

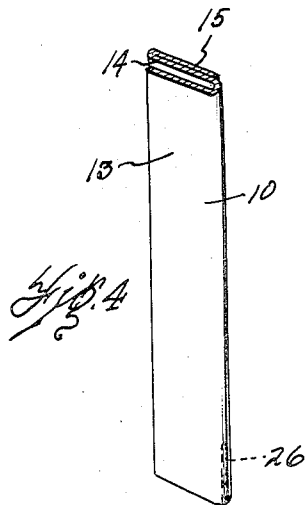
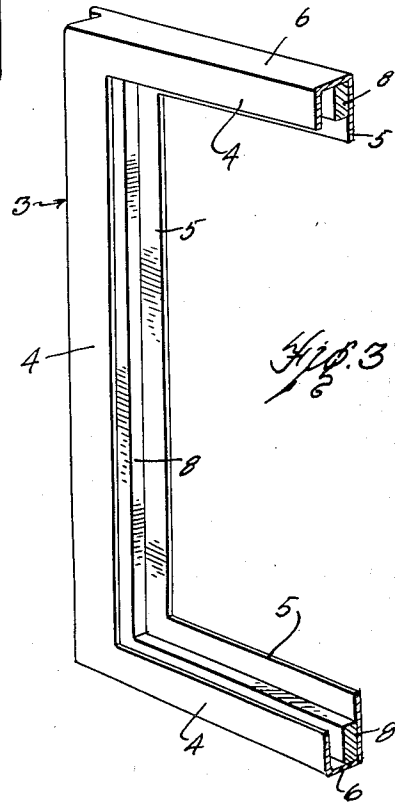
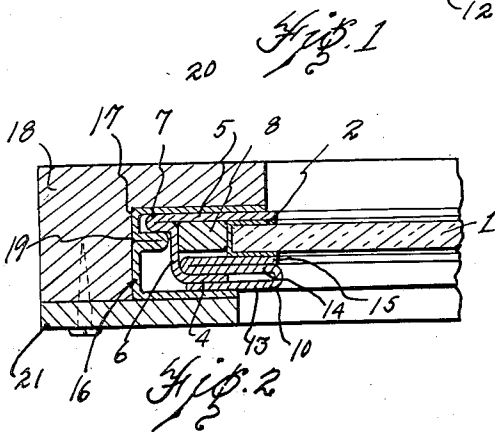
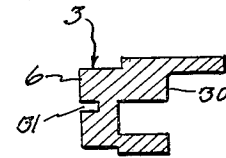
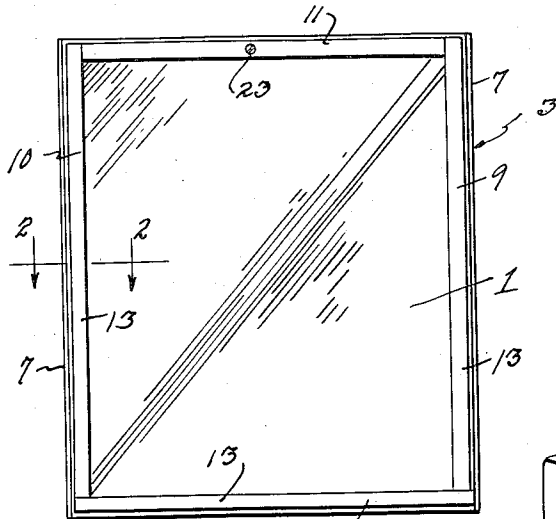
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WINDOW SASH MOUNTING

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WINDOW SASH MOUNTING

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3 Claims. (Cl. 20—56.4)

This invention relates to window sash mountings and the principal feature and object of the invention resides in the provision of a metal frame extending around the peripheral edge of a pane of glass and so constructed as to hold the pane of glass in position without the use of putty or the like.

Another object of the invention resides in the provision of a window sash mounting that is so constructed as to quickly and easily permit the replacement of the glass pane in the sash.

Another object of the invention resides in the provision of a structure of this character in which a pane of glass is placed in position in a rectangular frame and is held therein by a plurality of locking strips frictionally engaging the frame.

A still further object of the invention resides in the provision of a sheet metal frame having a lateral projecting flange on each side edge thereof for engaging a groove in the runway in which the sash slides thereby preventing leakage of air between the sash and the runway.

These objects and the several novel features of the invention are hereinafter more fully described and claimed and the preferred form of construction by which these objects are attained is shown in the accompanying drawing in which—

Fig. 1 is an elevational view of a window sash of my improved construction.

Fig. 2 is a section taken on line 2—2 of Fig. 1 showing the sash in its runway.

Fig. 3 is a sectional perspective view of the frame.

Fig. 4 is a detail perspective view of a portion of one of the locking strips.

Fig. 5 is a sectional view showing a modified form of frame construction.

Referring to the drawing, the pane of glass 1 is provided with the adhesive strip 2, the same being applied thereto prior to the assembly of the pane of glass 1 with the frame. The strip 2 may be an adhesive strip or may be of various forms of fibrous material cementitiously secured to the faces of the glass pane 1 adjacent the peripheral edge thereof. A rectangular frame 3 comprising the inturned flanges 4, the longer flanges 5 and the base portion 6 is formed with the laterally projecting flanges 7, one positioned on each side edge of the frame for a purpose to be hereinafter described. It will be noted, by referring more particularly to Figs. 2 and 3, that the frame is substantially U shaped in cross section and a strip or bar 8 is positioned therein adjacent the

flange 5 in the base 6 and is secured in place in any desired manner such as by spot welding or the like. The locking strips 9, 10, 11 and 12 are similar in cross section but the strip 11 is shorter than the strip 12 for a purpose to be hereinafter described. Each of the locking strips comprises a portion 13 the portion 14 in space relation thereto and the return bent portion 15 lying substantially flush with the portion 14.

A channel shaped runway 16 is positioned in the groove 17 formed in the frame 18 and the base thereof is provided with inwardly projecting flange 19 forming a channel shaped runway 20 for receiving the lateral projecting flange 7 on the frame 3. The channel shaped runway 16 is preferably made of spring metal and the flange 19 thereon frictionally engages the flange 7 to prevent passage of air from one side of the sash to the other. By referring more particularly to Fig. 2 it will be seen that each of the flanges 4 of the frame 3 is positioned in the space between the portions 13 and 14 of the respective locking strip and the portion 15 of each of the locking strips engages against the portion of the strip 2 on the adjacent face of the pane of glass 1. It will be noted that the distance between the adjacent edges of the oppositely disposed flanges 4 is slightly greater than the width or length of the sash than the pane of glass 1.

The device is assembled in the following manner. The frame 3 and the strip 8 therein is preferably placed on any flat surface so that the flange 5 rests on the supporting surface and the glass pane 1 having the adhesive strip 2 secured thereto is placed on the upper surface of the flange 5 the strips 8 limiting the movement of the glass pane relative to the flange. The strip 12 is hooked over the flange 4 and the strips 9 and 10 hooked over the respective flanges 4 forming the vertical sides of the frame and the strip 11 hooked over the flange 4 forming the top side of the rectangular frame 3.

A screw 23 fastens the strip 11 to the upper flange 4 of the frame to prevent any tendency of the strip to drop down after the sash has been in use for a while. It will be understood, of course, that the ends of the strip 12 between the portions 13 and 14 thereof will be slotted as indicated by the dotted lines 26 in Fig. 4 to permit the strip to project over the flanges 4 forming the vertical sides of the rectangular frame 3. It will be seen that the strips 9 and 10 when once assembled with the frame 3 cannot slip down as they rest on the upper portion of the ends of the strip 12 and the strips 9 and 10 cannot move

inwardly as they abut the end of the upper strip 11. It will be further understood that the strips 9 and 10 are provided with slots 26 at their upper ends to permit the strips to be assembled over the flange 4 forming the top side of the rectangular frame 3. It will be seen that the pane of glass will be held in position under spring pressure exerted between the flange 5 and the locking strips. After the rectangular frame is assembled the frame 3 may then be assembled with the runway 16 and the runway and the frame placed in position in the frame 18. The strip 21 may then be secured to the frame 18 in any desired manner and the device is ready for use.

The inner edges of the strip 2 may be trimmed off flush with the inner edges of the frame and it will be noted that the edges of the glass pane 1 will be held in frictional engagement between the locking strip and the flanges 5 of the frame 3 and the adhesive strip 2 will prevent rattling of the pane in the frame. It will be further noted that it is relatively easy matter to remove the glass pane if broken and replace the same with a new pane of glass.

Referring to Fig. 5, I have shown the frame 3 as being formed of bar stock and in this form of construction the shoulder 30 limits lateral movement of the pane of glass relative to the frame. This form of construction also contemplates having a vertically extending groove 31 formed in the base portion 6 thereof for receiving the inwardly projecting flange 19.

From the foregoing description it becomes evident that I have provided a window sash mounting which is held in place without the use of putty, or the like, thereby permitting easy replacement of a pane or glass therein, and further that the device is relatively inexpensive to manufacture and assemble and is so arranged as to prevent leakage of air between the sash and the runway in which it slides.

Having thus fully described my invention, its utility and mode of operation, what I claim and desire to secure by Letters Patent of the United States is—

1. A structure of the character described comprising a rectangular frame having a base, a pair of spaced inwardly extending peripheral flanges on each of its sides one of which extends inwardly to a distance greater than the other, a pane of glass positioned in the space between the flanges and engaging against the inner face of the longer flange, means in the space between the flanges providing a support for the glass preventing displacement thereof in any direction in its plane, said pane of glass having a width and length sufficiently less than the space between the shorter flanges of the frame to permit the same to be passed therebetween to position against the longer flanges, the thickness of the pane of glass being less than the space between the flanges, and a locking strip consisting of a U shaped member adapted to be manually inserted onto each of the shorter flanges of the rectangular frame to seat against the base and to project therefrom a dis-

tance approximately equal to the distance the longer flange extends therefrom, said U members each having a portion thereof engaging the edge of the pane in opposed relation to the respective longer flange when the parts are assembled, one of the said U members having a length approximately equal to the distance between the short flanges of the two sides of the frame and the U strip on the said short side flanges having a length equal to the distance from the first U strip to the opposite flange of the frame and the fourth U strip for said last named flange of the frame having a length approximately equal to the distance between the last two strips.

2. A structure of the character described comprising a rectangular frame having a pair of spaced inwardly extending flanges on each of its side and cross members, the outer flange of each of the sides of the frame extending inwardly a greater distance than the inner flange, a pane of glass having a width and length sufficiently less than the distance between the respective shorter flanges of the frames as to permit the same to be passed therethrough to engage the outer flange, a locking strip for supporting the pane of glass in place consisting of a U shaped member providing a slot adapting the same to be slipped over the shorter flange to engage a seat provided in the frame and to project beyond the shorter flange a distance approximately equal to the width of the longer flanges on each side of the frame and engaging against the glass edge in opposed relation thereto, and a frame in which the said rectangular frame is slidably mounted, said last named frame having a rib projecting inwardly from its base and the frame for the glass likewise having a rib projecting outwardly to engage back of the first named rib and in frictional contact therewith, at least one of the said flanges being sufficiently resilient to provide for frictional contact between the two ribs to prevent passage of air between the frames.

3. A structure of the character described comprising a rectangular frame having a pair of spaced inwardly extending flanges on each of its side and cross members, one flange of each of the side and cross members of the frame extending inwardly a greater distance than the other, a pane of glass having a width and length sufficiently less than the distance between the respective shorter flanges of the frame as to permit the same to be passed therethrough to engage the longer flanges, a locking strip for each side of the frame each having a portion engaging over the shorter flange on its respective side of the frame and a portion between the shorter flange and the pane to engage the edge of the glass in opposed relation to the respective longer flange, a second frame member in which the first named frame member is slidable, and a resilient means on one of the frames frictionally engaging a portion of the other to prevent passage of air laterally of the space between the frames.

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