Oct. 4, 1960 W. W. GOOD 2,954,820

CHAIR STRUCTURE

Filed Sept. 12, 1958

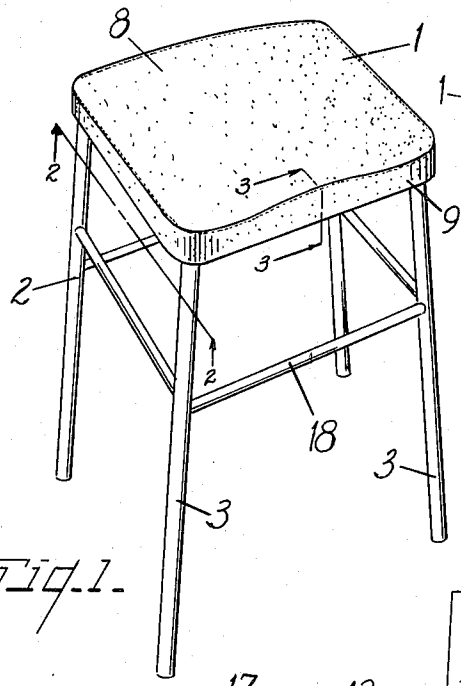


Fig. 1.

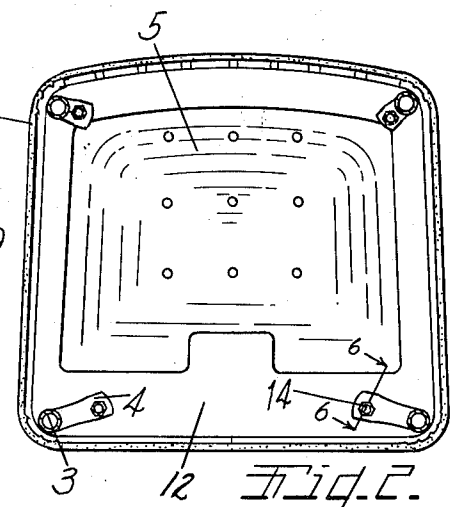


Fig. 2.

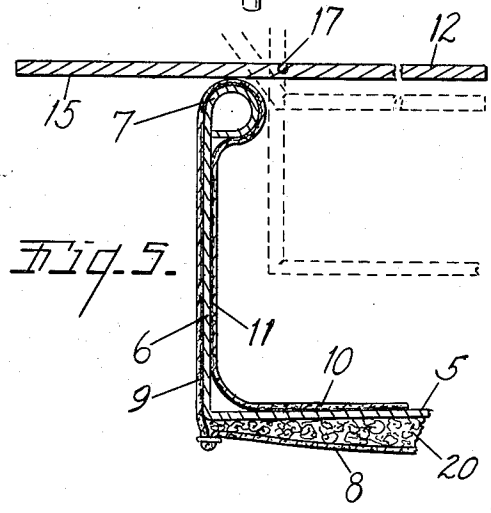


Fig. 5.

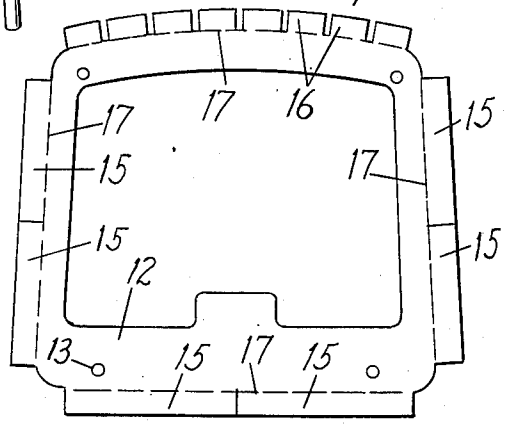


Fig. 4.

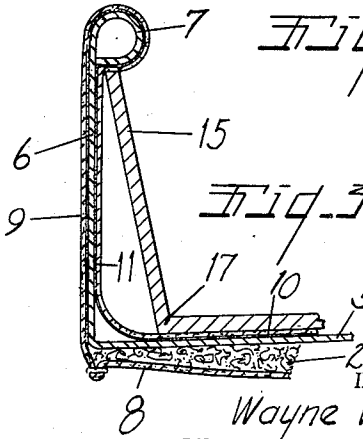


Fig. 3.

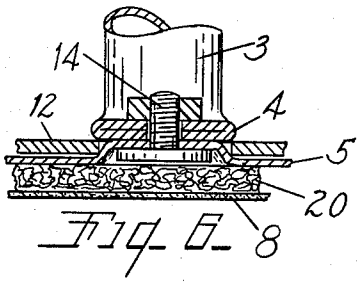


Fig. 6.

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2,954,820

Patented Oct. 4, 1960

2,954,820

CHAIR STRUCTURE

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Filed Sept. 12, 1958, Ser. No. 760,605

10 Claims. (Cl. 155—184)

This invention relates to chair structures and includes features particularly desirable for chairs of the stool or backless type, although broadly considered desirable for use in certain types of chairs commonly provided with backs.

The main objects of this invention are:

First, to provide a chair structure comprising a leg unit and an upholstered seat unit in which the units may be quickly and easily assembled.

Second, to provide a chair seat structure of the upholstered type in which the upholstery cover is securedly retained without the use of tacks or binding strips or the like.

Third, to provide a chair seat structure comprising body member of sheet stock such as sheet steel and one in which the upholstery is effectively secured.

Fourth, to provide a chair assembly having these advantages in which the attachment of the leg unit to the seat unit serves to add to the security of the attachment of the upholstery to the seat unit.

Fifth, to provide a chair structure having these advantages in which the parts may be economically produced and quickly assembled.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is defined in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of a chair embodying my invention.

Fig. 2 is a horizontal section on a line corresponding to line 2—2 of Fig. 1 illustrating the relationship of the seat unit and the supporting leg unit and certain details of the upholstery securing means.

Fig. 3 is an enlarged fragmentary view in vertical section on a line corresponding to line 3—3 of Fig. 1 with the seat unit in inverted position.

Fig. 4 is a plan view of the upholstery clamp member in the flat or extended form, the scoring being conventionally indicated.

Fig. 5 is a fragmentary sectional view corresponding to that of Fig. 3 illustrating certain structural details and certain steps in the assembling of the parts.

Fig. 6 is a fragmentary view in section corresponding to line 6—6 of Fig. 2 illustrating details of the connection for the leg unit to the seat unit.

In the accompanying drawing I have illustrated my invention in a preferred embodiment thereof in which the seat unit designated generally by the numeral 1 is formed as a completely assembled unit.

The leg unit 2 comprising legs 3 connected by the rungs 18 is desirably formed of tubular stock, the legs having laterally disposed flattened end portions 4 adapted to receive attaching bolts carried by the seat unit or forming a part of the seat unit.

The seat unit comprises the body member 5 desirably of sheet metal stock and having continuous downturned edge flanges 6. These flanges are of substantial width

and serve to rigidify or reinforce the body member, to provide upholstery securing members, to provide handholds and contribute to the appearance. These flanges 6 terminate in inturned beads 7 preferably of substantially cylindrical section as illustrated. The seat has a dished or concave central portion conventionally illustrated in Fig. 2. This provides a recess for the padding 20 of fibrous material. This may be such as is commonly used as upholstery padding. The upholstery covering 8 is arranged over the padding material and is provided with edge portion 9 embracing the flanges 6 of the seat body member and wrapped around the beads 7 thereof and extending down on the inner side of the flange with portions 10 lapped upon the under side of the seat body member 5 as is illustrated in Figs. 3 and 5.

The flanges are desirably provided with a fibrous covering adhered thereto and indicated at 11 in Figs. 3 and 5. The upholstery covering is retained by means of the clamp member designated generally by the numeral 12 and desirably formed of fiber board stock. The clamp member 12 is disposed on the under side of the seat body member in overlapping relation to the edge portions 10 of the upholstery covering as illustrated in Fig. 3 and is provided with holes 13 positioned to receive the leg attaching bolts 14.

The arms 4 of the legs are disposed on the upper side of the clamp member so that they serve as a supporting means for the clamp member. The clamp member is provided with flanges 15 on its front and side edges and flanges 16 on its rear edge. The flanges are formed by scoring the stock of which the clamp member is formed as indicated at 17, Figs. 3 and 4.

A plurality of the flanges 16 are provided to permit curving of the rear edge of the clamp member to the curved edge of the chair. These flanges 15 and 16 are of such vertical width that their edges may be disposed in snubbing engagement with the upholstery covering wrapped around the beads on the edge of the flanges so that the upholstery is effectively clamped or secured around the bead. This snubbing engagement also forces the body portion of the clamp member against the edge portion 10 of the upholstery covering lapped upon the under side of the seat body member as illustrated in Fig. 3. The upholstery is thus secured without the use of tacks or adhesive and the clamping securing means is entirely concealed. This arrangement greatly facilitates the assembling of the upholstery upon the seat body member which may be commercially produced as a stamping.

The legs of the leg unit are connected by the rungs 18 thereby providing an assembled leg unit consisting of the leg and connecting rungs. The arms 4 are integral parts of the legs and are disposed so that the legs may be positioned in the corners of the flanges as illustrated in Fig. 2. The arms 4 are, as stated, clampingly secured on the underside of the clamp member 12 which, with its engagement of the holes therein with the bolts 14, prevents any lateral shifting of the upholstery clamp member which would affect the snubbing engagement of the flanges 15 and 16 with the upholstery covering member.

I have illustrated and described my invention in an embodiment which is highly desirable viewed from several angles, for example shape and the amount of upholstery padding used. The upholstery may be readily varied as to material and color as may be desired. While the beads or inturned edge portions of the flange may be varied in cross section the beads of the curved sections, as illustrated, are desirable as they furnish a smooth round edge for grasping the chair.

I have not illustrated various modifications and adaptations of the variation in structural details which may be desirable for particular designs or the like as it is be-

lieved that this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described the invention what is claimed as new and desired to secure by Letters Patent is:

1. A chair comprising a leg unit including connected legs having inwardly projecting seat unit attaching arms at their upper ends, a seat unit comprising a seat body member of sheet stock having a continuous downwardly projecting edge flange of substantial width terminating in an inturned continuous bead, said seat body member having a concave upholstery receiving portion of less depth than the width of said flange, upholstery padding material arranged on said seat body member, an upholstery cover of flexible stock disposed over said padding material with its edges wrapped around said seat body member flange and lapped upon the under side of the seat body member, leg attaching bolts fixedly connected to said seat body member to depend therefrom in inwardly spaced relation to the flange at the corners thereof, the outer ends of the bolts being substantially above the plane of the lower edges of the flange, and a frame-like upholstery clamp member underlying and clampingly engaging the edges of the upholstery lapped upon the under side of the seat body member and having flanges swingably connected to the edges thereof and disposed with their edges in snubbing thrust engagement with the upholstery covering wrapped around and in supported engagement with the said bead, said upholstery clamp member having holes therein receiving said leg attaching bolts, said seat unit being disposed upon said leg unit with the upper ends of the legs positioned in the corner thereof and with their attaching arms receiving and secured to said seat unit by said bolts thereon and in clamping engagement with said upholstery clamp member.

2. A chair comprising a leg unit including connected legs having inwardly projecting seat unit attaching arms at their upper ends, a seat unit comprising a seat body member of sheet stock having a continuous downwardly projecting edge flange of substantial width terminating in an inturned continuous bead, said seat body member having a concave upholstery receiving portion of less depth than the width of said flange, upholstery padding material arranged on said seat body member, an upholstery cover of flexible stock disposed over said padding material with its edges wrapped around said seat body member flange and lapped upon the under side of the seat body member, leg attaching bolts fixedly connected to said seat body member to depend therefrom, and a frame-like upholstery clamp member underlying and clampingly engaging the edges of the upholstery lapped upon the under side of the seat body member and having flanges swingably connected to the edges thereof and disposed with their edges in snubbing thrust engagement with the upholstery covering wrapped around and in supported engagement with the said bead, said seat unit being disposed upon said leg unit with their attaching arms receiving and secured to said seat unit by said bolts thereon and in clamping engagement with said upholstery clamp member.

3. A chair comprising a leg unit including connected legs having inwardly projecting seat unit attaching arms at their upper ends, a seat unit comprising a seat body member of sheet stock having a continuous downwardly projecting edge flange of substantial width terminating in an inturned continuous bead, said seat body member having a concave upholstery receiving portion of less depth than the width of said flange, upholstery padding material arranged on said seat body member with relatively thin portions thereof extending to the edge of said body member, a fibrous covering material adhered to said seat body member flange, an upholstery cover of flexible stock disposed over said padding material with its edges wrapped around said seat body member flange and lapped upon the under side of the seat body member, leg attaching bolts fixedly connected to said seat body member to depend therefrom, and a frame-like upholstery clamp member underlying and clampingly engaging the edges of the upholstery lapped upon the under side of the seat body member and having flanges swingably connected to the edges thereof and disposed with their edges in snubbing thrust engagement with the upholstery covering wrapped around and in supported engagement with the said bead, said seat unit being disposed upon said leg unit with their attaching arms receiving and secured to said seat unit by said bolts thereon and in clamping engagement with said upholstery clamp member.

4. A chair comprising a leg unit including connected legs having laterally projecting seat unit attaching arms at their upper ends, a seat unit comprising a seat body member having a continuous downwardly projecting edge flange of substantial width terminating in an inturned continuous edge portion, an upholstery seat cover disposed with its edges wrapped around said seat body member flange and lapped upon the under side of the seat body member, leg attaching bolts fixedly connected to said seat body member to depend therefrom in inwardly spaced relation to the flange at the corners thereof, and an upholstery clamping member of sheet fiber board stock underlying and clampingly engaging the edges of the upholstery lapped upon the under side of the seat body member and having integral flanges hingedly connected to the edges thereof and disposed with the edges in snubbing thrust engagement with the upholstery covering wrapped around and in supported engagement with the said interned edge of said flange, said upholstery clamp member having holes therein receiving said leg attaching bolts, said seat unit being disposed upon said leg unit with the upper ends of the legs positioned in the corners thereof and with their attaching arms receiving and secured to said seat unit by said bolts thereon and in clamping supporting engagement with said upholstery clamp member.

5. A chair comprising a leg unit including connected legs having laterally projecting seat unit attaching arms at their upper ends, a seat unit comprising a seat body member having a continuous downwardly projecting edge flange of substantial width terminating in an inturned continuous edge portion, an upholstery seat cover disposed with its edges wrapped around said seat body member flange and lapped upon the under side of the seat body member, leg attaching bolts fixedly connected to said seat body member to depend therefrom in inwardly spaced relation to the flange at the corners thereof, and an upholstery clamp member of sheet fiber board stock underlying and clampingly engaging the edges of the upholstery lapped upon the underside of the seat body member and having integral flanges hingedly connected to the edges thereof and disposed with the edges in snubbing thrust engagement with the upholstery covering wrapped around and in supported engagement with the said inturned edge of said flange, said seat unit being disposed upon said leg unit with their attaching arms receiving and secured to said seat unit by said bolts thereon and in clamping supporting engagement with said upholstery clamp member.

6. A chair seat unit comprising a body member having continuous downwardly projecting edge flange of substantial width terminating in an inturned continuous bead, upholstery padding material arranged on said body member, an upholstery cover of flexible stock disposed over said padding material with its edges wrapped around said seat body member flange and lapped upon the under side of the seat body member, leg attaching bolts fixedly connected to said seat body member to depend therefrom in inwardly spaced relation to the flange at the corners thereof, the outer ends of the bolts being above the plane of the lower edges of the flange, and a

frame-like upholstery clamp member underlying and clampingly engaging the edges of the upholstery lapped upon the under side of the seat body member and having flanges swingably connected to the edges thereof and disposed with their edges in snubbing thrust engagement with the upholstery covering wrapped around and in supported engagement with the said bead, said upholstery clamp member having holes therein receiving said leg attaching bolts.

7. A chair seat unit comprising a body member having continuous downwardly projecting edge flange of substantial width terminating in an inturned continuous bead, upholstery padding material arranged on said body member, an upholstery cover of flexible stock disposed over said padding material with its edges wrapped around said seat body member flange and lapped upon the under side of the seat body member, and a frame-like upholstery clamp member disposed on the underside of said seat body member within said flanges in upward thrust clamping engagement with the upholstery cover lapped upon the under side of the seat body member and having flanges swingably connected to the edges thereof and disposed with their edges in snubbing thrust engagement with the upholstery covering wrapped around and in supported engagement with the said bead.

8. A chair seat unit comprising a body member having continuous downwardly projecting edge flange of substantial width terminating in an inturned continuous bead, said seat body member having a concave upholstery receiving portion of less depth than the width of said flange, upholstery padding material arranged on said seat body member with relatively thin portions thereof extending to the edge of said body member, a fibrous covering material adhered to said seat body member flange, an upholstery cover of flexible stock disposed over said padding material with its edges wrapped around said seat body member flange and lapped upon the under side of the seat body member, and an upholstery clamp member underlying and clampingly engaging the edges of the upholstery lapped upon the under side of the seat body member and having flanges swingably connected to the edges thereof and disposed with their edges in snubbing thrust engagement with upholstery covering wrapped around and in supported engagement with the said bead.

9. A chair seat unit comprising a seat body member having downwardly projecting edge flanges terminating in inturned continuous edge portions, an upholstery seat cover disposed over said seat body member and with its edges wrapped around its flanges and lapped upon the under side of the seat body, and an upholstery clamp member disposed on the underside of said seat body member within said flanges in upward thrust clamping engagement with the upholstery cover lapped upon the under side of the seat body member and having flanges on its edges in downward snubbing thrust engagement with the upholstery cover wrapped around and in supported engagement with the inturned edges of said flanges, said seat unit being provided with leg connecting bolts projecting through said upholstery clamp member adjacent the corners of the seat body member.

10. A chair seat unit comprising a seat body member having downwardly projecting edge flanges terminating in inturned continuous edge portions, an upholstery seat cover disposed over said seat body member and with its edges wrapped around its flanges and lapped upon the under side of the seat body, and an upholstery clamp member disposed on the underside of said seat body member within said flanges in upward thrust clamping engagement with the upholstery cover lapped upon the under side of the seat body member and having flanges on its edges in downward snubbing thrust engagement with the upholstery cover wrapped around and in supported engagement with the inturned edges of said flanges.

References Cited in the file of this patent

UNITED STATES PATENTS

1,374,716	Bloom et al.	Apr. 12, 1921
1,694,935	Cable	Dec. 11, 1928
2,333,311	Greitzer	Nov. 2, 1943
2,499,956	Hord	Mar. 7, 1950
2,760,562	Fisher	Aug. 28, 1956
2,815,800	Rocker et al.	Dec. 10, 1957
2,825,394	Hamilton	Mar. 4, 1958
2,851,090	Hamilton	Sept. 9, 1958

FOREIGN PATENTS

599,981	Great Britain	Mar. 25, 1948
1,078,291	France	May 5, 1954