

July 30, 1968

A. C. WORRELL, JR
METALLIC PANEL STRUCTURE

3,394,518

Filed Nov. 22, 1966

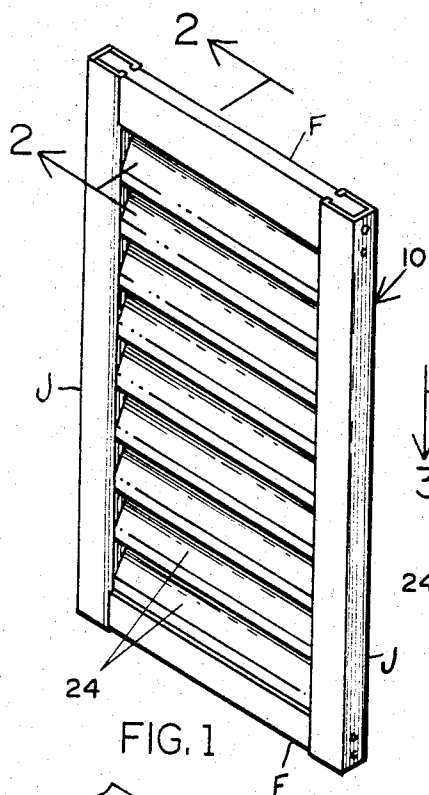


FIG. 1

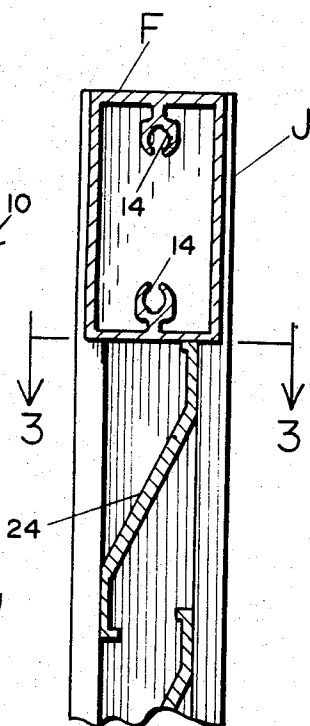


FIG. 2

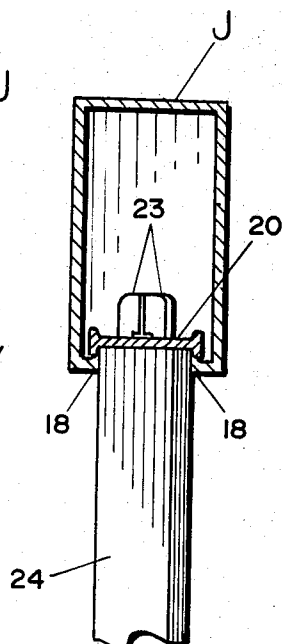


FIG. 3

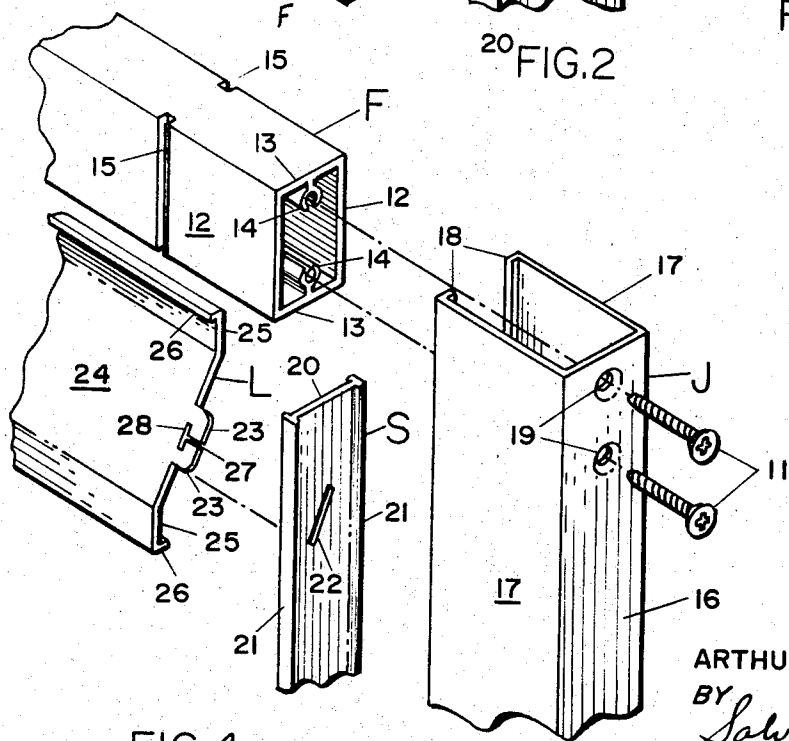


FIG. 4

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METALLIC PANEL STRUCTURE
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Filed Nov. 22, 1966, Ser. No. 596,259
1 Claim. (Cl. 52—473)

This invention relates to building structures and is more particularly directed to a metallic panel structure.

A principal object of the present invention is to provide a metallic panel structure which is readily fabricated for use as a shutter, awning, room divider, swinging and sliding doors.

Another object of the present invention is to provide a metallic panel structure that is simple in construction and manufacture, inexpensive in cost and most effective in its manifold uses.

A further object of the present invention is to provide a metallic panel structure that is maintenance free, long lasting and enhances the beauty of the building on which it is mounted as well as being functional.

A still further object of the present invention is to provide a metal panel structure that consists of only four members all of which are extruded.

With these and other objects in view, the invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming a part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:

FIGURE 1 is a perspective view of a metallic panel structure constructed in accordance with my invention.

FIGURE 2 is a cross sectional view taken along the line 2—2 of FIGURE 1.

FIGURE 3 is a transverse cross sectional view taken along the line 3—3 of FIGURE 2.

FIGURE 4 is an exploded view illustrating the simplicity of assembly of my panel structure.

Referring to the drawing wherein like numerals are used to designate similar parts throughout the several views, the numeral 10 refers to a metallic panel structure consisting of a pair of horizontal frame members F, a pair of jambs J, a pair of jamb strips S and a plurality of louvers L. Except for screw bolts 11 no other material is needed in the construction of my panel structure 10.

The horizontal frame members F of which there are two (one at the top and the other at the bottom of the panel 10) consist of a solid extruded member of rectangular cross section having vertical walls 12 joined at their edges to the horizontal walls 13. The latter are provided with a split bolt seat 14 which receives screw bolts 11 in the assembly of my panel 10. In order that the horizontal frame members F fit properly when assembled, slots 15 are formed in the side walls 12 as is explained hereinafter.

The vertical frame members or jambs J are hollow extruded members consisting of a U-shape cross section and having an end wall 16 with side walls 17 extending therefrom. At the free ends of the side walls 17 are flange portions 18 extending in a direction towards each other. Bolt holes 19 which are formed at the ends of the end wall 16 receive the bolts 11 in fastening the jambs J to the horizontal frame members F while the flange portions 18 are received by the slots 15 to fit the two members F and J together in a proper fashion.

The flange portions 18 are provided for the purpose of retaining the jamb strips S within the jambs J. The

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jamb strips S consist of a flat body portion 20 with enlarged end portions 21 which bear against the flange portions 18 when assembled. The flat body portion 20 of the jamb strips S are provided with a plurality of aligned slots 22 along its full length which receive tab portions 23 of the louvers L.

The louvers L are likewise extruded members having a flat body portion 24 with members 25 mounted along each edge at an oblique angle. When mounted in position on the panel structure 10, the main flat body portion 24 will be inclined with relation to a longitudinally disposed plane passing through the center of the panel structure while the members 25 will be in parallel relation thereto. Along the free edge of each of the members 25 is a flange portion 26 extending horizontally. The securing tabs 23, are mounted at each end of the louvers L at the mid-portion of the main body portion 24 being slotted as at 27 and 28 to permit twisting the tabs 23 after being received in the slots 22 for securing the louvers L to the jamb strips S.

In the assembly of the panel structure 10, after the various parts have been cut to their proper lengths, the ends of the horizontal frames F are inserted between the flanges 18 and the side walls 17 at one end of the jambs J and slid inwardly. The flanges 18 will be received by the slots 15 and the screw bolt seats 14 will become aligned with the bolt bores 19. The bolts 11 are then inserted into the bores 19 and threaded into the screw bolt seats 14 to fasten the horizontal frame member F to the jambs J. Now louvers L are mounted on the jamb strips S by inserting the tabs 23 into the slots 22 and then twisted by means of a pair of pliers and the like to prevent the tabs 23 from leaving the slots 22. When all of the slots 22 of a pair of jamb strips S have tabs 23 extending therethrough, the jamb strips S with the louvers L extending therebetween are positioned at the ends of the jambs J adjacent to the flanges 18 and inside the jambs J. The jamb strips S with the louvers extending therebetween is slid downwardly along the jambs J until the ends of the jamb strips S engage the horizontal frame member F that had been previously mounted thereon. Then the other horizontal frame member F is slid into place over the exposed ends of the jambs J, with the bolts 11 received by the bolt bores 19 and threaded into the bolt seats 14 to fasten the second horizontal member F to the jambs J.

My panel structure is now completely assembled as shown by FIGURE 1 and ready for use as a shutter, an awning, room divider or as swinging or sliding doors. For example, upon placing hinges on the jambs J of the panels 10, and hinging same at a window opening, the panel 10 may be used as a window shutter. If hinged at a door opening, the panel 10 can be used as a swinging door. By securing a plurality of panels 10 together at the jambs J and hinged at the horizontal frame member F, the combined panels can be used as an awning when hinged to an opening above a window or doorway. The combination of the louvers L mounted on a pair of jamb strips S may be used in lieu of screen or glass in a sliding door or in a glass or screen wall panel. The metallic louvers offering protection against rain, privacy and preventing entry by undesirable persons.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A panel structure comprising a pair of spaced jamb members, louver supporting means mounted in said jamb members, said louver supporting means having a plurality of slots, a plurality of louvers extending between said louver supporting means, tabs mounted on each end of said louvers, said tabs being received by said slots and twisted in place whereby said louvers are secured to said louver supporting means, said jamb members having an

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end wall, leg portions extending along each edge of said end wall forming a U-shaped cross section, flange portions extending in a direction toward each other at the free end of said leg portions, said louver supporting means positioned between said leg portions and engaging said flange portions of said jamb members.

5 mounted at each end of said jamb members and extending therebetween, said horizontally disposed frame members having a substantially rectangular cross section, screw bolt seat members mounted within said horizontally disposed frame members, said jambs having bores in alignment with said screw bolt seat members, screw bolts extending through said bores and received by said screw bolt seat members fastening said jambs to said horizon-

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tally disposed frame members and said horizontally disposed members having slotted portions for receiving said flange portions of said jamb members.

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KENNETH DOWNEY, *Primary Examiner.*

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,394,518 Dated July 30, 1968

Inventor(s) Arthur C. Worrell

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 3, line 6, after "portions" cancel "of said jamb members" and insert -- , horizontally disposed frame members --.

Signed and sealed this 17th day of October 1972.

(SEAL)
Attest:

EDWARD M. FLETCHER, JR.
Attesting Officer

ROBERT GOTTSCHALK
Commissioner of Patent