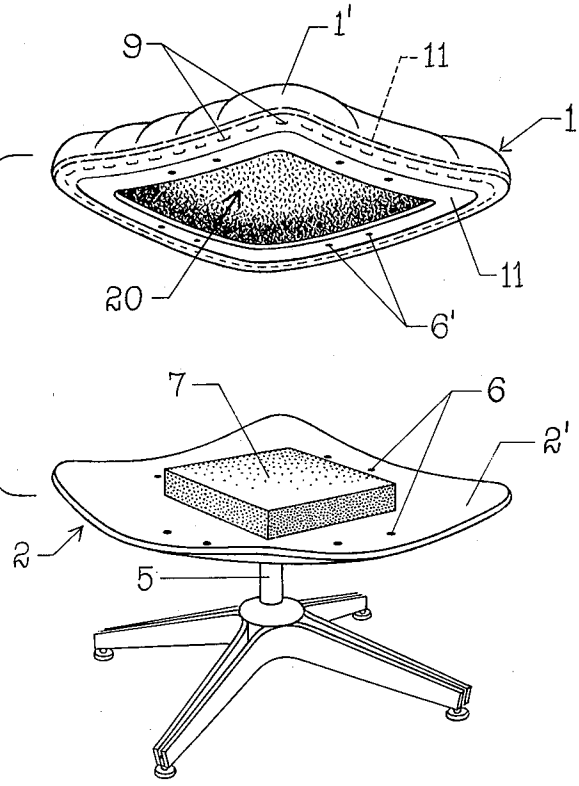
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FIG. 9



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PADDING SHELL CHAIRS

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2 Claims. (Cl. 5—345)

This invention deals with the padding of chairs, the bodies of which are made of molded formable rigid sheet shells of plywood and similar materials. More specifically, it relates to chairs having seat cushions and similar portions padded with heat-sealed sheet padding, and wherein the shell is provided with a centrally-disposed pad section which fits into the bottom hollow section of a framed cushion.

For many years, chairs have been padded by upholstery, wherein the chair frame is covered with springs and padding material, after which it is covered with a durable sheet, such as leather, plastic, cloth, and the like, which sheet material usually is tacked onto the chair frame by brads. In recent years, chairs have been made of formed shells. For example, a sheet of plywood, or other laminated sheet material, is formed in a press into a shape contoured to fit the body, and this shell then is supported on the floor by metal rods, or the like, attached thereto. Also, there recently has been introduced for general use a sheet padding material made of two sheets of thermoplastic resin, such as polyvinyl chloride, polystyrene, or the like, having a layer of cotton padding or similar material disposed therebetween, the entire laminate being held together by heat-sealing together, at intervals, the two layers of thermoplastic resin in a manner to resemble tufting.

One of the objects of the present invention is the combining of the two aforesaid materials to produce a low-priced chair which is much cheaper to produce than upholstered chairs. Another object is to make chairs which, although cheap to produce, are at least as strong, as serviceable, and as attractive as the conventional upholstered chairs.

Although, for the purposes of description of this invention, a chair seat is used as an example, it is to be understood that the invention is not to be limited thereto, but is applicable to chair backs, ottomans, and similar units.

The invention will be more readily understood by reference to the accompanying drawings in which FIGURE 1 depicts a top or plan view of a chair seat made in accordance with the present invention. A front elevation thereof is shown in FIGURE 2, while a bottom view thereof (without the shell and support, and with a portion of the padding cut away) is illustrated in FIGURE 3. FIGURE 4 presents a plan view or top portion of the shell to which the centrally-disposed pad is attached, while a front elevation thereof is depicted in FIGURE 5. A bottom view of the entire seat is presented in FIGURE 6. FIGURE 7 is a cross-sectional view of a portion of the seat padding of FIGURES 1–3, showing how the heat-sealing of the thermoplastic sheets effects the tufting. FIGURE 8 represents a front cross-sectional view of a portion of the seat pad of FIGURES 4 and 5, showing how the pad is stapled onto the shell. FIGURE 9 illustrates an exploded front view of the seat described in the previous figures. Similar numerals refer to similar parts in the various figures.

Referring again to the drawings, numeral **1** represents generally the chair cushion, while the shell and attached mounting is generally designated by the numeral **2**. Cushion **1** is made by first making a frame **11** of a single or multiple pieces of wood or similar material, over which is spread the sheet padding **1'** made of a lamination of cotton padding or similar padding material **10**, disposed

between sheets **1***a* and **1***b* of thermoplastic sheeting, the entire lamination being held together by heat-sealing the two thermoplastic sheets at tufts **3**, as in FIGURE 7. This sheeting, after being spread over the top of the cushion, is attached to the bottom of frame **11** by means of staples **9**, or by other suitable means, and the ends **1***c* of the padded lamination **1'** are cut off at the inside edge of or on the bottom surface of frame **11**, so as to leave open the center frame area **20** (FIG. 3).

On the top surface of shell **2'**, which is made of laminated plywood or other suitable thin but rigid material, and in the central portion thereof, is placed (FIGS. 4–5) a pad **7** of soft, resilient material, such as foamed polyurethane, foam rubber, and the like, its thickness and dimensions being such as to enable easily fitting of said pad **7** into the space **20** inside of frame **11** in the bottom portion of cushion **1**. Pad **7** preferably is attached to shell **2'** by means of staples **8**, or similar means, as shown in FIGURE 8.

Thereafter, cushion **1** is placed on shell **2'** and over pad **7** so that the pad fits into space **20** inside frame **11** (FIG. 2), and the cushion is affixed to the shell by screws **6** which penetrate holes **6''** in the shell and enter wooden frame **11** at **6'**. As is apparent from FIGURES 2 and 5, shell **2** of the seat generally is provided with a mounting plate **4** attached to the bottom thereof. Also, fixed to the mounting is swivel rod **5** which is inserted into the leg hub to which the legs of the chair are attached.

It will be noted that, upon assembly as outlined heretofore, a cushioned seat is produced with a minimum amount of labor and in a very short time. Yet, an upholstered chair of exceptional utility, appearance, and durability is achieved.

I claim:

1. A cushion for a chair comprising, in combination,
a solid shell body of rigid sheet material and having a top surface,
a resilient pad of size smaller than said shell body and attached on the center top area thereof above the top surface of said body,
a pad frame having external dimensions about those of the cushion and disposed on said shell around said pad,
a laminated cushioning material covering the top of said pad and the top and sides of said frame and having its ends attached to the bottom of said frame, and
attaching means for attaching said frame to said shell.

2. A cushion for a chair comprising, in combination,
a solid shell body of rigid sheet material and having a top surface,
a resilient pad of size smaller than said shell body and attached on the center top area thereof above the top surface of said body,
a wooden pad frame having external dimensions and thickness about those of the cushion and disposed on said shell around said pad,
a laminated cushioning material covering the top of said pad and the top and sides of said frame and having its ends attached to the bottom of said frame, and
attaching means for attaching said frame to said shell.

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