

Dec. 15, 1925.

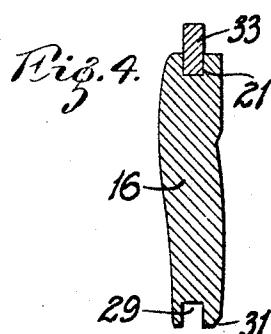
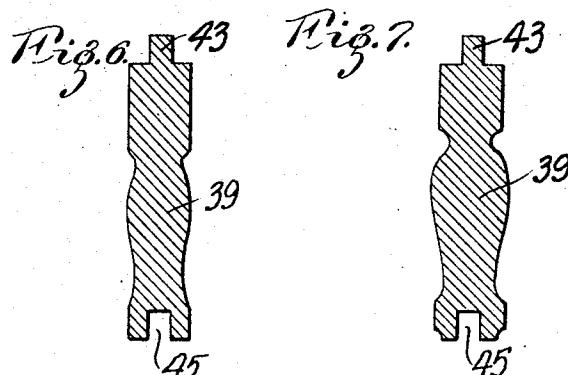
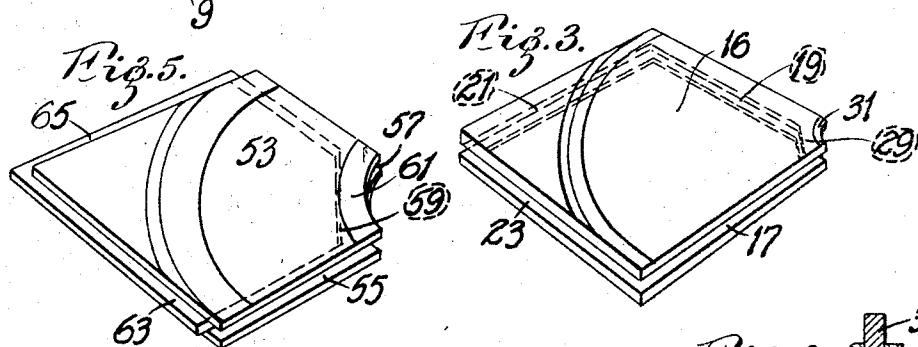
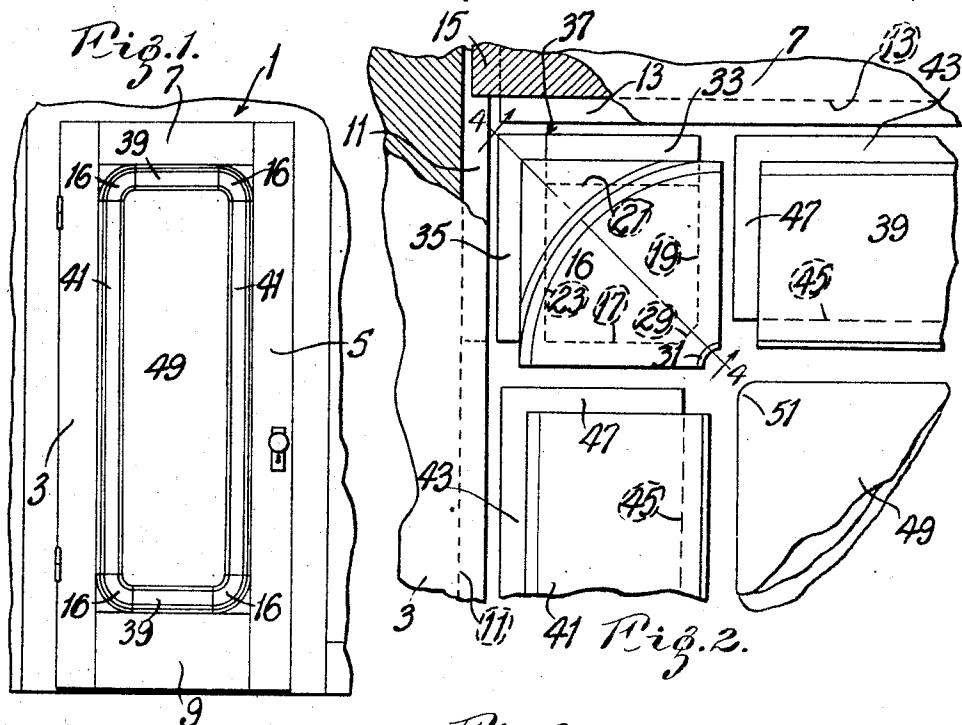
1,565,597

E. J. SPIESBACH

DOOR

Filed April 9, 1925

2 Sheets-Sheet 1



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Fig. 8.

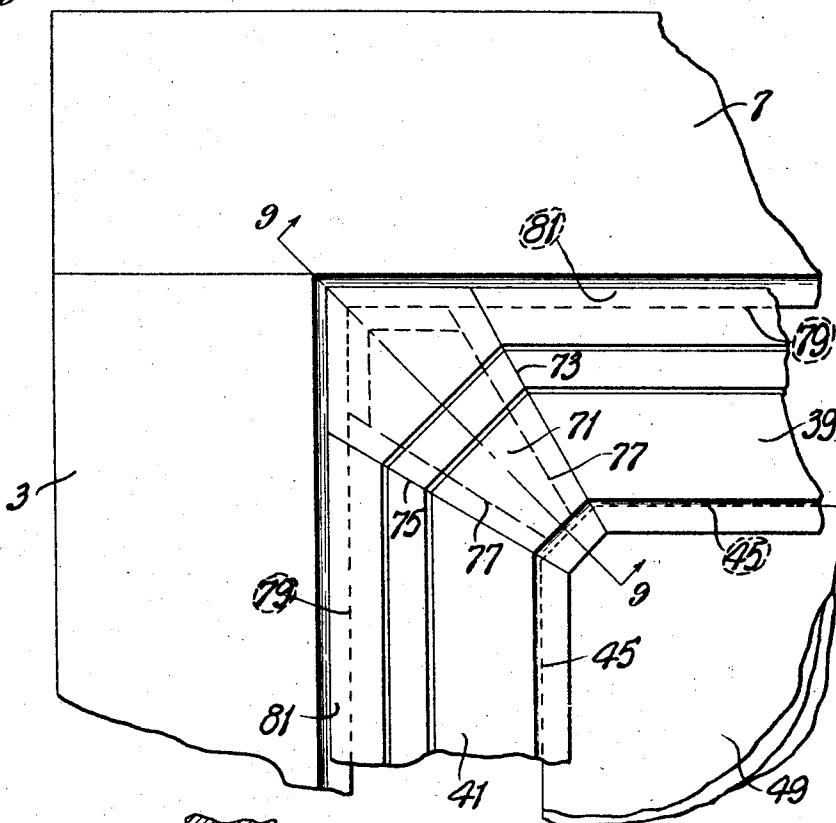
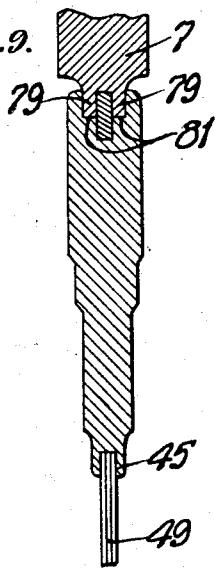


Fig. 9.



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UNITED STATES PATENT OFFICE.

EDWARD J. SPIESBACH, OF EAST ST. LOUIS, ILLINOIS.

DOOR.

Application filed April 9, 1925. Serial No. 21,815.

To all whom it may concern:

Be it known that I, EDWARD J. SPIESBACH, a citizen of the United States, and a resident of East St. Louis, St. Clair County, Illinois, have invented an Improvement in 5 Doors, of which the following is a specification.

This invention relates to joints and with regard to certain more specific features to 10 means for locking insert panels into door frames.

Among the several objects of the invention may be noted the provision of strong and durable means for mounting insert 15 veneer panels and the like in door frames, the provision of such said means as will have a neat and graceful appearance and yet not have a high manufacturing cost.

The invention accordingly comprises the 20 features of construction, combinations of elements, and arrangements of parts which are exemplified in the structure hereinafter described and the scope of the application of which will be indicated in the following 25 claims.

In the accompanying drawings, in which are shown two of various possible embodiments of this invention,

Fig. 1 is an elevation of a door showing 30 the application of this invention;

Fig. 2 is a plan view with parts broken away of the various elements of the invention in their positions prior to assembly;

Fig. 3 is a perspective view of a preferred 35 form of corner block;

Fig. 4 is a section taken on line 4—4 of Fig. 2;

Fig. 5 is a perspective view of a modified form of corner block;

Figs. 6 and 7 are sectional views of possible molding shapes showing characteristic 40 tongues and grooves;

Fig. 8 is an assembled plan view of a modified corner construction illustrating a 45 corner block of alternative angle; and

Fig. 9 is a section taken on the line 9—9 of Fig. 8 showing the arrangement of parts when more than one tongue is used.

Similar reference characters indicate 50 corresponding parts throughout the several views of the drawings.

Referring now more particularly to Fig. 1, there is illustrated at 1 a door comprising stiles 3 and 5 and rails 7 and 9.

The stiles and rails are provided at their

inner faces with grooves 11 and 13 respectively, see Fig. 2.

Tongues 15 at the ends of the rails 7 and 9 fit into the said vertical grooves 11 of the stiles for jointing purposes. Thus when 60 the stiles 3, 5 and rails 7, 9 are assembled there is provided a framework inwardly grooved. The number of grooves may be one or more. This framework, however, is not assembled until other parts, to be de- 65 scribed, are in the process of assembly.

At the corners of the framework of stiles and rails are provided corner blocks, pref- erably of the type shown in Fig. 3.

These corner blocks comprise a block of 70 material 16 (usually wood) which may be carved or formed to pleasing shapes on either or both horizontal surfaces.

The preferred form of corner block is pro- 75 vided with grooves 17, 19, 21 and 23 in the four edges thereof. Two of the grooves 17 and 19 meet by means of a beveled portion 29. The grooves are comparable in size to the grooves mentioned in connection with the said stiles and rails. There may be sev- 80 eral grooves running parallel, if desired.

The edges of the block 16 in which 85 grooves 17 and 19 are cut need not be formed at ninety degrees to one another. The particular angle to be used is left to 90 the discretion of the designer, as illustrated in Fig. 8. In Fig. 8 edges 73 and 75 of block 71 are shown to be other than ninety degrees to the frame edge. The angle between the faces in which grooves 21 and 23 are cut, need only conform with the angle 95 between the stiles and rails. This last named angle is usually ninety degrees.

An ornamental curve 31 may be formed at the inner corner of the corner block 16. 95

Splines 33 and 35 are adapted to fit into the grooves 21 and 23 of the corner block and grooves 11 and 13 of the stile and rail re- 100 spectively. The splines 33 and 35 are adapt- ed to come flush with one another at the point 37 but not to extend into grooves 17 and 19. The number of splines may be in- creased if the number of parallel grooves is increased as described.

Placed parallel to the rails and stiles are 105 molding pieces 39 and 41 respectively. These molding pieces may have any one of many cross-sectional shapes. Two illus- trative molding sections are shown in Figs. 6 and 7. The ornamental portions of the 110

shapes are left to the designer's discretion in so far as he makes them match the corner blocks. However, the moldings should be characterized by outside longitudinal 5 tongues 43 and inside longitudinal grooves 45. As a continuation of outside tongues 43, there are provided end tongues 47 adapted to fit into the grooves 17 and 19 of the corner block 16.

10 The outside tongues 43 fit into the same grooves into which the splines 33 and 35 fit. The number of parallel tongues may be one or more per piece of molding.

It should be noted that the end tongues 15 47 do not extend over into the longitudinal projection of the inner grooves 45.

In Figs. 8 and 9 is illustrated the corner block 71 having edges 73 and 75. This block and its corresponding molding pieces have 20 multiple grooves 81 to fit multiple tongues 79 of the stiles 3 and 5 and rails 7 and 9.

The molding pieces 39 and 41 are shown in Fig. 8 provided with the two outside longitudinal grooves 81, and the original 25 inside longitudinal groove 45 corresponding to the original inside groove 45 of Fig. 2. The groove 45 receives an insert panel 49, to be described.

The Figs. 8 and 9, therefore, show a modification wherein a corner block having an 30 inside angle not equal to ninety degrees is used. These figures also illustrate the use of multiple tongues and grooves with one free spline. The spline might be fixed or 35 integral. Also, more grooves might be used. End tongues 77 are provided on the molding pieces corresponding to end tongues 47 of Fig. 2.

Adapted to fit into the inner grooves 45 40 (Fig. 2) is the insert panel 49. This panel is usually of the veneer type.

The edges of panel 49 are adapted to come flush with the outer edges of the end tongues 47 when all parts are assembled. 45 Likewise the corners 51 of panel 49 are adapted to go in under the rounded ornamental portion 31 of the corner block. The portion 31 may be of any shape whatsoever. The bevel 29 of the corner block grooves 50 allows room for the corner 51 of the insert panel when the portion 31 is rounded as shown.

In order to assemble the parts they are put into the relative positions shown in 55 Fig. 2 and the usual glue applied to the edges of panel 49, grooves and tongues of the molding pieces 39 and 41 and corner blocks 39, and to the grooves and tongues of the stiles and rails.

60 Next the stiles and rails are clamped together in the position shown in Fig. 1, clamping therebetween the panel, molding and corner blocks as shown in said Fig. 1.

After the glue has hardened an exceptionally rugged and beautiful door results.

Fig. 5 illustrates a modified form of corner block 53 in which integral instead of separate splines are used.

The modified corner block is made with two grooves 55 and 57 corresponding to the 70 grooves 17 and 19 of the preferred form of block 15. A beveled portion 59 is also employed to join the grooves under a rounded inner corner portion 61.

Instead of employing free splines in the 75 outside grooves, however, there are formed two integral outside tongues 63 and 65 which are adapted to reach into the grooves 11 and 13 of the stiles and rails respectively. These tongues 63 and 65 in the modified 80 form take the place of the loose splines 33 and 35 in the preferred form and consequently are adapted (like the splines) not to extend out into the inner grooves of the corner block. The number of outside 85 tongues may be one or more.

The described method of assembly is employed for the modification.

The word splined, as used in this specification and in the following claims is to 90 be construed as implying means for fastening members by way of integral tongues and grooves or by way of separate splines and grooves.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As various possible embodiments might 100 be made of the above invention and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting 105 sense.

I claim:

1. A door comprising a frame corner blocks set into four corners of said frame, molding pieces set along the edges of said frame and between said corner blocks, and a panel adapted to fit within the confines of said molding pieces and said corner blocks.

2. A door comprising a frame, corner blocks set into four corners of said frame, molding pieces tongued into the edges of said frame and tongued to said corner blocks, and a panel adapted to fit within the confines of said molding pieces and said corner blocks.

3. A door comprising an inwardly grooved frame, grooved corner blocks for said frame splined thereto, tongued and grooved molding adapted to be placed along the inner edges of said frame and between said corner blocks, the tongues fitting into said grooves of said frame and corner blocks, and a panel adapted to fit within the grooves of said molding and corner blocks.

4. A door comprising an inwardly 130

grooved frame, grooved corner blocks for said frame splined thereto by means of tongues integral with said corner blocks, tongued and grooved molding adapted to be placed along the inner edges of said frame and between said corner blocks, the tongues on said molding fitting into said grooves of said frame and corner blocks, and a panel adapted to fit within the grooves of said 10 molding and corner blocks.

5. A door comprising an inwardly grooved frame, grooved corner blocks for said frame splined thereto, by means of insert splines, tongued and grooved molding adapted to be placed along the inner edges of said frame and between said corner blocks, the tongues of said molding fitting into said grooves of said frame and corner blocks, and a panel adapted to fit within the grooves 15 of said molding and corner blocks.

6. A door comprising grooved stiles and grooved rails, said rails having end tongues to fit into the grooves of the stiles, grooved corner blocks adapted to be set into the cor-

ners at the junctions of rails and stiles, said 25 blocks being splined to said stiles and rails tongued and grooved molding pieces adapted to be set along the edges of said rails and stiles and in between said corner blocks and splined to said rails and stiles and corner 30 blocks by means of said tongues and said grooves, and a panel adapted to fit into the grooves of said molding pieces and portions of the grooves in said corner blocks.

7. A door comprising an inwardly multi- 35 ple-grooved frame, outside multiple-grooved corner blocks for said frame splined thereto, multiple-tongued and singly grooved molding adapted to be placed along the inner edges of said frame and between 40 said corner blocks, the tongues fitting into said grooves of said frame and corner blocks and a panel adapted to fit within the singly grooved molding.

In testimony whereof, I have signed my 45 name to this specification this 7th day of April, 1925.

EDWARD J. SPIESBACH.