Sept. 11, 1956 J. SYLVAN 2,762,474

MULLION ASSEMBLY

Filed Oct. 9, 1953

FIG. 1

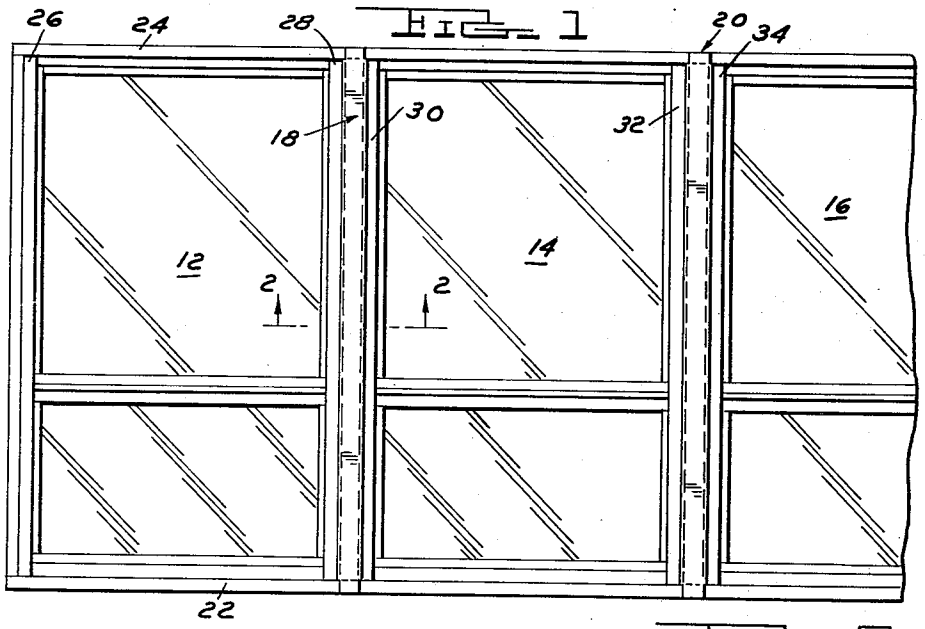


FIG. 2

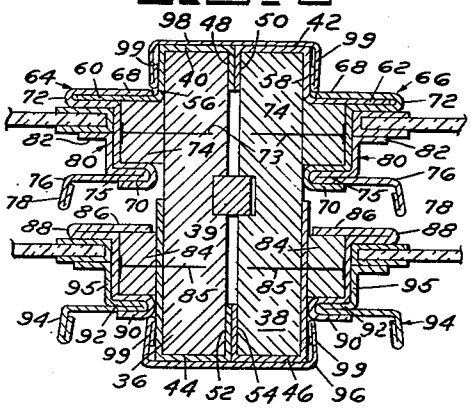


FIG. 3

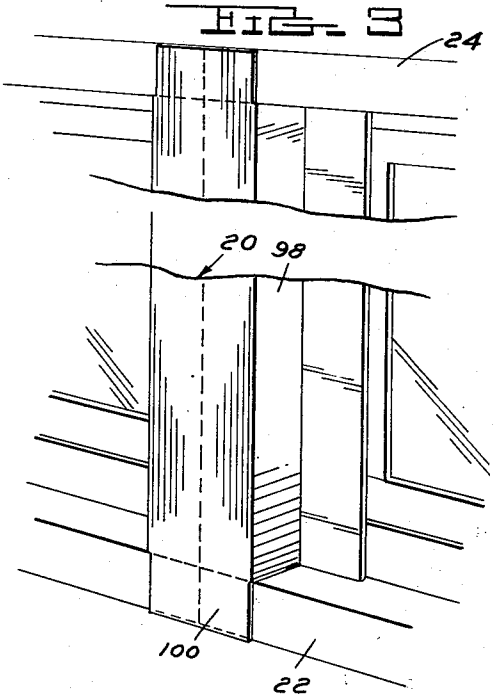
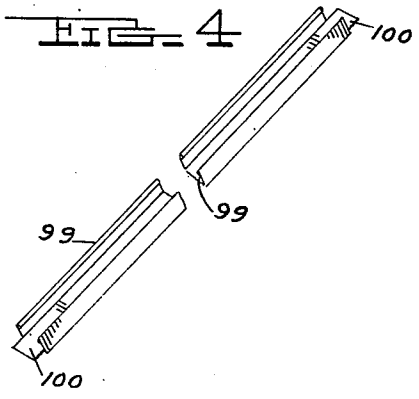


FIG. 4



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MULLION ASSEMBLY

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4 Claims. (Cl. 189—75)

This invention relates to window frame structures and particularly to a mullion assembly for a window frame.

The jamb assemblies shown in this application are similar to the jamb assemblies in my copending application, Serial No. 380,777, filed September 17, 1953. As is therein disclosed, the window frame assembly comprises opposed pairs of laterally spaced apart jamb assemblies adapted to overlie the jamb faces of the permanent window opening jamb frame members, with one pair forming an outer opposed jamb assembly and the other pair forming an inner opposed jamb assembly. Vertically slidable sashes are mounted within the opposed jambs of each assembly.

Each jamb assembly includes a base jamb member generally chair shaped in cross section with the legs of the chair shape extending toward the jamb faces of the permanent window opening jamb member with which the jamb assembly is associated, and overlying the inner and outer edges of a window stop mounted on the jamb face of the permanent window opening jamb frame member. Each of the jamb assemblies is provided with members which overlie the inside and outside edges of the permanent window opening jamb members and aid in positioning and securing the jamb assemblies to the permanent window opening jamb members.

An object of the present invention is the provision of a mullion assembly which incorporates in its construction the jamb assemblies disclosed in my copending application, and above generally described, without any alteration in the construction or structure of the jamb assemblies.

Another object is the provision of a mullion assembly including a clamping strip which is adapted to overlie the inside and outside edges of two pairs of jamb members which are disposed back to back to form a mullion, and hold the members together in such position.

A meritorious feature of the invention is the provision of a clamping strip for a mullion assembly, which strip is generally U-shaped in cross section with the side walls of the U-shape tensioned toward each other so that the strip may be disposed over the inside or outside of a mullion formed of oppositely disposed jamb members positioned back to back, and hold the jamb members together while preventing the entrance of moisture between the meeting edges of the jamb members.

An advantage of the invention is that it enables the same jamb members that are used in other window frame constructions to be employed in building a mullion assembly which is easily and quickly assembled and provided with sealing strips which prevent the entrance of moisture between the elements comprising the mullion, and hold the elements together, and additionally serve to position the mullion between the header and sill members of the permanent window opening.

Another advantage of the invention is the provision of a mullion assembly having complementary jamb assemblies coupled together by means permitting movement toward and away from each other while preventing relative lateral movement and also including cooperating tensioning members in the form of trim strips receivable over the linear inside and outside edges of the jamb assemblies to normally urge them toward each other.

Other objects, advantages and meritorious features will more fully appear from the following specification, appended claims and accompanying drawings, wherein:

Fig. 1 is a front elevation of a portion of three window openings disposed side by side and showing my improved mullion assembly between the window openings;

Fig. 2 is a cross sectional view of my mullion assembly taken on line 2—2 of Fig. 1;

Fig. 3 is a broken perspective view of my mullion assembly in place between adjacent window openings; and

Fig. 4 is a perspective of the trim strip covering one edge of my mullion assembly.

Shown in Fig. 1 are three adjacent window frame and sash assemblies 12, 14 and 16, with my improved mullion assemblies disposed therein as at 18 and 20. A sill member 22 extends along beneath the windows and a header member 24 extends along over the top of the windows. Vertical jamb assemblies 26, 28, 30, 32 and 34 are shown as extending from the header to the sill members. Jamb assemblies 28 and 30 comprise a portion of the mullion assembly 18, and assemblies 32 and 34 comprise a portion of the mullion assembly 20.

The assemblies 32 and 34 are shown in Fig. 2 as overlying a pair of spaced apart vertical parallel mullion base frame members or permanent window frame jamb members 36 and 38. Each of these frame members is disposed between the header 24 and the sill 22 and held against movement inwardly or outwardly of the window frame by keys or the like mounted on the header and sills and fitting within grooves formed in the opposite ends of the members. A key such as 39, disposed in complementary grooves formed in the jamb frame members, prevents relative lateral movement of the members. However, the key is so sized to the grooves that a certain amount of relative movement of the jamb members toward and away from each other is permitted. The reason for this will become apparent hereinafter.

Overlying the inner and outer edges and a portion of the jamb faces of the frame members 36 and 38 are the generally channel shaped base strips 40, 42, 44 and 46, forming portions of the inner and outer sash guide channel assemblies. Each of these base strips has a side wall respectively indicated as 48, 50, 52 and 54 received within the space between the frame members with the side walls of adjacent strips abutting. The side walls 56 and 58 of these strips 40 and 42 form a jamb face portion of the sash guide channel assemblies and are bent away from the jamb faces of the members 36 and 38 to form flanges 60 and 62 which are adapted to position and support the outer sash guide channel members 64 and 66 upon the frame members.

The outer sash guide channel assemblies additionally includes members generally chair shaped in cross section having legs 68 and 70 extending toward the jamb faces of the frame members 36 and 38. The leg 68 of these channel members is folded upon itself as at 72 to form a lip receiving channel into which is received the flanges 60 and 62 of the base strips. The walls of such lip receiving channels are tensioned toward each other to grippingly engage the flanges of the base strips. Therefore it can be appreciated that the base strips cooperate with the lip receiving channels of the outer sash guide channel members to position the latter on the jamb faces of the frame members 36 and 38.

The chair shaped outer sash guide channel members are adapted to be seated over the opposite jamb stops 74. The legs 68 of the channel members are received over the outside edge of the stops being spaced there-

from by the flanges 60 and 62 of the base strips and the inside legs 70 of the channel shaped members are received over the inside edge of the jamb stops. These jamb stops serve to support the seating portion of the chair shaped channel members which seating portion forms a bottom wall for the sash guide channels hereinafter described. The legs 68 and 70 of the channel members may be tensioned toward each other to grip the jamb stops between the legs, thereby serving to retain the channel members on the jamb stops. Nails or the like 73 secure the jamb stops to the jamb faces of the permanent window opening jamb frame members.

The legs 70 of the outer sash guide channel members are folded upon themselves to form a lip receiving channel whose side walls are tensioned toward each other and adapted to grippingly engage the lip portion 75 of a removable sash guide element 76. The element is provided with a handle portion 78 to facilitate its removal from the sash guide channel members. The runway elements are further shaped to define the sash guide runway channels 80. One side wall 82 of each of the runway elements cooperates with the opposed back portion 72 of the outer sash guide channel members to form therewith outer sash runway channels.

The inner sash guide channel assemblies each comprise chair shaped jamb members received over jamb stops 84 which are secured to the jamb faces of the members 36 and 38 by nails or the like 85. Each of the chair shaped members is provided with an outer leg 86 which overlies the outer edge of the jamb stops 84 and is folded upon itself as at 88 to form an outer sash guide runway channel side wall for a runway channel formed in the inner jamb assemblies. The inner wall 90 of the inner assemblies is folded upon itself to form a lip receiving channel adapted to grippingly engage a lip portion 92 of a removable runway channel element 94. This removable element is of the same construction as the removable element above described in connection with the outer jamb assembly and the lip receiving channel grips and positions the runway element on the jamb faces of the channel members in the same manner as does the lip receiving channel of the outer jamb assemblies. One side wall of the inner runway element cooperates with the outer wall 88 to form therebetween a sash runway channel, and the element itself is shaped to define another sash runway channel 95.

It will be noted that the base strips 44 and 46 extend toward the outer jamb assemblies but the edges of the base strips are spaced therefrom. This spacing ensures that there will be no transmission of heat or cold from one of the assemblies to the other. It will also be noted that the channel shaped jamb members are spaced laterally apart a distance greater than the thickness of a window sash such as S, shown in Fig. 2.

To prevent moisture or foreign matter from entering in between the meeting edges of the base strips and also to hold the base strips and channel members to the permanent jamb members 36 and 38 and urge the jamb assemblies together, a pair of trim strips 96 and 98 are provided. These trim strips are generally U-shaped in cross section with the side walls tensioned toward each other so that when the trim strips are placed over the base strips 40, 42, 44 and 46 and therefore over the inner and outer edges of the frame members 36 and 38, as shown in Fig. 2, they will urge the base strips toward each other and grip them against the jamb members 36 and 38. The side walls of the trim strips are folded upon themselves as at 99 to form a bearing surface for the side walls where they abut the base strips.

The gripping action of the trim strips is such that the jamb members 36 and 38 are urged toward each other gripping the side walls or flange portions 48, 50, 52 and 54 between the jamb members, and urging the flange portions into tensioned abutment with each other. It is for the purpose of permitting such movement of the frame members that the keys and grooves hereinbefore mentioned are dimensionally proportioned as described.

The bearing surfaces 99 at the free edges of the side walls of the trim strip bear against the jamb face portions 56 and 58 of the outer sash guide channel assembly and effect a weather tight seal therealong. It will be noted also that the bottom wall of the channel shaped trim strip extends between such jamb faces of the jamb assemblies and cooperates with the side walls of the strip to form a weather impervious barrier extending between the jamb faces of the sash guide channel assemblies.

A number of seals are effected specifically along the lines where the folded bearing surfaces 99 of the trim strip abut the base strip members, where the base strip members engage the jamb faces of the jamb members 36 and 38, where the flange portions 48, 50, 52 and 54 abut the opposed faces of the jamb members 36 and 38, and where the flange portions themselves abut one another. These seven points of seal along the above-mentioned lines at the inner and outer edges of the mullion assembly ensure that no moisture, air drafts or foreign matter will enter in between the jamb members 36 and 38, or in between such members and the other parts of the assembly.

Each trim strip exhibits at its opposite ends tabs 100 and these tabs are adapted to overlie the inner and outer edges of the header and sill members as shown in Fig. 3. These tabs serve to prevent moisture or foreign matter from creeping in from the edge of the header and sill members to the inner portions of the mullion assembly.

What I claim is:

1. A mullion assembly comprising: a pair of frame members disposed back to back, a sash guide channel assembly mounted on each frame member, and a trim strip generally channel shaped in cross section with the side walls of the strip bent toward each other, said strip extending throughout the length of the members with the side walls received over a portion of each of the runway channel assemblies and adapted to urge the assemblies toward the frame members and urge the frame members together in said back to back relation.

2. A mullion assembly comprising: a pair of parallel complementary jamb assemblies disposed back to back one of the back to back meeting faces provided with a tongue-like part slidably received in a complementary groove in the opposed meeting face with the groove having a depth exceeding the height of the tongue, whereby the jamb assemblies may be shifted toward and away from each other while relative lateral movement is prevented, and a generally channel shaped trim strip having the side walls tensioned toward each other received over an edge of each assembly with the walls of the strip urging the assemblies toward each other and the tongue and groove in interfitting engagement.

3. A mullion assembly comprising: a pair of parallel upright frame members having opposed faces, a pair of sash guide channel assemblies spaced apart and overlying adjacent the interior and exterior edges each of the jamb faces of the frame members, each assembly including a base strip portion having a flange extending between the frame members and overlying the opposed faces spacing the frame members apart, one of said opposed faces exhibiting an aligning rib, the other of said opposed faces exhibiting a groove adapted to slidably receive the rib, a trim strip generally channel shaped in cross section with the side walls tensioned toward each other and with each wall adapted to overlie a jamb face of one of the assemblies to urge the assemblies and the frame members toward each other and grip said flange portions of the base strips between the frame members, the bottom walls of the trim strips overlying the interior and exterior edges of the frame members and extending between the jamb faces of the sash guide channel assemblies and forming

with the side walls a weather impervious barrier extending between the jamb faces of said assemblies.

4. A mullion assembly comprising: a pair of parallel complementary upright jamb frame members disposed in close proximity, a sash guide channel assembly for each frame member overlying the jamb faces of each member and having a part overlying a portion of the opposed faces of the members, said parts adapted to abut each other and space the jamb members apart, the opposed face of one of said members exhibiting a linearly extending key slidably received within a complementary groove formed in the opposed face of the other member, the depth of said groove exceeding the depth of penetration of the key therewithin, and a trim strip generally channel-shaped in cross section having the side walls tensioned toward each other with one wall overlying the part of each sash guide assembly tensioning the assemblies and the frame members toward each other and holding said key and groove in interfitting engagement and said parts of the guide channel assemblies in tensioned abutment.

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