

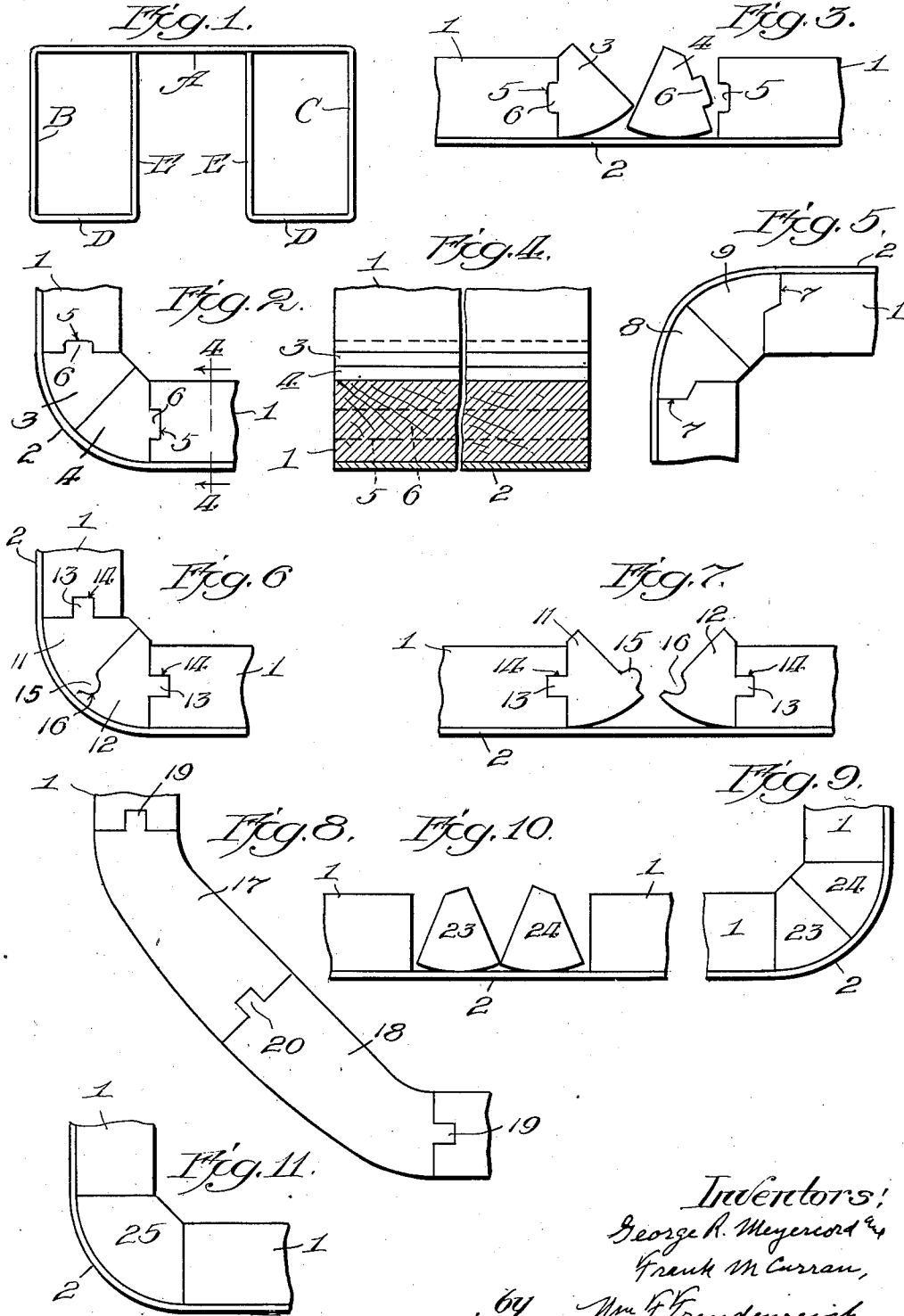
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G. R. MEYERCORD ET AL

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CORNER CONSTRUCTION FOR FURNITURE OR THE LIKE

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Inventors:
George R. Meyercord &
Frank M. Curran,
by Wm. F. Freudenreich,
Atty.

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CORNER CONSTRUCTION FOR FURNITURE OR THE LIKE

George R. Meyercord, Chicago, Ill., and Frank M. Curran, Grand Rapids, Mich., assignors, by mesne assignments, to Reconstruction Finance Corporation, a Federal corporation

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The present invention has for its object to make it possible easily and conveniently to form a plywood structure, in which there are two or more walls arranged at any desired angle to each other and joined by rounded corners each of which has any desired curvature or combination of curvatures from a single plywood panel the facing veneer of which extends continuously from end to end across the corner or corners.

A further object of the present invention is to make it possible to produce such structures as the one just described from preformed panels that may be shipped in a flat condition and simple filler means serving as corner post devices, which may also be pre-formed; thus making it easy to ship the material for such a structure and the setting up of the structure at any remote point a comparatively simple matter.

The present invention may be used to advantage in the manufacture of furniture which it may be desired to construct without leaving visible corner posts but having the face veneer extend continuously past the corners, although the invention may be used wherever two or more walls form angles with each other and it is desirable or advisable to have a common continuous facing of wood veneer or veneers for all of the walls.

In carrying out our invention we construct a plywood panel of the proper length to form the several walls desired, providing the panel with gaps or slots cut across the same through the thickness of what may be termed the backing member; each slot or gap being of the proper width to permit the facing veneer or veneers to be bent into the desired shape. Suitable filling pieces or strips shaped to fill the contracted slots or gaps after the bends or folds have been made are also provided. The slotted flat panel and the filling pieces adapted to cooperate therewith may be shipped to the furniture factory or other place of assembly and be there assembled with a suitable adhesive interposed between some or all of the pairs of faces that are meeting faces in the finished product.

The various features of novelty whereby our invention is characterized will hereinafter be pointed out with particularity in the claims; but, for a full understanding of the invention and of its objects and advantages, reference may be had to the following detailed description taken in connection with the accompanying drawing, wherein:

Figure 1 is a diagrammatic view showing a single panel folded or bent to produce the body portion of a rectangular desk of the type having a tier of drawers at each end; Fig. 2 is a hori-

zontal section, on a larger scale, through one of the corners of the structure shown in Fig. 1; Fig. 3 is a view of the parts appearing in Fig. 2, showing the panel in its flat condition and the filling strips in the slot or gap; Fig. 4 is a section that may be said to be taken on line 4—4 of Fig. 2 on the same scale and illustrating the same construction as that appearing in Fig. 2; Fig. 5 is a view similar to Fig. 2, showing a modification; Fig. 6 is a view similar to Figs. 2 and 5, showing a still further modification; Fig. 7 is a view similar to Fig. 6, showing the parts while the panel is still in a flat condition, but after the filling strips have been inserted in the slot or gap preparatory to bending the panel; Fig. 8 is a view similar to Figs. 2, 5 and 6, showing a further modification; Fig. 9 is a view similar to Fig. 2, showing a construction in which there are no tongues or grooves or similar interlocks; Fig. 10 is a view similar to Fig. 9, showing the panel in its flat condition; and Fig. 11 is a view similar to Fig. 2, showing a corner in which there is only a single filling strip.

Referring to Fig. 1 of the drawing, A, B and C represent the back wall and the two end walls of a desk; D, D are two short front wall sections through which are adapted to extend the two sets of drawers at the ends of a desk; and E, E are two walls parallel with the walls B and C, closing the inner sides of the end drawer compartments. If desired, all of these walls may be formed of a single panel so that the facing veneer extends continuously over all six of the exposed corners.

In Figs. 2, 3 and 4 there is shown one form of corner construction and the method of making the same. Thus, the panel may be said to consist of a backing member 1 and a facing member 2. The backing member is usually and preferably made of plywood. The facing member 2 may consist of one or more thicknesses of thin wood veneer. If the grain of the facing veneer runs across the line of bend or fold in the panel, the member 2 may consist of a single layer, if desired. On the other hand, if the direction of the grain is more or less parallel with the line of bending or folding it will usually be necessary to reinforce the outer facing layer with an inner layer or ply of thin veneer in which the grain runs across the line of bending or folding. In any event, if desired, there may be two or more thin plies in the facing member, the only limit to the number of layers or plies being the capacity of the facing member to conform to the desired shape when subjected to the proper bending

forces. Therefore, since the present invention is not particularly concerned with the number of plies or layers in either of the members 1 and 2, each of these members has been illustrated as being comprised of a single thickness.

The facing member 2 is continuous but the backing member is interrupted so as to provide at the place where a corner is to be fashioned a wide slot or gap bounded at the bottom by the facing member and at two sides by edge faces of sections of the backing member. While it is possible otherwise to manufacture the panel with its slots or gaps, we prefer to cut each section of the backing member to size before gluing it to the facing member. The sections of the backing member and the facing member may then be assembled, with spacing pieces of exactly the right width or widths placed between the sections of the backing member; the whole being then glued up in any usual way excepting only that the spacing pieces are not glued to the facing member and may therefore be removed at the end of the gluing operation.

In order to produce a solid corner having the desired outer surface configuration, a filling means is placed in the slot or gap between two adjacent sections of the backing member; the filling means being of such size and shape that, when the panel is bent to bring the two sections at the proper angle to each other, the filling means fits snugly against the edge faces of the two backing sections and also against the portion of the facing member that bridges the space between these two backing sections. Thus, the filling means forms a solid backing for the unbacked part of the facing member. The corner shown in Fig. 2 is of the quarter-round type; the exterior curved surface being a segment of a cylindrical surface 90° wide. The filling means has a correspondingly shaped face whose radius is, of course, slightly smaller than that of the outer face of the corner.

In the preferred construction the filling means consists of two similar strips 3 and 4 each extending throughout the length of the slot or gap, as it has been found easier to produce a successful bend with the filler corner element snugly seated, with two filler strips instead of a single large strip. In the case of a comparatively sharp corner, such as shown in Fig. 2, it is often difficult to secure contact through the entire width of the curved face of the filler and the facing member when only a single filler strip is employed; the tendency being for those portions of the facing member close to the ends of the backing sections to stand away from the filler strip. By cutting the filler strip in half, the bending of the facing member into proper engagement with the filler element is facilitated. Further assurance that what may be termed the corners of the filler will fit snugly into the angles between the edge faces of the backing sections and the free portion of the facing member can be had by providing interlocks between the two filler strips and the adjacent ends of the backing sections, whereby the filler strips may initially be set with their corners against the facing member at the juncture of the latter with the corresponding edge faces of the backing sections and be held against slipping along the edge faces of the backing sections away from the facing member when pressure comes on the strips. In the arrangement shown, a groove 5 is cut throughout the length of the slot or gap in each of the two adjacent edge faces of the backing member, and each filler strip is provided

with a longitudinal tongue 6 adapted to enter the corresponding groove. These filler strips may be laid in the slot or gap as the strip 4 is laid in Fig. 3, preparatory to bending the panel; but each strip is preferably interlocked with the adjacent backing section as the strip 3 is interlocked in Fig. 3. By fitting the tongue on each strip in its proper groove, contact is obtained between each strip and the facing member in the region where it is most difficult to secure such contact and, since the tongue and groove connections keep the strips from jumping out of the slot, this contact will be maintained while the panel is being bent into the condition illustrated in Fig. 2.

The bridge piece of the facing member must be sufficiently damp and pliable to bend without breaking or splitting. Ordinarily and, it may be said, usually, the facing veneer will be too dry. The proper amount of moisture may be provided by sponging or otherwise moistening the back or inner face of the facing member, thereby avoiding such wetting of the exposed outer face of the veneer to cause it to become roughened and necessitate further sanding. Suitable adhesive material or glue may be placed wherever it is found to be desirable so that in the completed joint as it appears in Fig. 2 there will be glue lines between any desired number of the pairs of meeting faces.

In Fig. 5 there is shown a construction that differs somewhat from that illustrated in Fig. 2. In this construction, instead of employing the tongues and grooves 6 and 5 each of the backing sections is cut back adjacent to the facing member, as indicated at 7, 7. This causes the width of the facing member bridge piece to be considerably greater than in Fig. 2 and permits the use of a flatter curve in forming the corner. The two filler strips 8 and 9 are, of course, so shaped that portions thereof extend into the undercuts in the backing sections, thereby securing the same interlocking effect as with the tongue and groove arrangement. Furthermore, whereas in Fig. 2 the surface at the corner is a quarter of a cylindrical surface to which the outer faces of the straight portions of the panel are tangent, the curvature of the corner in Fig. 5 may be compound, beginning at the ends with a long radius and decreasing in radius from the ends toward the middle.

In Figs. 6 and 7 there is shown a construction similar to that in Figs. 2 and 3. In this form of the invention the strips 11 and 12, corresponding to the strips 3 and 4, are provided with tongues 13 entered into grooves 14 in the adjacent edge faces of the backing sections. The tongues and grooves are intended, however, to be simply indicative of undercutting in general whereby the width of the slot or gap, while the panel is in a flat condition, is less at the top than at some lower point. In addition to being interlocked with the backing member the strips are also interlocked with each other; the strip 11 having on the radial face toward the other strip a bead or tongue 15 extending lengthwise thereof, and the strip 12 having a complementary groove 16 to receive the tongue when the panel is bent or folded while the strips are in place.

In the arrangement shown in Fig. 8 the slot or gap is very wide and the filler device is shown as taking the form of two board-like members 17 and 18. The members 17 and 18 may be interlocked with the backing member sections by means of tongue and groove devices 19 or in any other suitable manner, and they may be

interlocked with each other at their meeting faces by a tongue and groove device 20 similar to the tongue 15 and the groove 16 in Figs. 6 and 7. This construction permits a very flat corner to be produced. The outer face of the compound filler strip is only slightly rounded, excepting at the extreme ends where the curvature is comparatively sharp so as to be tangent to both the plane outer faces of the straight portions of the panel and the gently curved surface of the greater portion of the filler device.

In Figs. 9 and 10 there is shown an arrangement similar to that of Figs. 2, 3 and 4, the only exception being that the filler strips 23 and 24, corresponding to the strips 3 and 4 in the other modification, do not interlock with the backing member.

In Fig. 11 the construction may be said to be the same as that in Figs. 9 and 10 excepting that the filler strip 25 is made in one piece consisting, in the particular arrangement shown, of the quarter-round strip of wood.

While we have illustrated and described with particularity only a single preferred form of our invention, we do not desire to be limited to the exact structural details thus illustrated and described; but intend to cover all forms, arrangements and methods which come within the definitions of the invention constituting the appended claims.

We claim:

1. The method of producing a panel comprising two backing members arranged at an angle to each other and having a continuous facing member extending over both, which comprises constructing a flat panel composed of a facing

sheet and backing members glued thereto and having their adjacent ends spaced apart and undercut to form between them a slot or gap narrower at the top than at some lower point, placing in the slot two strips shaped to fit the edge contours of the backing members, and bending the panel to close the gap and cause the strips to be pressed together and the panel faces at the sides and the bottom of the slot to be brought into intimate contact with the strips, sufficient adhesive material being applied between some or all of the faces that are caused to meet to hold the parts together.

2. The method of producing a panel comprising two backing members arranged at an angle to each other and having a continuous facing member extending over both, which comprises constructing a flat panel composed of a facing sheet and backing members glued thereto and having their adjacent ends spaced apart and undercut to form between them a slot or gap narrower at the top than at some lower point, placing in the slot two strips shaped to fit the edge contours of the backing members and having on the sides toward each other complementary male and female elements adapted to interlock when the strips are pressed together, and bending the panel to close the gap and cause the strips to be pressed together and the panel faces at the sides and the bottom of the slot to be brought into intimate contact with the strips, sufficient adhesive material being applied between some or all of the faces that are caused to meet to hold the parts together.

GEORGE R. MEYERCORD.
FRANK M. CURRAN.