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F. C. OSTEN, SR
WINDOW CONSTRUCTION

2,667,668

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2 Sheets-Sheet 1

FIG. 1.

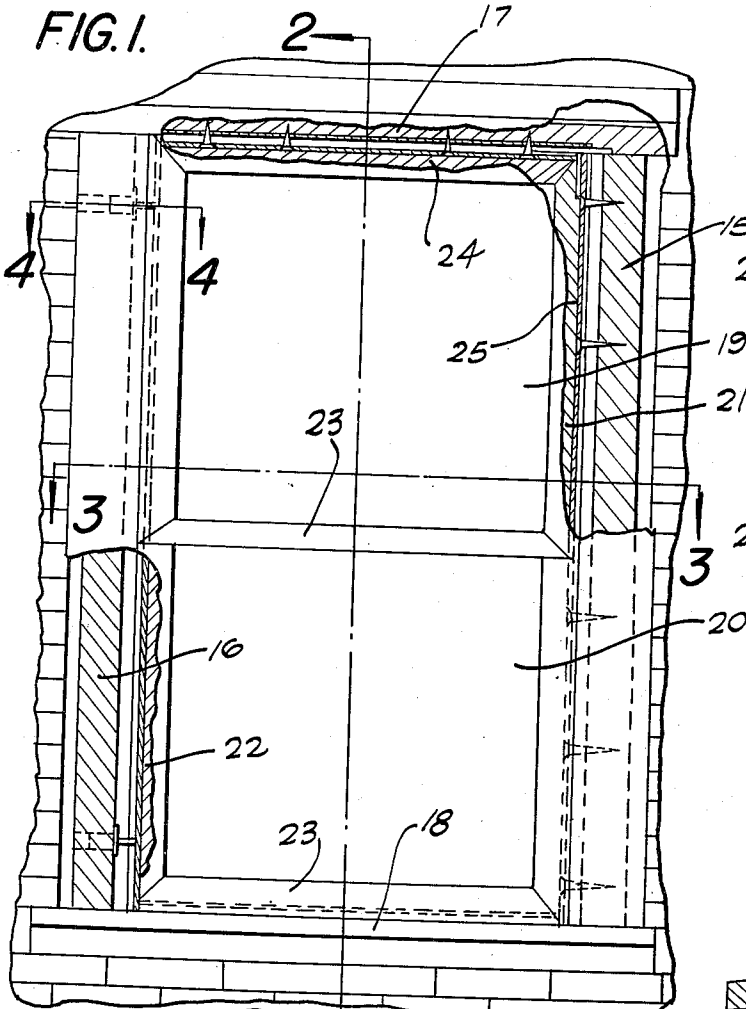


FIG. 2.

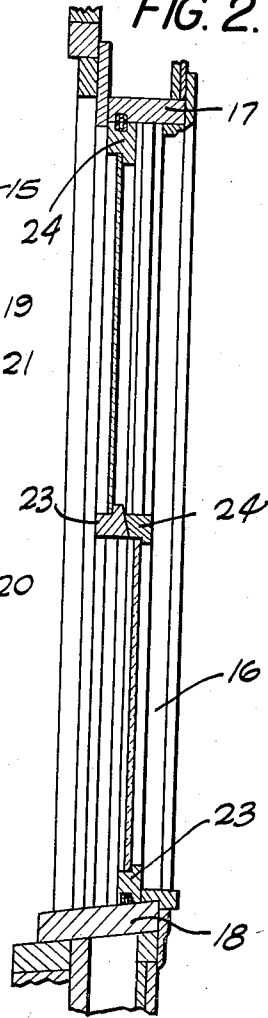
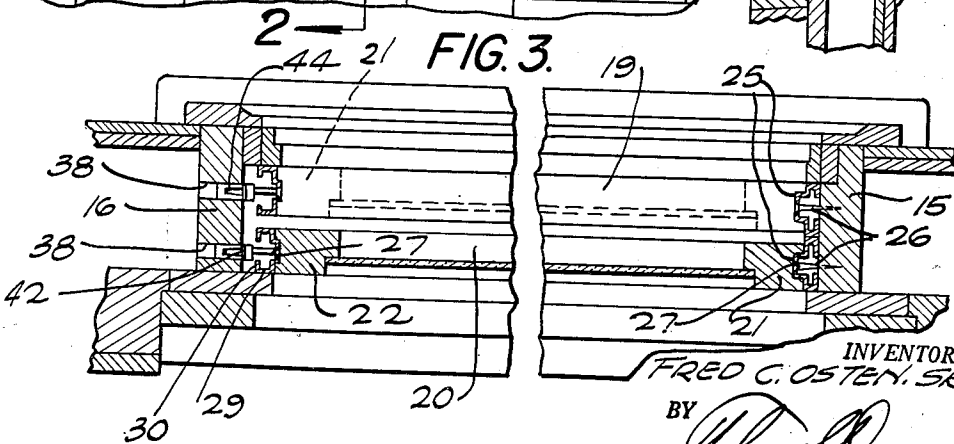


FIG. 3.



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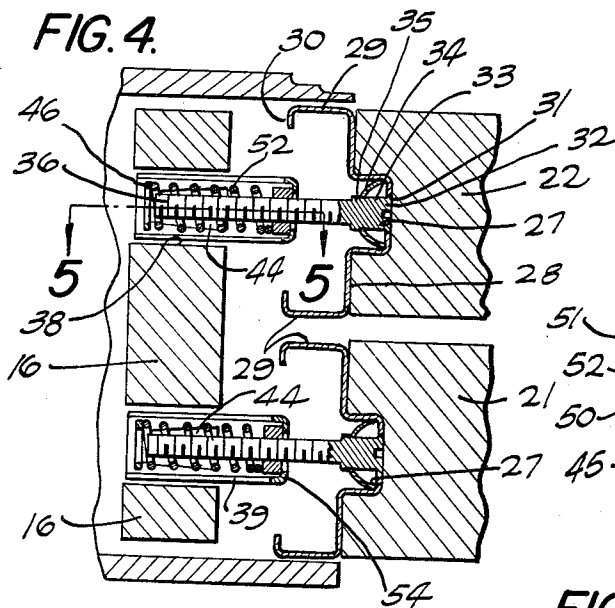
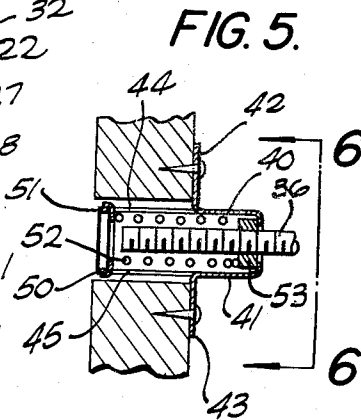
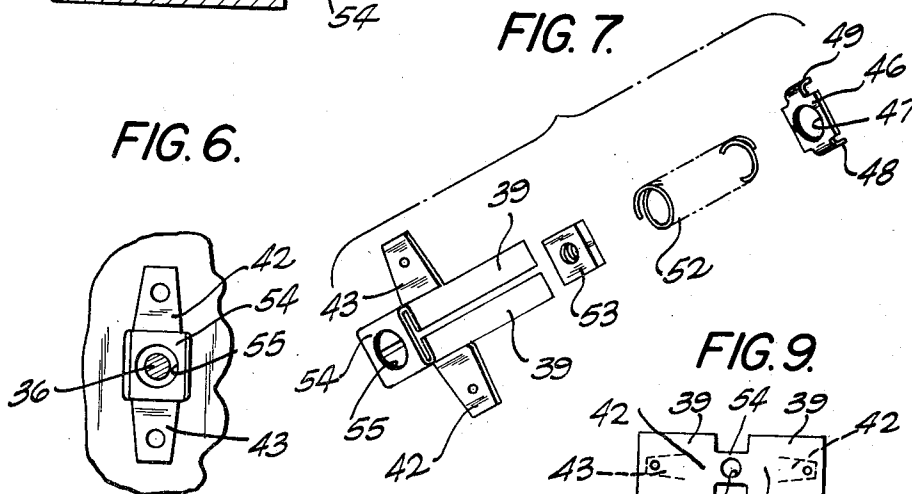
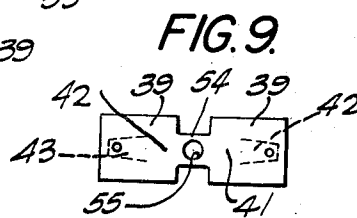
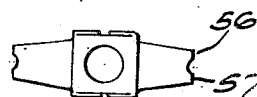
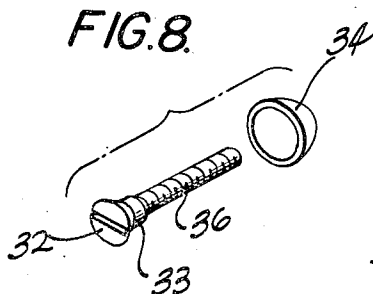
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2 Sheets-Sheet 2



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WINDOW CONSTRUCTION

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3 Claims. (Cl. 20—12)

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My invention relates to a new and useful improvement in a window construction in which a sash or a plurality of sashes is, or are, slidably mounted in a window frame. These sashes engage at their opposite side rails with a slide rail and in the type of window construction referred to in this application it is intended that one of the slide rails be fastened in fixed relation to a side rail of the frame and the oppositely disposed slide rail be mounted in such a manner that it may be movable toward and away from the slide rail of the frame on which mounted. This permits the removal of the sash from the window frame without the necessity of removing any of the associated parts. This is effected by moving the sash laterally so as to move the movable slide rail toward the rail of the frame on which mounted.

In the present invention a structure is provided which permits of an easy and quick mounting of the movable slide rail on the side rail of the frame and to provide such a structure is one of the objects of this invention.

Another object of the invention is the provision in a mounting of the movable slide rail whereby the use of screws, nails or other attaching means is avoided.

Another object of the invention is the provision of a housing for containing a nut and a spring so constructed and arranged that it may be fastened to the side rail of a window frame without the use of separate nails or screws.

Other objects will appear hereinafter.

It is recognized that various modifications and changes may be made in the detail of structure illustrated without departing from the invention and it is intended that the present disclosure shall be considered but the preferred embodiment.

Forming a part of this application are drawings in which:

Fig. 1 is an elevational view of a window frame with a pair of window sashes slidably mounted therein, with the invention applied and with parts broken away and parts shown in section.

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 1 with parts broken away, with lower sashes raised.

Fig. 4 is an enlarged fragmentary sectional view taken on line 4—4 of Fig. 1, with lower sashes raised.

Fig. 5 is a fragmentary sectional view taken on line 5—5 of Fig. 4.

Fig. 6 is a front elevational view of the hous-

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ing used in the invention taken on line 6—6 of Fig. 5.

Fig. 7 is a perspective view of the housing used in the invention with the parts contained therein shown in separated relation thereto.

Fig. 8 is a perspective view of a screw and of an associate part used in the invention with these parts shown in separated relation.

Fig. 9 is a plan view of the blank from which the housing is made.

Fig. 10 is a front elevational view of a modified form of housing.

Fig. 11 is a side elevational view of the housing shown in Fig. 10.

In the drawings I have illustrated a window frame embodying the oppositely disposed side rails 15 and 16, a top rail 17 and a bottom rail or window sill 18. Slidably mounted in this window frame is an upper sash 19 and a lower sash 20. Each of these sashes embodies the oppositely disposed side rails 21 and 22, a bottom rail 23 and a top rail 24.

Fixedly mounted to the side rail 15 of the frame is a slide rail having a rib forming portion 25 through which is extended nails 26 to secure this slide rail to the side rail 15. The general contour and construction of the slide rails at opposite sides of the window frame is substantially identical, the only substantial difference being in the mounting of the slide rails on their supporting side rails. Consequently a description of the slide rail at one side would, so far as the slide rail itself is concerned, also form a description of the other slide rail. Each of the sashes has, on the outer face of its side rails 21 and 22, a longitudinally directed groove 27, in which engages the rib 25. This engagement of the rib 25 in the groove 27 effects a weatherstripping or seal at that point.

As shown in Fig. 4, the slide rail at opposite sides of the rib portion 25 is the same, extending outwardly from this rib forming portion. At opposite sides is a flange 28 angularly turned to provide the flange 29, which terminates in the angularly turned flange forming portion 30. Formed through the rib 25 centrally thereof, at the desired location longitudinally of this rib, is an opening 31. Projected through this opening 31 is a screw 32 carrying a head 32, this head being larger than the opening 31 so that it cannot pass therethrough. The head 32 is chamfered on one side and the opening 31 is countersunk, as shown in Fig. 4, so that the outer surface of the head 32 lies flush with the outer face of the rib forming portion 25. The screw is thicker at its head bearing end than at the remaining portion, so that there is thus provided

a shoulder 33 against which engages the edge of the cup-shaped member 34 through which the screw 36 is projected. As this screw 36 is projected through this cup-shaped member a burr or collar 35 is struck outwardly from the screw 36 so as to securely clamp the cup 34 against the inner face of the rib 25. In this manner the screw 36 is fixed longitudinally relatively to the rib forming portion 25, while at the same time the screw is freely rotatable.

Formed in the rail 16 of the window frame is an opening 38 in which is positioned a housing. This housing is preferably formed from a single piece of material, such as illustrated in the blank shown in Fig. 9. The edges of this material are folded inwardly toward each other to provide one side embodying the portions 39 clearly shown in Fig. 7. The opposing side is similarly formed with the in-turned edges. The other side walls 40 and 41 of the housing each have a tongue 42 and 43 struck therefrom respectively so as to provide the slots 44 and 45. These tongues 42 and 43 serve as a means for fastening a housing in position on the window frame 16 by means of nails or other suitable securing means projected through the tongues into the frame rail. A retaining plate 46, having a central opening 47 formed therethrough, is provided at opposite sides with the tongues 48 and 49 which extend through the slots 44 and 45 and engage the walls 40 and 41 at their ends at the portions 50 and 51 at the ends of the slots. This plate 46 serves as an abutment having a spring 52 which is positioned within the box. The opposite end of the spring, engaging a nut 53, is positioned in the box and is non-rotatable therein, the box being flat-sided and the nut 53 also being flat-sided. The screw 33 is adapted to thread through the nut 53. This nut 53 is normally held by the spring 52 in engagement with the inner face of the end wall 54 of the housing, this end wall having an opening 55 formed centrally therethrough for accommodating the screw 36.

In Fig. 10 and in Fig. 11 I have shown a modified form of the housing in which the structure illustrated in Fig. 6 and Fig. 7 is embodied, excepting that there are angularly turned barbs 56 and 57 projected outwardly from one face of the wings.

I claim:

1. In a window construction adapted for mounting in a window frame having oppositely disposed side rails and embodying a slide rail for engaging with a slidable sash and having a threaded member rotatably mounted on the slide rail in fixed axial relation thereto and projecting from one side toward a side rail of the frame: a housing projectable at one end into a recess formed in a side rail of said frame and extending at its opposite end outwardly beyond the face of said rail of said frame, said opposite end having a central opening formed therein in alignment with said screw; a nut positioned in said housing and non-rotatable therein and having a threaded opening in alignment with said screw for reception of the same, the inner end of said housing being open; a pair of tongues punched outwardly from opposite sides of said housing and engageable with the outer face of said side rail of said frame for providing means for securing said housing in said recess; and a retaining clip mounted in the open end of said housing and having a pair of oppositely directed tongues for engaging in the slot formed in said side walls upon punching of said first named tongues there-

from for closing said open end of said housing; and a spring positioned in said housing and engaging at one end against said nut and at its opposite end against said clip.

2. In a window construction adapted for mounting in a window frame having oppositely disposed side rails and embodying a slide rail for engaging with a slidable sash and having a threaded member rotatably mounted on the slide rail in fixed axial relation thereto and projecting from one side toward a side rail of the frame: a housing projectable at one end into a recess formed in a side rail of said frame and extending at its opposite end outwardly beyond the face of said rail of said frame, said opposite end having a central opening formed therein in alignment with said screw; a nut positioned in said housing and non-rotatable therein and having a threaded opening in alignment with said screw for reception of the same, the inner end of said housing being open; a pair of tongues punched outwardly from opposite sides of said housing and engageable with the outer face of said side rail of said frame for providing means for securing said housing in said recess; and a retaining clip mounted in the open end of said housing and having a pair of oppositely directed tongues for engaging in the slot formed in said side walls upon punching of said first named tongues therefrom for closing said open end of said housing; and a spring positioned in said housing and engaging at one end against said nut and at its opposite end against said clip; and barbs on the outer ends of each of said tongues for penetrating into said side rail of said frame.

3. In a window construction adapted for mounting in a window frame having oppositely disposed side rails and embodying a slide rail for engaging with a slidable sash and having a threaded member rotatably mounted on the slide rail in fixed axial relation thereto and projecting from one side toward a side rail of the frame: a housing projectable at one end into a recess formed in a side rail of said frame and extending at its opposite end outwardly beyond the face of said rail of said frame, said opposite end having a central opening formed therein in alignment with said screw; a nut positioned in said housing and non-rotatable therein and having a threaded opening in alignment with said screw for reception of the same, the inner end of said housing being open; a pair of tongues punched outwardly from opposite sides of said housing and engageable with the outer face of said side rail of said frame for providing means for securing said housing in said recess; and an abutment member mounted in said housing at its open end for closing said open end of said housing; and a spring positioned in said housing and engaging at one end against said nut and at its opposite end against said abutment.

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