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H. C. MORRIS

METHOD OF ASSEMBLING DOORS

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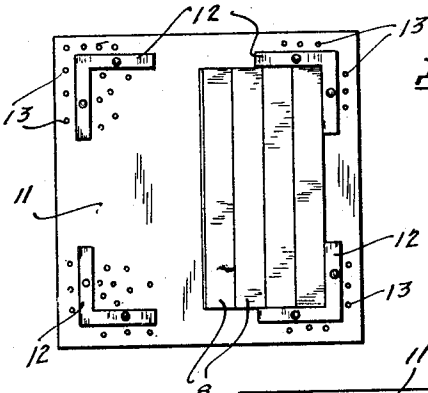



Fig. 2

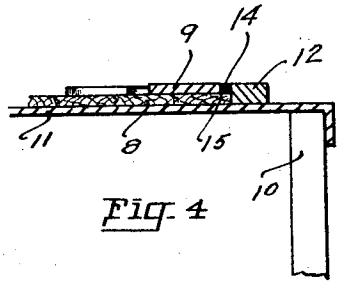



Fig. 4

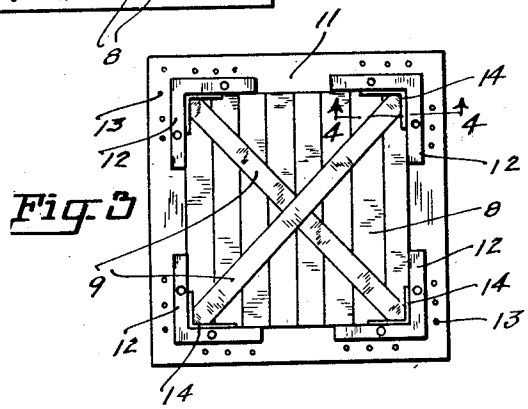



Fig. 3

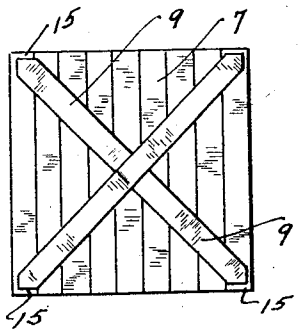



Fig. 5

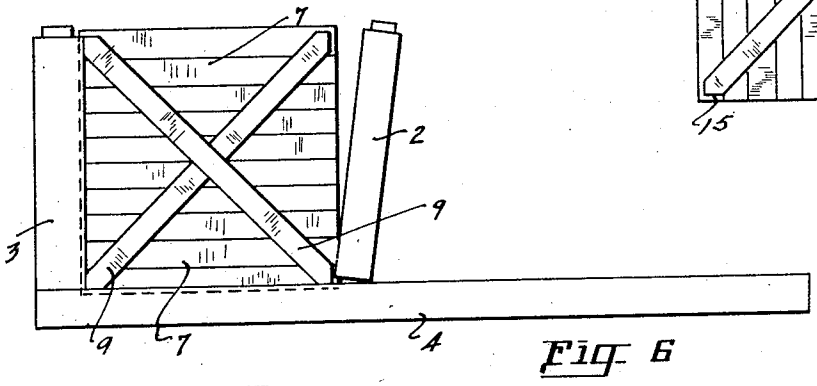



Fig. 6

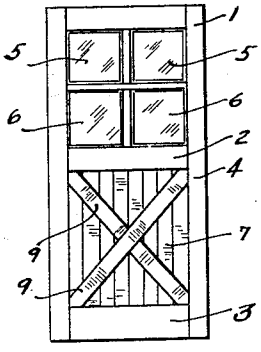



Fig. 1

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# UNITED STATES PATENT OFFICE.

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## METHOD OF ASSEMBLING DOORS.

Application filed June 28, 1927. Serial No. 202,126.

My invention relates to a method of assembling doors, particularly garage doors that have a panel, occupying a large portion of such door, composed of strips held together by cross braces.

My invention has for its purpose, the provision of a novel and useful method of assembling doors of this character, wherein strips composing a panel are assembled into one unit, and thereafter said unit together with the other elements of which the door is constructed, are united in the order and manner hereinafter set forth.

With these and incidental objects in view, the invention consists in certain novel features of application and method of procedure, the essential elements of which are set forth in the appended claims, and a preferred form of embodiment of which is hereinafter shown with reference to the drawings which accompany and form a part of this specification.

In the drawings:—

Fig. 1 is a door in front elevation of the kind upon which my method may be successfully used in the manufacture of the same.

Fig. 2 is a plan elevation of an assembly frame showing a panel partially assembled thereon.

Fig. 3 is a plan elevation of an assembly frame showing a panel completely assembled thereon.

Fig. 4 is an end elevation partially broken away illustrating the frame and the panel assembly thereon.

Fig. 5 is a front elevation of the completed panel.

Fig. 6 is a diagrammatical illustration of the assembly of the panel between the rails and stiles of a door.

Like reference characters refer to like parts throughout the several views.

Fig. 1 illustrates a door to which my method of making doors is particularly applicable, wherein 1, 2 and 3 respectively designate the top rail, center or lock rail and the bottom rail, and 4 refers to the stiles thereof. Between the lock rail 2 and the top rail 1 are secured by usual tongue and groove assembly the top panels 5 and the center panels 6 which may be of any of the usual designs. Between the lock rail 2 and the lower or bottom rail 3 is the panel 7, which is composed of the individual tongue and groove units or strips 8 secured together and braced by the cross braces or diagonal stiffening members 9. The outer edges, as is usual in this character of door construction, are inserted in grooves provided in the stiles and rails.

Heretofore, according to the knowledge of applicant, it has been the method to assemble the units 8 one at a time between the bottom and lock rails, one of the stiles being left unmounted during the assembly and has proven to be a tedious and expensive method of assembly.

In the method disclosed herewith, the units or strips 8 are preassembled and are inserted between the stiles and the rails as a completed unit or panel 7 and is accomplished by pre-assembling the strips 8 into a panel 7 upon the assembly frame or table 10. The table 10 is provided with a bed or top 11 upon which are removably positioned the guide members or brackets 12. The brackets 12 are to embrace the corners of the panels to be assembled. To accommodate the table to different sized panels the brackets 12 are movable or positionable relative to one another, which is accomplished by providing the assembly top with positioning holes 13 into which studs or pins projecting on the underside of the brackets 12, not shown, are inserted.

The brackets 12 are relatively positioned upon the assembly top to define the size of panel to be constructed. The units 8 are then assembled therebetween as shown in Fig. 2, and fit snugly within the area outlined by the brackets 12. After the strips 8 have been assembled upon the table within the angle of each of the brackets 12, and resting upon the strips 8 are placed the angular spacing members 14. After the spacing members have been placed in position the diagonal brace or siffening members are placed upon the units 8 and secured thereto. The diagonal brace members extend from one spacing member to another diagonally opposite, and have their ends spaced from the outer edges of the panel by means of the spacing members 14, thereby allowing the units 8 to project beyond the cross bars for insertion within the grooves within the stiles, lock or bottom rails, as the case may be.

Fig. 5 illustrates the completed panel 7 constructed or assembled according to the foregoing method, and is ready to be inserted within the door. The method of con-

structing the door with the preassembled panel is as follows: One stile 4 is placed upright upon its outer edge as shown in Fig. 6. The bottom rail 3 is mounted thereto, the lock rail 2 is partially mounted thereto at an angle. The panel 7 is next mounted by having two converging edges thereof inserted into the converging grooves of the stile 4 and the bottom rail 3. The lock rail 2 is moved toward the panel 7 allowing the outer edges thereof to enter the groove provided in the rail for its reception. After which the other panels making up the door may be mounted in like fashion between the lock rail and the top rail (this feature is not shown in the drawings as the invention relates solely to the method of mounting panels of the multiple unit type.) After the remaining panels and cross bars are in position, the remaining stile is secured in place, thereby completing the construction of the door.

While I am aware that the art of door building or constructing is old in the art, and therefore do not claim the same broadly; but I am not aware that others have constructed doors according to the method disclosed herein, and therefore as my invention, I claim:

1. A method of assembling doors consisting in placing the base stile of the door in a substantially horizontal position, the placing of one end of each of the rails of the door into the stile thus placed, and in the placing of the panels next into place as completely assembled panels and in the final placing of the final stile into place and the fastening of the door together by any suitable fastening means.

2. A method of assembling doors, consisting in preassembling the panel units, then assembling the grooved rails and one grooved stile, inserting the preassembled panels between adjacent rails so that three of their outer edges penetrate the aforesaid grooves, and lastly securing another grooved stile to the aforesaid assembly in a manner that the aforesaid stiles are spaced apart by the said rails and the fourth edge of the panels are inserted within the grooves of the last mentioned stile.

3. A method of assembling doors having a substantial opening provided with grooved edges to receive a panel composed of strips secured together by diagonal braces, which comprises uniting a sufficient number of strips by means of diagonal braces secured thereto to form a panel of the size required, joining the bottom rail to one stile, inserting the converging edges of the panel in converging grooves of the aforesaid stile and rail, joining a cross rail to the aforesaid stile so that the third edge of the panel penetrates the groove provided in the last mentioned rail, joining a second stile to the cross rails and the aforesaid panel so that the fourth edge of the panel penetrates the groove provided therefor in said stile.

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