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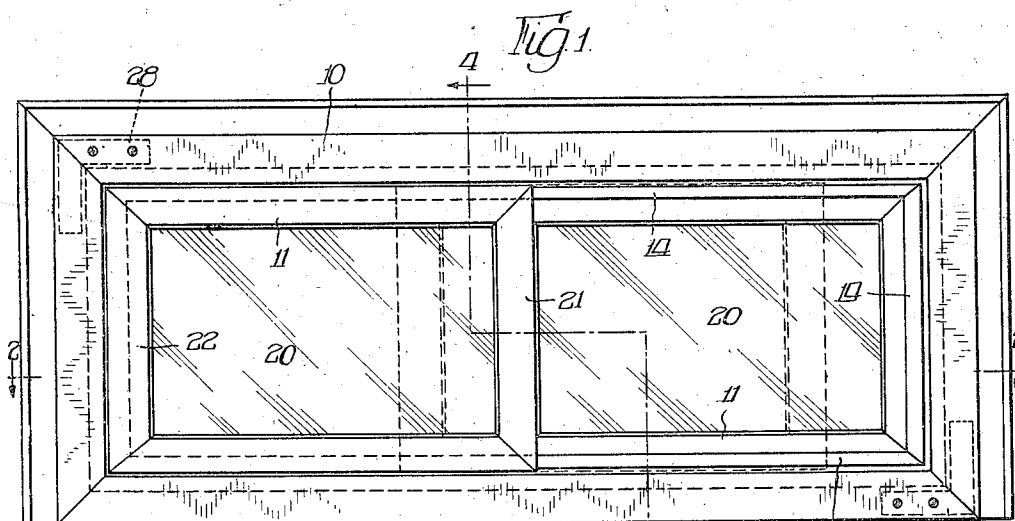
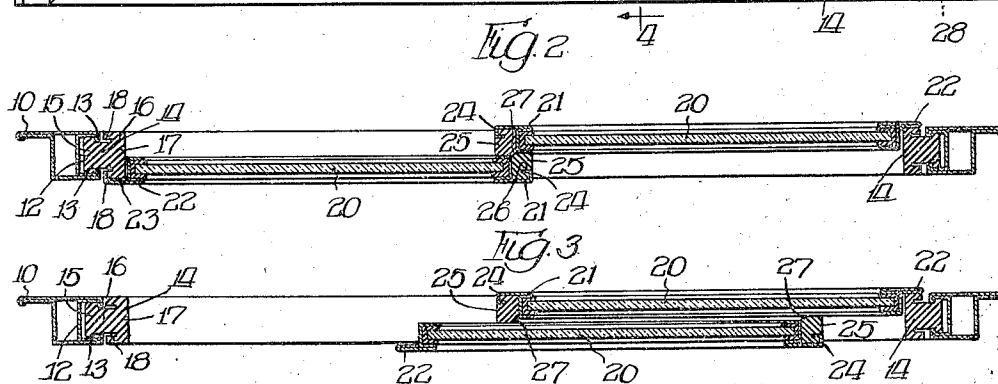
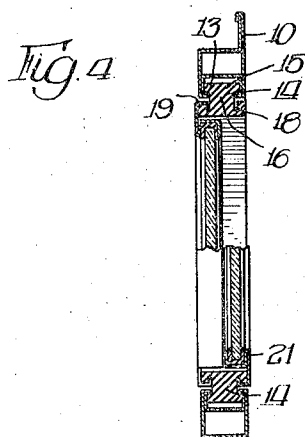
W. S. HAMM

1,944,232

SASH CONSTRUCTION

Filed May 11, 1932

2 Sheets-Sheet 1



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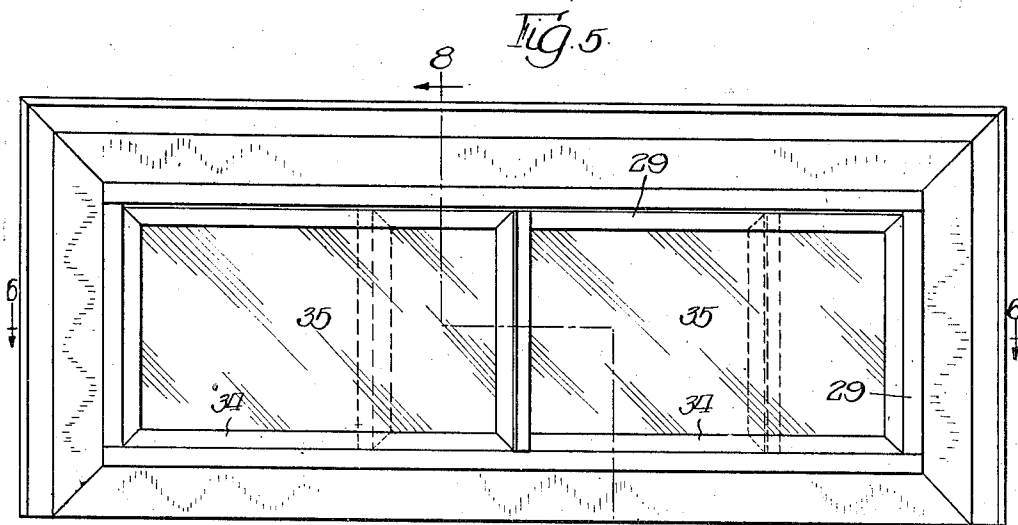
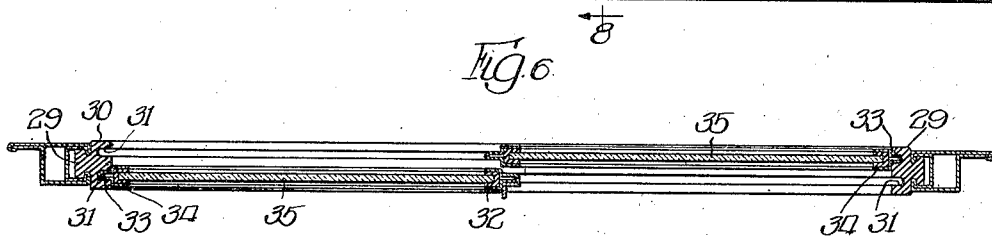
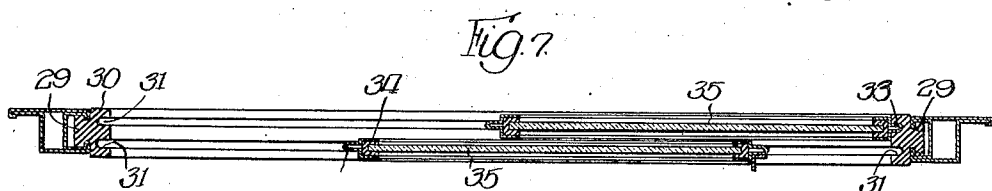
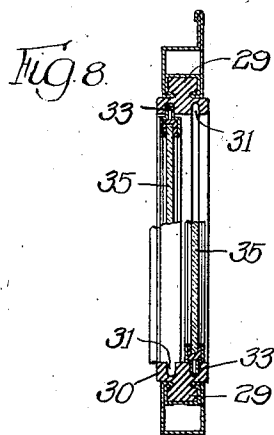
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1,944,232

SASH CONSTRUCTION

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

1,944,232

SASH CONSTRUCTION

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Application May 11, 1932. Serial No. 610,646

7 Claims. (Cl. 189—72)

The purpose of this invention is to provide an improved sash unit of the type containing one or more small horizontally slidable panels.

Sash of the type referred to are used quite extensively in buses, both as transom sash and as drivers' sash. Heretofore, considerable criticism has been directed against the same, because of the noise caused by the rattling of the panels, the air drafts permitted by the joints at the edges of the panels when made loose enough to allow for free sliding, and the rapid disintegration of the metal frame members in the unit due to continued vibration.

In the novelly constructed sash unit which forms the subject matter of this invention, these difficulties have been entirely overcome. In addition, the improved sash provides a weather tight closure when the panels are shut, absorbs all shocks and jars without destructive vibration, and is comparatively inexpensive, both to manufacture and to maintain in service.

While the foregoing statements are indicative in a general way of the nature of the invention, other more specific objects and advantages will be apparent to those skilled in the art upon a full understanding of the construction, arrangement and cooperation of the parts which have been combined to produce the improved sash unit.

In order that the invention may be readily understood, two slightly different embodiments of the same are presented herein, but it will of course be appreciated that such embodiments have been chosen primarily for the purpose of exemplification and that the invention is susceptible of embodiment in still other structurally modified forms coming equally within the scope of the appended claims.

In the accompanying drawings:

Fig. 1 is an inside face view of a sash unit which is constructed in accordance with the invention;

Fig. 2 is a horizontal section through the sash, taken on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view which corresponds to Fig. 2 but which shows one of the panels slid back into the partially open position shown in dotted lines in Fig. 1;

Fig. 4 is a composite vertical section through the sash, taken on the irregular line 4—4 of Fig. 1; and

Figs. 5 to 8 inclusive are views which correspond to Figs. 1 to 4 inclusive but which show a somewhat different construction which also embodies the invention.

The sash which is shown in Figs. 1 to 4 inclu-

sive is composed of a horizontally elongated rectangular frame 10 and two small horizontally slidable rectangular panels 11, which panels are enclosed within the frame 10 and are movable therein past each other, either into positions in substantially end-to-end relation or into positions in partially or fully lapped relation. Both of the panels 11 are shown as being movable, but the outside panel may be made stationary if desired.

The frame 10 is made up of four rail members of hollow sheet metal construction, which are mitered at their ends and securely fastened together. The frame is provided about its inner periphery with a continuous groove 12, and the edges of the frame at the sides of the groove are provided with inturned flanges 13 which leave only a narrow opening into the groove.

The groove 12 is occupied by four rubber strips 14 which are coextensive with the rail members of the frame and are mitered at their ends in order to fit nicely together. The strips 14 are characterized by base portions 15 which fit within the groove 12 in interlocked relation with the edge flanges 13 on the frame, by relatively narrow web portions 16 which extend out between the flanges 13, and by head portions 17 which are located beyond the web portions. The head portions 17 of the rubber strips are substantially equal in width to the rail members of the frame and are provided at their sides with narrow slots 18 which extend into the head portions from the direction of the neck portions and are disposed in substantially the side planes of the latter.

The slots 18 in the rubber strips at the top and bottom of the frame 10 form of the head portions guide tracks which cooperate with hook-shaped flanges 19 on the upper and lower edges of the sliding panels 11. The panels 11 are made up of glass panes 20 and sheet metal rims 21, and the hook-shaped flanges 19 are formed as portions of the upper and lower members of the rims 21, with the flanges projecting from the rims in the side planes thereof and also in approximately the side planes of the surrounding frame 10.

This arrangement provides a freely sliding, weather tight, and securely interlocked connection between the panels 11 and the frame 10, which connection is of such nature as to absorb all severe shocks and jars and vibration and also allow for a slight amount of resilient yieldability of the panels in directions at right angles to the plane of the surrounding frame.

The rims 21 on the panels 11 are provided at their far ends with flat flanges 22 which are adapted to lap with the side faces 23 of the head portions of the rubber strips in the ends of the frame, in resiliently compressed associated relation with the latter, when the panels are in their closed positions. At the meeting ends of the panels, the rims 21 are provided with hook-shaped flanges 24 which are securely interlocked with narrow rubber strips 25 in grooves 26 provided in the latter. When the panels are closed, beveled edges 27 on the rubber strips 25 are adapted to abut resiliently against each other to provide a slightly yieldable yet tight and weather-proof closure between the panels at the center of the sash unit.

If it is desired to replace the rubber strips 14 at any time, the same may be easily accomplished by taking the frame 10 apart at two of the corners thereof, readily releasable screw-fastened corner connections 28 being provided at preferably two diagonally opposed corners of the frame.

In the modification shown in Figs. 5 to 8 inclusive, the rubber strips 29 which are mounted in the groove about the inner periphery of the frame are provided in the head portions 30 thereof with grooves 31. The grooves 31 open toward the panels 32 and are adapted to receive and resiliently embrace hollow sheet metal ribs 33 which are formed on the rims 34 of the panels in the median plane of the latter. The grooves 31 in the rubber strips at the top and bottom of the frame serve as guides in which the ribs 33 on the top and bottom of the panels slide, while the grooves 31 at the ends serve as pockets into which the end ribs on the panels move when the panels are closed.

In this particular embodiment, the glass panes 35 are comparatively thin and the edges thereof are set in rubber glazing strips 36 in the rims 34; also, the ends of the rubber strips 29 are lapped, instead of mitered, but either type of joint, or any other type, may of course be employed in any embodiment of the invention.

While the strips 14 in the first embodiment and the strips 29 in the second embodiment are preferably made of rubber, the same might be constructed of some other non-metallic resiliently yieldable material or combination of materials.

I claim:

1. In a sash unit of the character described, a rectangular frame, a plurality of panels slidably mounted in the frame for horizontal movement past each other into either lapped or extended positions, resiliently yieldable non-metallic strips secured about the inner periphery of the frame, and sliding connections between the upper and lower strips and the upper and lower edges respectively of the panels.

2. In a sash unit of the character described, a rectangular frame, a plurality of panels slidably mounted in the frame for horizontal movement past each other into either lapped or extended positions, rubber strips secured about the inner

periphery of the frame, and interlocked sliding connections between the upper and lower rubber strips and the upper and lower edges respectively of the panels.

3. In a sash unit of the character described, a rectangular frame, a plurality of panels slidably mounted in the frame for horizontal movement past each other into either lapped or extended positions, rubber strips secured about the inner periphery of the frame, and sliding connections between the upper and lower rubber strips and the upper and lower edges respectively of the panels, said connections being disposed inwardly of the inner periphery of the frame, whereby to subject the rubber strips to shearing stress and render the panels resiliently yieldable to a certain extent when pressure is applied thereto at right angles to the plane of the frame.

4. In a sash unit of the character described, a rectangular frame provided with a groove about the inner periphery thereof, a plurality of panels slidably mounted in the frame for horizontal movement past each other into either lapped or extended positions, rubber strips mounted in the groove in interlocked association with the same, and hook-shaped top and bottom flanges on the panels in interlocked sliding association with the upper and lower rubber strips.

5. In a sash unit of the character described, a rectangular frame provided with a groove about the inner periphery thereof, a plurality of panels slidably mounted in the frame for horizontal movement past each other into either lapped or extended positions, rubber strips mounted in the groove in interlocked association with the same, and hook-shaped top and bottom flanges on the panels in interlocked sliding association with the upper and lower strips, said panels being also provided with end flanges for lapped association with the rubber strips at the ends of the frame when the panels are closed.

6. In a sash unit of the character described, a rectangular frame provided with a groove about the inner periphery thereof, a plurality of panels slidably mounted in the frame for horizontal movement past each other into either lapped or extended positions, rubber strips mounted in the groove in interlocked association with the same, hook-shaped top and bottom flanges on the panels in interlocked sliding association with the upper and lower rubber strips, and rubber strips secured to the meeting ends of the panels for resilient engagement with each other when the panels are closed.

7. In a ventilating sash, a rectangular sheet metal frame, a sliding panel in the frame composed of a glass pane and a sheet metal rim in which the pane is supported, rubber strips secured to the upper and lower edges of the frame and provided with grooves inwardly of such edges, and sheet metal formations on the upper and lower portions of the rim of the panel in laterally interlocked but horizontally slidable association with the grooves in the rubber strips.

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