

July 21, 1959

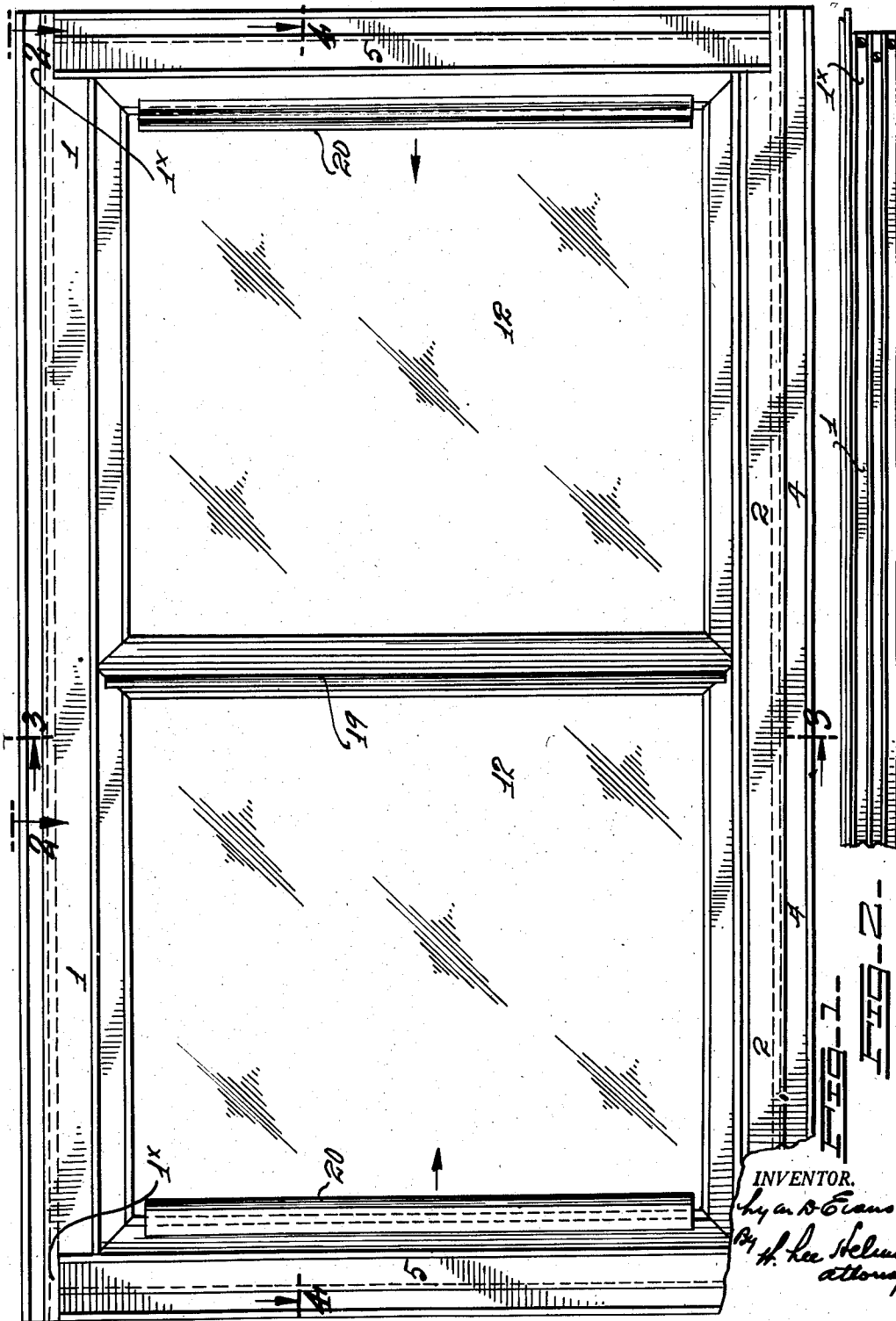
L. D. EVANS

2,895,182

WINDOW STRUCTURE

Filed April 22, 1954

5 Sheets-Sheet 1



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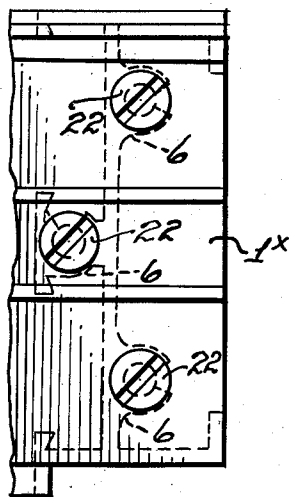
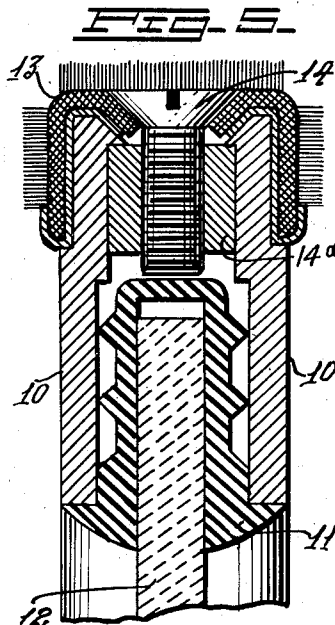
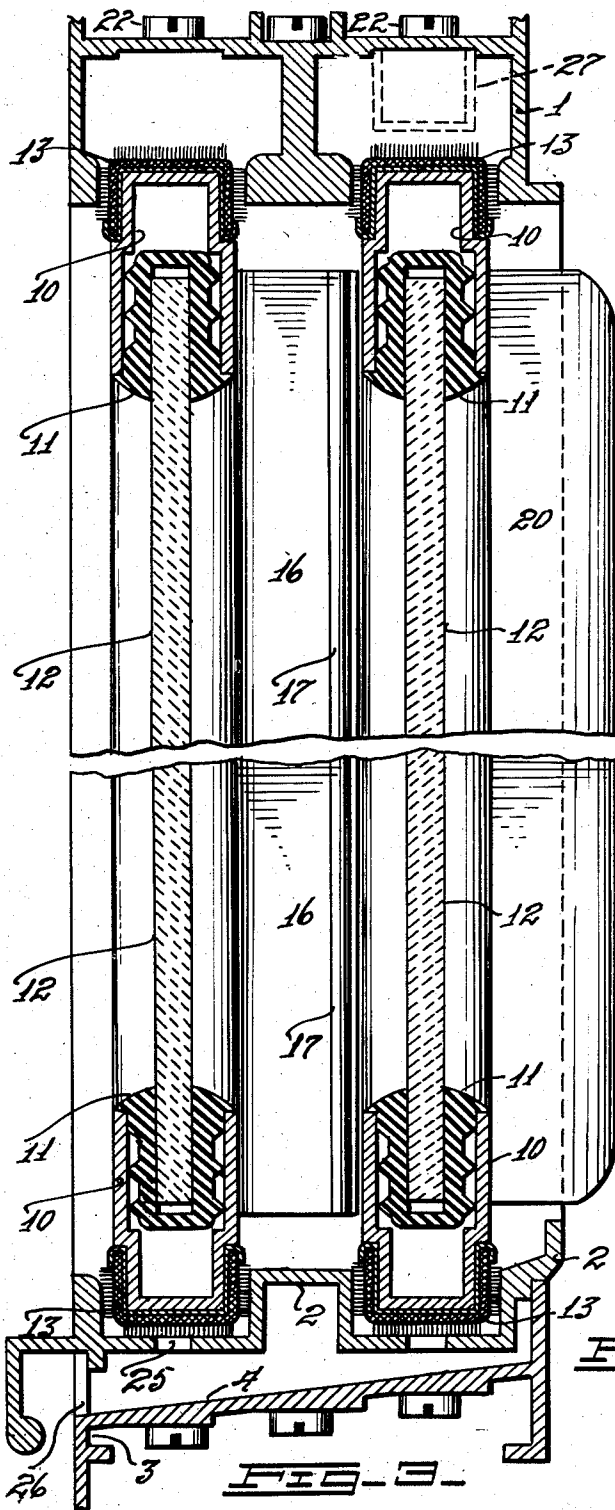


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5 Sheets-Sheet 3

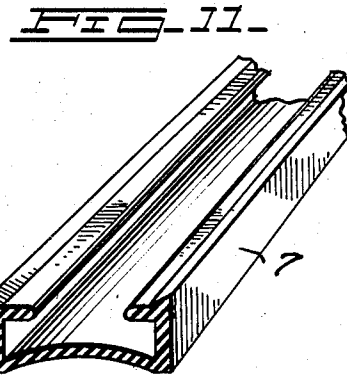
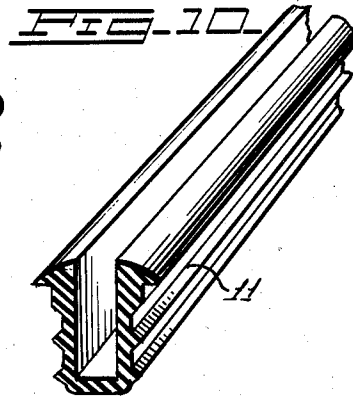
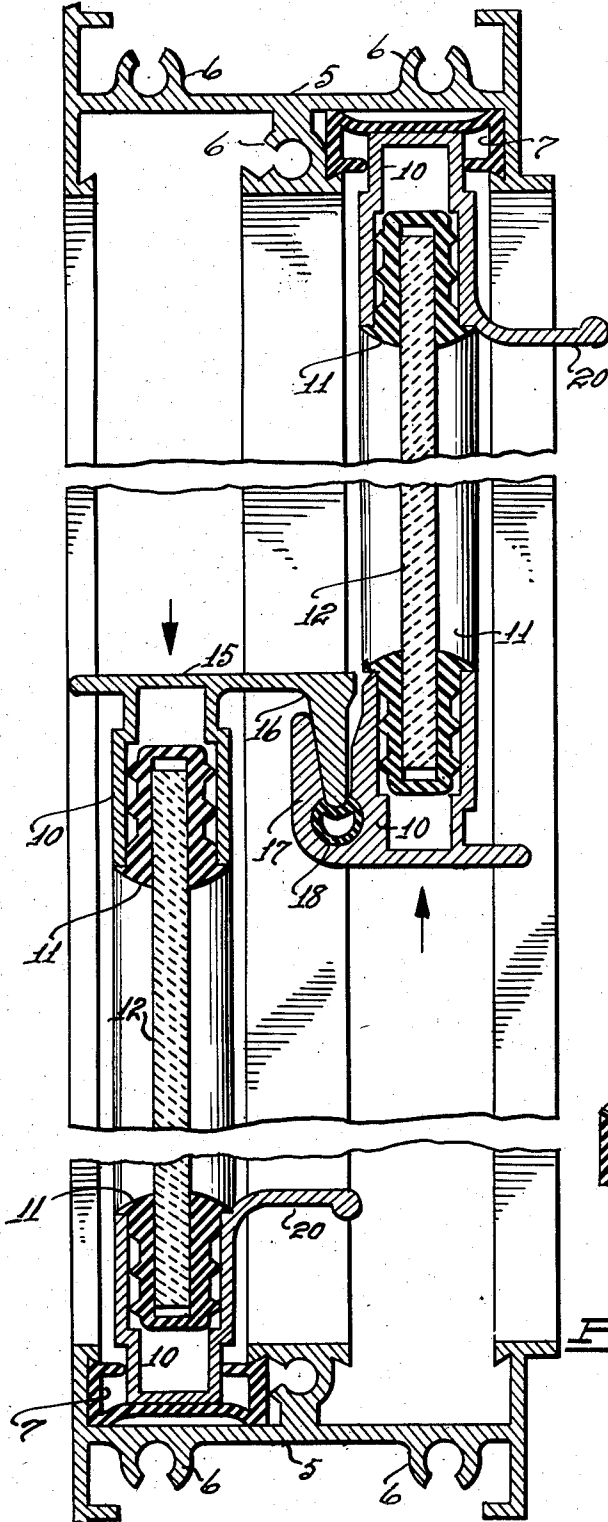


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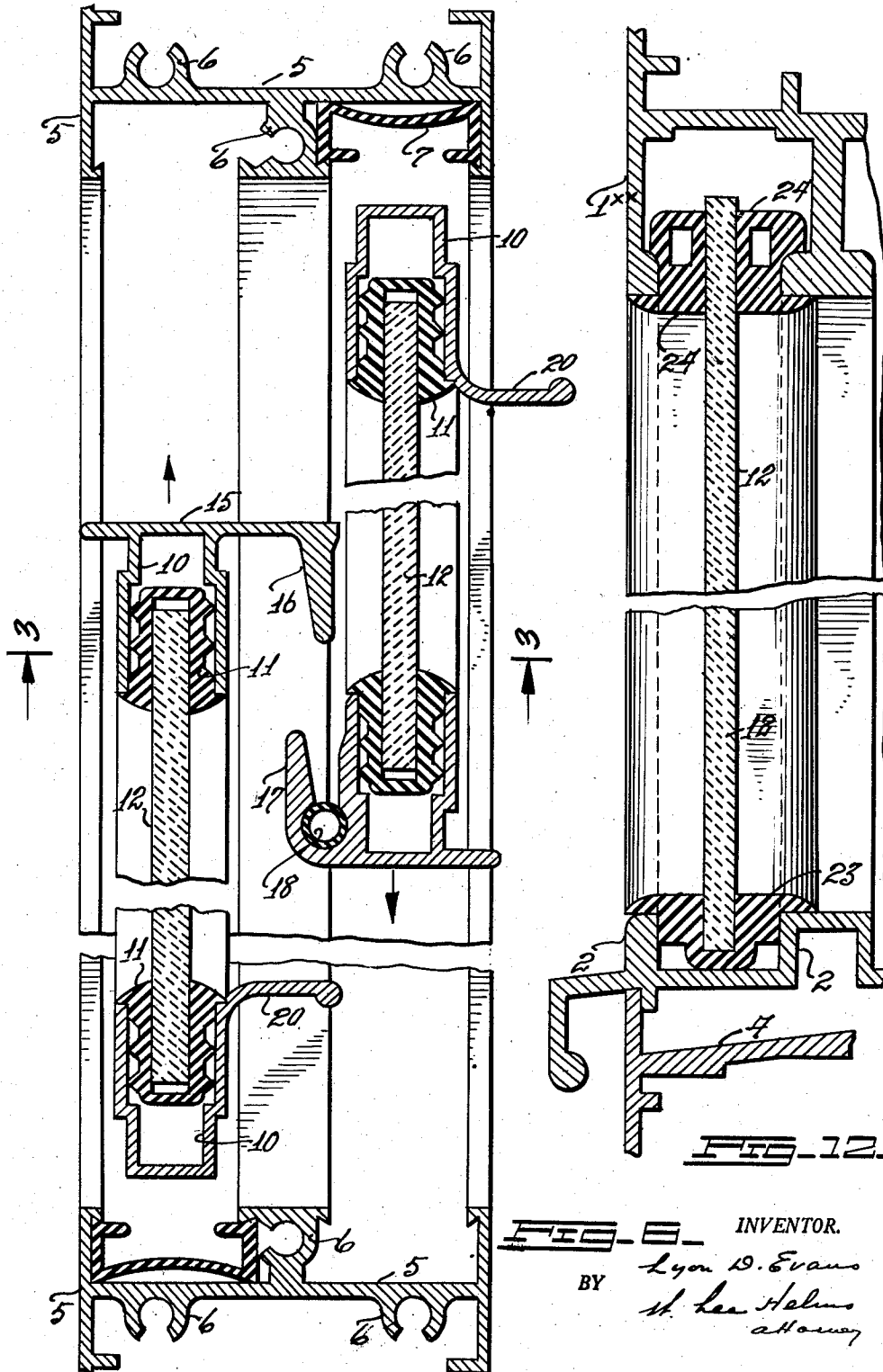


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5 Sheets-Sheet 5

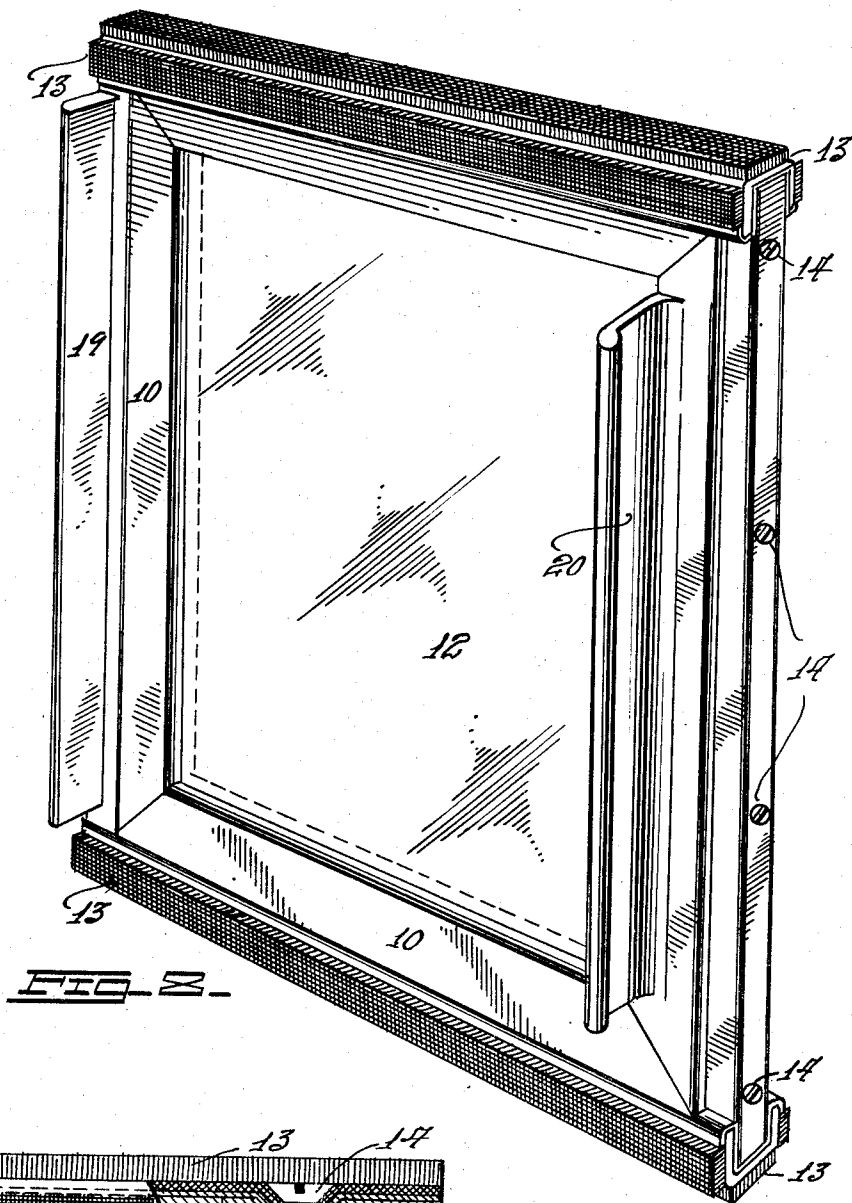


FIG. 2.

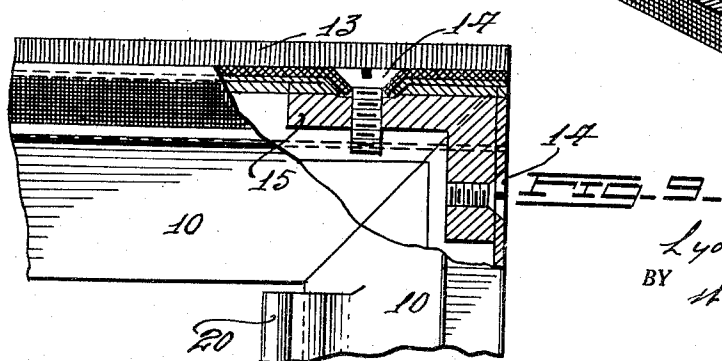


FIG. 3.

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2,895,182

WINDOW STRUCTURE

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2 Claims. (Cl. 20—11)

This invention relates to windows having slidable sashes therein, for example, horizontal slidable sashes.

It is an object of this invention to provide windows having horizontal slidable sashes.

It is another object of this invention to provide a window having a framepiece made from extruded metallic parts, and having window sash therein also made from extruded metal parts.

It is another object of this invention to provide a slidable window made from extruded metal parts, said parts being secured together by means of lugs having disposed therein extruded self threading screw receiving cavities.

It is another object of this invention to provide a picture window having slidable sash windows.

It is another object of this invention to provide a window having slidable sashes, the window frame piece of which is provided with peripherally disposed sash receiving weather stripping.

These and other objects of this invention will become apparent on reading the following descriptive disclosure taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a front view of a double sash window having two movable sash;

Fig. 2 is a fragmentary top view of Fig. 1;

Fig. 3 is a vertical section on line 3—3 of Fig. 1;

Fig. 4 is a longitudinal section on line 4—4 of Fig. 1, and partly broken away;

Fig. 5 is an enlarged sectional view of one of the sliding sashes and showing a method of securing the sealing member;

Fig. 6 is a view similar to Fig. 4 showing one sash moved inward;

Fig. 7 is an enlarged end view of the sash top member shown in Fig. 2;

Fig. 8 is a perspective view of the slidable sash;

Fig. 9 is a broken-away corner view of the sash shown in Fig. 8;

Fig. 10 is a detail view in perspective, of the sash U-shaped sealing strip;

Fig. 11 is a detail view, in perspective, showing the resilient sealing strip of the frame; and

Fig. 12 is a vertical, broken away, sectional view of a fixed sash assembly to be used with a movable sash.

Fig. 1 shows an extruded substantially W-shaped frame head 1 and a substantially W-shaped extruded sill member 2, which is mounted on sub-sill 3 having an inclined wall 4. The frame is provided with vertically disposed extruded spaced-apart frame jambs 5 (Fig. 4). The vertically disposed jamb frame pieces 5 are adapted to receive slidable parallel disposed sashes, or a slidable sash and a fixed sash.

The jamb pieces are provided with a plurality of extruded crescent-shaped self-threading screw receiving projections 6. The channels of the jamb pieces 5 are provided with resilient non-oxidizing weather stripping 7. The weather stripping 7 is provided with two inwardly

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projected webs spaced to provide a longitudinal channel of a width adapted to receive the frames of the respective sash.

The sash are provided with top and bottom longitudinal metal channel strips 10, interiorly of which is disposed the window pane proper, said window pane may be of a single glass pane or of the insulating double glass pane variety. Seated in each channel strip and bearing upon its top by lateral flanges is a resilient glazing strip 11 which directly receives the glass pane 12.

The slidable sash is provided with insulating pile fabric material 13 disposed longitudinally on the entire sash top and bottom. The pile fabric 13 may be of mohair construction and is disposed over the edges of the sash so as to engage the reduced lower wall of each U-shaped channel strip. The pile fabric may be secured to the metal sash by means of flat headed screws 14 which may pass through reinforcing pieces 15 within the sash. The inward vertically disposed member 14a of one movable sash is provided with a channel to receive one of the glazing strips 11 and with a laterally projected integral tongue 16 (Fig. 4).

The inward vertical member 19 of the coacting sash (Fig. 4) is provided with a channel to receive one of the glazing strips 11, and with a socket extension 17 at the base of which is a resilient sealing member 18, preferably tubular. When the two sash are moved to closed position, as shown in Fig. 4, tongue 16 of the one sash enters the socket 17 and bears upon sealing member 18. Each outer vertical sash member has an outward extension 20 serving as a pull handle.

The self-threading screw-receiving longitudinal projections 6 of the jambs 5 are in line with lateral extensions 1x of the head 1, and corresponding lateral extensions 4x of the sub-sill 4 (see Figs. 1 and 7). These extensions are apertured to receive screws 22 which by downward pressure and rotation are self threading in the walls of the apertures of jamb projections 6.

Various combinations of fixed and movable sash are embraced within the scope of this invention. Thus, as shown in Fig. 12, a fixed sash may be disposed at the side of a movable sash. In such case, the cavities of the head 1 and sill 2 may receive fixed resilient glazing members 23, 24 for the glass pane 12. In such case, the inner fixed sash frame may have the channel formation with the resilient sealing member 18 therein, as shown in Fig. 6, to receive rib 16 of the movable sash, or vice versa. Other combinations, such as a fixed picture window sash disposed centrally within a rectangular window frame and having movable sashes disposed on both of its lateral sides, is also within the scope of this invention.

It will be seen by reference to the cross section of the frame head 1, shown in Fig. 3, that raising of either sash to the point where its base clears the sill will enable the sash to be tilted outwardly at its base and then withdrawn from the frame. It is averred that this be enabled only when the appropriate sliding sash has been moved to fully open position. Thus, when the sash is in closed position, it may be held against such raising and withdrawal by any suitable member carried within the appropriate channel of the head, as schematically indicated at 27, Fig. 3.

While this invention has been shown and described by means of illustrative embodiments thereof, other embodiments will become obvious to those skilled in the art and within the claims appearing hereinafter.

As shown in Fig. 3, the sill 2 is formed with one or more drain openings at 25 and the sub-sill has an inclined base wall to receive condensation or rain which may pass downward through an opening (or openings) 26 in the channel wall of the sill.

Having described my invention, what I claim and desire to secure by Letters Patent is as follows:

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1. A sill, jamb, and head structure, for sliding sash, comprising a unitary head member formed with front and rear walls and an intermediate downwardly extending wall, said walls defining spaced channels and wall guides for two sash, a first sill member having front and back walls, and a connecting wall therefor, said connecting wall being formed with an upwardly directed centrally located U-shaped projection serving as a spacer between channels, each for receiving a sash, a second and lower sill member consisting of front and back walls having an intermediate connecting wall adapted as a bottom sill closure, said intermediate wall being spaced from the bottom area of the first sill member, and a pair of vertically disposed jamb pieces each formed with integrally apertured screw-receiving areas adapted to receive screws passed downwardly from the head and upwardly from the second sill member.

2. A sill and jamb structure constructed in accordance with claim 1, in which the second sill member is formed as a saddle which receives the first sill member with the lower area thereof faced by the front and back walls of said second sill member, said front wall of the second sill member being apertured above its intermediate connecting wall, and said first sill member being integrally formed with a downwardly extending wall which faces, but which is spaced from, said apertured area of the second sill member.

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