July 11, 1950 P. M. VIRTUE 2,514,685

CHAIR BACK

Filed Sept. 21, 1948

Fig. 1.

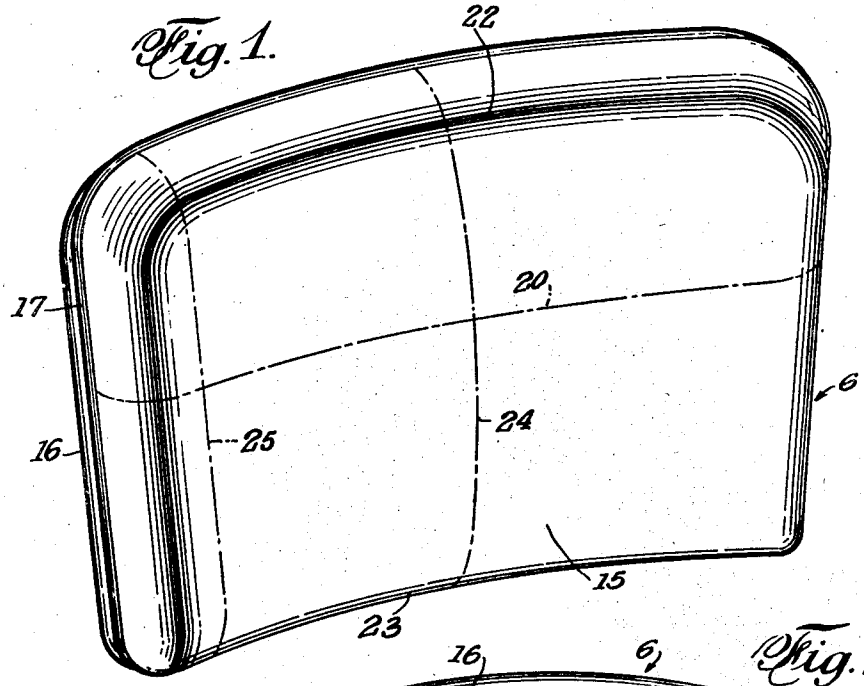


Fig. 2.

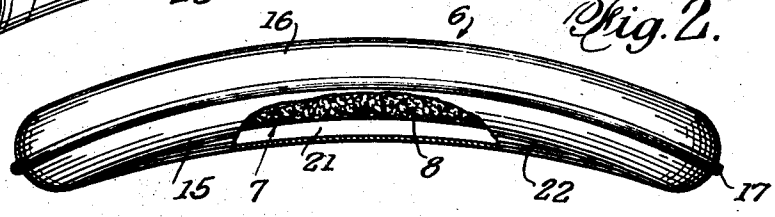


Fig. 3.

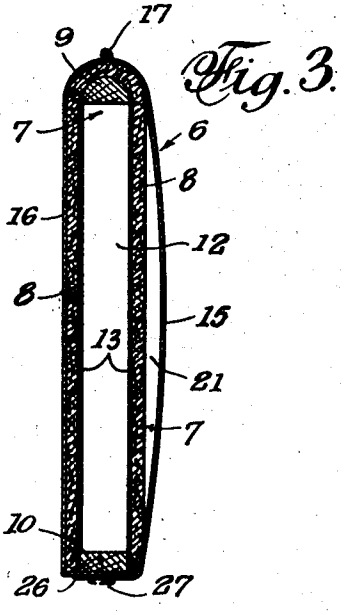
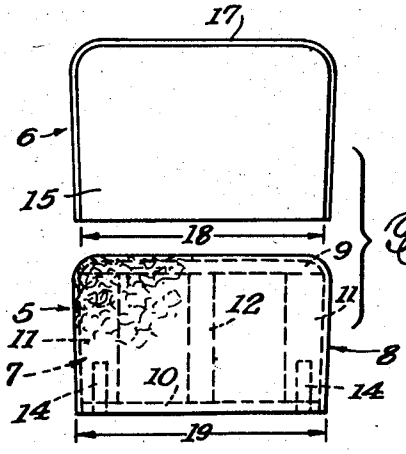


Fig. 4.



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CHAIR BACK

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5 Claims. (Cl. 155—178)

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This invention relates to chair back construction and has for an object to provide a back that resiliently supports the occupant of a chair or seat of which said back is a part.

Another object of the invention is to provide a transversely curved padded chair back that is provided with an elastic cover which is so formed and stretched that the front panel element of said back is rendered taut yet elastic so the same is spaced from the core of the chair back whereby support is afforded by the elasticity of the front panel rather than by the padding within the construction.

A further object of the invention is to provide a curved chair back, as above indicated, in which the elastic cover is initially made as an envelope that is smaller than the core it fits over and is so stretched at assembly that the front panel of said cover has vertical and transverse curvatures that are different than the curvatures of the core at similar points.

The invention also has for its objects to provide such means that are positive in operation, convenient in use, easily installed in a working position and easily disconnected therefrom, economical of manufacture, relatively simple, and of general superiority and serviceability.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description. However, the drawings merely show and the following description merely describes one embodiment of the present invention, which is given by way of illustration or example only.

In the drawings, like reference characters designate similar parts in the several views.

Fig. 1 is a perspective view of a chair back according to the present invention.

Fig. 2 is a top plan view thereof, partly broken away.

Fig. 3 is a vertical sectional view through the middle of the chair back.

Fig. 4 is a reduced scale front view of the core and cover of the back before the same are assembled.

The chair back that is illustrated in the drawing comprises, generally, a core 5 and a cover 6 for said core.

The core that is shown comprises, generally, a frame 7 and padding 8 completely covering said frame except the bottom edge thereof.

The frame 7 is formed to have a transverse concave curvature and slightly tapered side edges, being larger across the top than across the bottom. Said frame is advantageously fabricated of wood elements that are dowelled together and, as shown, comprises a top rail 9, a bottom rail 10, and ribs 11, and a center rib 12. In practice, a chip board panel 13 is secured to each side of the wood frame thus provided, the front and rear sides and the top and side edges being thus suited to be covered by the padding 8 which is applied in sheet form around the frame. The back frame is provided with two sockets 14 for dowels that extend from a chair frame, said dowels, thereby, connecting the chair back and the chair frame.

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The cover 6 is formed as an envelope that is open at the bottom and comprises front and rear panels 15 and 16, respectively, connected along a welted seam 17 that extends up one side, along the top and down the other side. The panels 15 and 16 are made of a stretchable material such as plastic film that does not embody a mesh fabric, although a film-coated or impregnated fabric may be used provided the same has elasticity to a degree essential to the present construction. Several types of plastic film may be employed of which one known in the trade as "Duran" possesses the desired properties.

The envelope cover is made up to be somewhat smaller than the core 5, the opening 18 of the former being smaller than the base dimension 19 of the latter. The other comparable dimensions of the envelope and core are in like proportion. Due to the elasticity in the cover, the same is readily stretched when fitted over the core and, when released, seeks its initial size and draws back tautly over the core. In so doing, the back panel 16 of the cover smoothly stretches over the convex back face of the core. However, the front panel 15 so stretches that, as exemplified by the typical transverse line 20, said panel is pulled taut to be spaced, as at 21 from the concave face of the core. Thus, it will be obvious that the front upper and lower edges 22 and 23, respectively, have substantially the curvature of the core, whereas, as the middle of the back, along line 20, is approached, the curvature becomes increasingly flatter.

This tautening of the front panel 15 results in the vertical middle thereof assuming a convex curvature as shown by line 24, as seen in Fig. 3, although at the sides, as indicated by line 25, the panel 15 is vertically straight. Thus, while the core is concavely transversely curved and vertically straight, the front panel, insofar as the support surface thereof is concerned, has a transverse but shallower or flatter concave curvature and a vertical convex curvature that is unsup-

ported by the core padding 8 to provide a trim, unwrinkled and elastic back support that will retain its tautness under all conditions of normal use.

After assembly of the core and cover, the edges defining the cover opening are folded over as at 26 and secured in place by suitable tacks 27.

While the invention that has been illustrated and described is now regarded as the preferred embodiment, the construction is, of course, subject to modifications without departing from the spirit and scope of the invention. It is, therefore, not desired to restrict the invention to the particular form of construction illustrated and described, but to cover all modifications that may fall within the scope of the appended claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A chair back comprising a transversely and concavely curved core, and a unitary elastic enveloping cover thereover formed with a panel that has a shallower transverse and concave curve whereby the middle portion of same is spaced from the core and the remainder supported by the core only at the peripheral edges of the latter.

2. In a chair back having a transversely curved core, an elastic taut cover over said core and comprising an envelope initially smaller than the core and formed of front and rear panels, the rear panel, at all points, tightly hugging the convex face of the core and the front panel tightly hugging the peripheral portions of the concave face of the core, the middle portion of said front panel being spaced from the core.

3. In a chair back having a transversely curved core, an elastic taut cover over said core and comprising an envelope initially smaller than the core and formed of front and rear panels, the rear panel, at all points, tightly hugging the convex face of the core and the front panel tightly hugging the peripheral portions of the concave face of the core, said front panel being stretched beyond its initial relaxed state to assume a transverse curvature that is flatter than that of the core, whereby the middle portion of said latter panel is spaced from the core.

4. A chair back comprising a transversely curved frame having padding lining both the convex and concave sides of said frame, said frame and padding constituting a core, and an envelope of sheet material having limited elasticity and formed of front and back panels connected around the periphery of said panels to leave a bottom opening in said envelope, said envelope being initially smaller than the core and requiring to be stretched when the core is entered in said bottom opening, the envelope panel covering the convex side of the core, tightly hugging the same throughout, and the panel covering the concave side of the core, tightly hugging the peripheral portions of the padding on the latter side and being stretched beyond its initial relaxed state to assume a transverse curvature that is flatter than that of the concave side of the core, the middle portion of said front panel, thereby, being spaced from the core, the bottom edges of the front and back panels being secured to the bottom edge of the core.

5. A chair back comprising a transversely curved frame having padding lining both the convex and concave sides of said frame, said frame and padding constituting a core, and an envelope of sheet material having limited elasticity and formed of front and back panels connected around the periphery of said panels to leave a bottom opening in said envelope, said envelope being initially smaller than the core and requiring to be stretched when the core is entered in said bottom opening, the envelope panel covering the convex side of the core, tightly hugging the same throughout, and the panel covering the concave side of the core, tightly hugging the peripheral portions of the padding on the latter side and being stretched beyond its initial relaxed state to assume a transverse curvature that is flatter than that of the concave side of the core, the middle portion of said front panel, thereby, being unsupported by the core, the bottom edges of the front and back panels being secured to the bottom edge of the core.

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