SERPENTINE CROSS SECTION FRAME ASSEMBLY

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5 Claims

ABSTRACT OF THE DISCLOSURE

An elongate jamb readily securable to a door opening while providing a neat and clean exterior appearance devoid of exposed connectors consists essentially of a completely symmetrical serpentine extruded jamb having a pair of elongated generally U-shaped channel portions facing in a first direction and integrally joined by a connecting flange which traverses the longitudinal center line of the jamb for forming an oppositely facing central channel. Each channel of the serpentine jamb is provided with interior shoulders for retainingly receiving the hooks of a channel cover strip which upon assembly provides a flat, flush exterior surface with the jamb. The cover strip is an extruded member adapted to fit within any of the channels of the serpentine jamb and may be adapted to transmit glazing or similar modifications of the door opening.

This application is a continuation of pending application 670,296 filed Sept. 5, 1967 (now abandoned).

The present invention relates to door jambs and is particularly concerned with lightweight, extruded door jambs for power operated sliding doors and the like.

An object of the present invention is to provide a new and improved extruded door jamb configured to permit its manufacture and storage as a standardized stock item, while providing ease of installation in the field regardless of the size of the door opening, a rugged and durable yet lightweight construction, a clean and neat exterior appearance, and a ready adaptability to various door framing requirements such as adaptability to transmit glazing of the door opening.

Another object of the present invention is to provide a new and improved extruded door jamb for use with power operated sliding doors which provides readily accessible areas for housing air and electrical lines required by such structures.

A further object of the present invention is to provide an extruded door jamb of simple, yet strong and durable construction, capable of providing excellent support for the header assembly of a power operated sliding door while exhibiting a plurality of smooth, flat, exterior surfaces which facilitate a variety of jamb mounting orientations.

A still further object of the present invention is to provide a door jamb of the type described which may be constructed from only a pair of stock components and simply requires that the components be cut to length prior to installation. Included as part of this object is the provision for a jamb which exhibits a clean exterior appearance free from visible fastening connections or other protruding parts.

Other objects will be in part obvious and in part pointed out more in detail hereinafter.

The invention accordingly consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereafter set forth and the scope of the application which will be indicated in the appended claims.
3 in FIG. 2, the elongated channel cover strip 60 is of generally U-shaped cross-section and is provided with a substantially flat base portion 62 which upon assembly fits within the rabbit grooves 64 located along the longitudinal edges of each of the channel openings to provide a smooth, flat and continuous surface for the jam. A pair of arm portions 66 project inwardly from the base portion 62 at substantially right angles thereto and have outwardly facing hooks 68 on the free ends thereof exhibiting leading cam surfaces 70 for slidably contacting the tapered surfaces 44 of the shoulders 42. The arm portions 66 converge slightly at their free ends so that the outer extremity of each hook 68 is disposed inwardly of the walls of the channel. Thus, as the cover strip 60 is mounted on the jamb, the hooks 68 freely pass into the channels until the surfaces 44 cam the arms 66 inwardly toward each other and permit the hooks 68 to eventually snap over the shoulders and engage, may be desired for surface 46 to provide a locked but releasable interengagement between the serpentine jamb and the elongated cover strip. As mentioned hereinafter, the base portion 62 fits within the rabbit grooves 64 so that it is flush with base 30 to give the jamb an over-all flat, rectangular external appearance.

Turning now to FIG. 4 of the drawing, it is an advantage of the present invention that identical channel cover strips may be used to enclose all three channels of the door jamb thereby permitting the exposure of any or all sides of the elongated, generally rectangular door jamb depending upon the particular installation desired. Thus, the serpentine jamb 20 is shown with the flat exterior surface 34 of one of the terminal legs 32 mounted against the wall 18 in order to provide proper support for a sliding door header assembly wherein the door panel slides parallel to and adjacent one surface of the supporting wall. Three channel closure strips 60 are assembled on the jamb 20 in interlocking relationship to fully enclose the channels within the jamb and provide a clean, neat appearance to the assembly. As mentioned hereinafter, in view of the versatility of the assembly, there is generally no necessity for utilizing any part other than the two basic stock components of the jamb, namely, the main serpentine jamb and the elongated channel cover strip, although different cover strips may be desired for specialized applications.

The door jamb assembly is generally produced as extruded aluminum members in standard lengths of stock size, such as members of about seven feet or more in length, and can be easily cut in the field to assure accurate and customized installation within or adjacent the door opening.

As will be apparent from the foregoing detailed description, the jamb provides channels facing in opposite directions for securing the jamb to both the wall and the header assembly while providing longitudinal access areas for both the air and electrical lines associated with power operated sliding doors. After simply cutting the serpentine jamb to the proper length, it is easily secured in position and the exposed channels are then quickly and effectively covered by the channel cover strips which readily snap into position and provide a smooth, continuous and fastener-free exposed surface. Advantageously, this neat and clean exterior appearance is imparted by the simplified two component structure with-

out sacrificing the rugged, sturdy and durable construction necessary for power operated sliding doors and the like.

As will be apparent to persons skilled in the art, various modifications and adaptations of the structure above-described result in a practical departure from the spirit and scope of the invention, the scope of which is defined in the appended claims.

1. A supporting frame assembly variably positionable to provide universal mounting regardless of which side wall is thereby exposed comprising an elongated one piece support member of serpentine cross section providing a pair of substantially identical longitudinally extending side channels and a pair of substantially identical longitudinally extending intermediate channels disposed in adjacent side-by-side relationship to the side channel and having a common side member therebetween, each channel being provided with an opening of identical size facing in opposite directions; and a channel cover strip for selectively closing the opening of both of said channels, each of said channels being provided with a base forming a wall portion having an exterior surface in the same directein as the opening of the adjacent channel, the exterior surface on the base of each channel and the opening of the adjacent channel lying in a common plane, said cover strip including an opening traversing portion lying in said common plane upon closing said opening, each channel having a second side member spaced from said common side member and traversing the full depth of the assembly, said second and common side members including cover strip retaining means, said cover strip being received within the channel being closed and retained therein by said retaining means, said cover strip retaining means including a pair of opposed inwardly projecting shoulders for retaining the channel cover strip in locked interengagement therewith.

2. The assembly of claim 1 wherein the channel cover strip is an elongated member of generally U-shaped cross section having hooks on the terminal ends thereof for cooperatively engaging said inwardly projecting shoulders and providing interference to separation of said strip from said support member.

3. The assembly of claim 1 wherein the serpentine support member includes a series of elongated channels disposed in side-by-side relationship, the openings in alternate channels facing in the same direction, all of said channels having openings of identical size and a pair of inwardly projecting shoulders spaced a substantial distance from the openings to retainably engage the cover strips closing the individual channels.

4. The assembly of claim 1 wherein each channel includes a pair of inwardly facing shoulders to provide resistance to removal of the cover strip and a pair of outwardly facing shoulders disposed intermediate the channel opening and the inwardly facing shoulders to provide resistance to continued insertion of the cover strip into the channel, said cover strip having abutments complementary to said pairs of shoulders and cooperating therewith to maintain the cover strip substantially immobile within the channel being covered.

5. A supporting frame assembly variably positionable to provide universal mounting regardless of which side wall is thereby exposed comprising an elongated one piece support member of serpentine cross section providing a pair of substantially identical longitudinally extending side channels and a pair of substantially identical longitudinally extending intermediate channels disposed in adjacent side-by-side relationship to the side channel and having a common side member therebetween, each channel being provided with an opening of identical size, the openings of the side channels facing in the same direction and in a direction opposite to the direction faced by the opening of the intermediate channel; and a pair of channel cover strips for selectively closing the openings of said channels, each of said channels being
provided with a base forming a wall portion having an exterior surface facing in the same direction as the opening of the adjacent channel, the exterior surface on the base of each channel and the opening of the adjacent channel, lying in a common plane, each of said cover strips including an opening traversing portion lying in said common plane upon closing said opening, each side channel having a second side member spaced from said common side member and traversing the full depth of the assembly, said second and common side members including cover strip retaining means, said cover strip being retainably secured within the said side channels by said retaining means.

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