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E. H. MARQUART

2,173,175

CONSTRUCTION OF WINDOW FRAMES AND SASH EQUIPMENT THEREFOR

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2 Sheets-Sheet 1

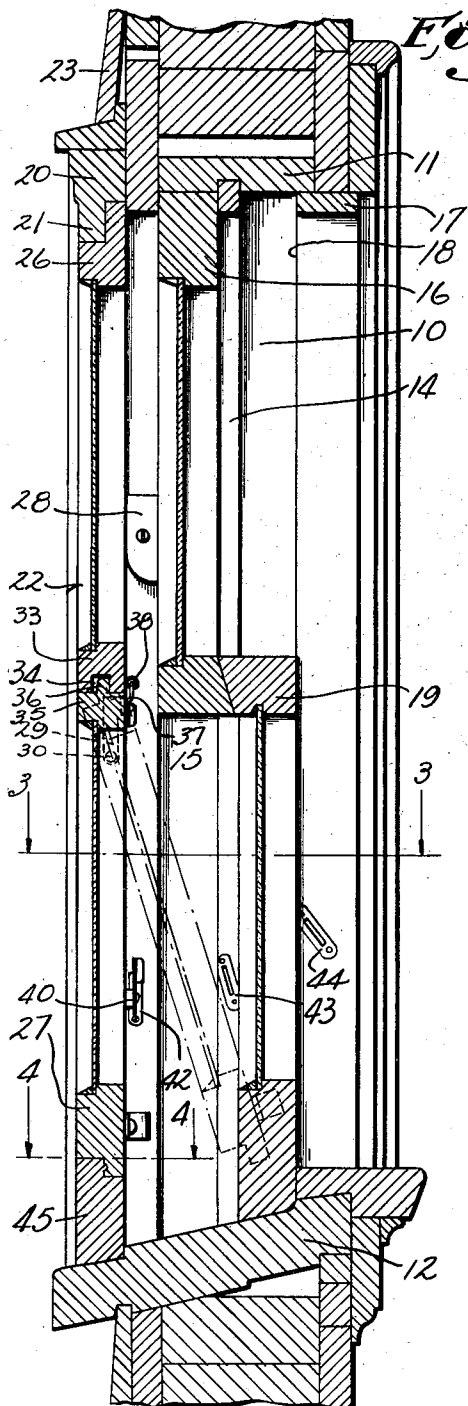


Fig. 1.

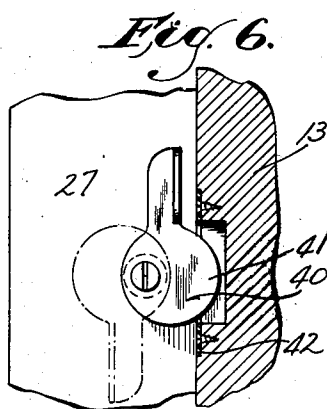


Fig. 6.

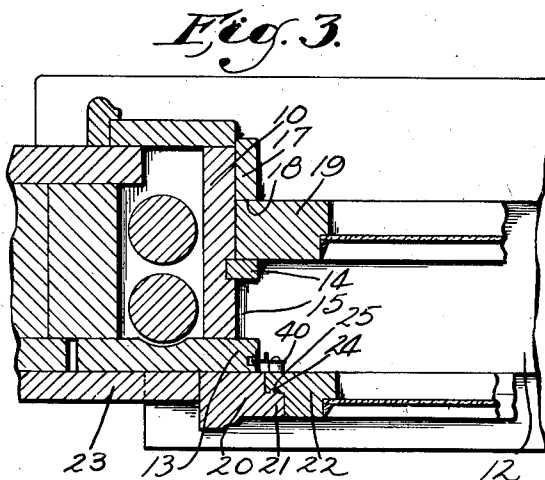


Fig. 3.

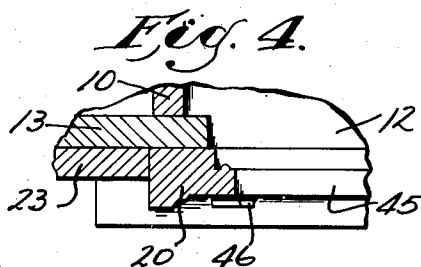


Fig. 4.

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*Fig. 2.*

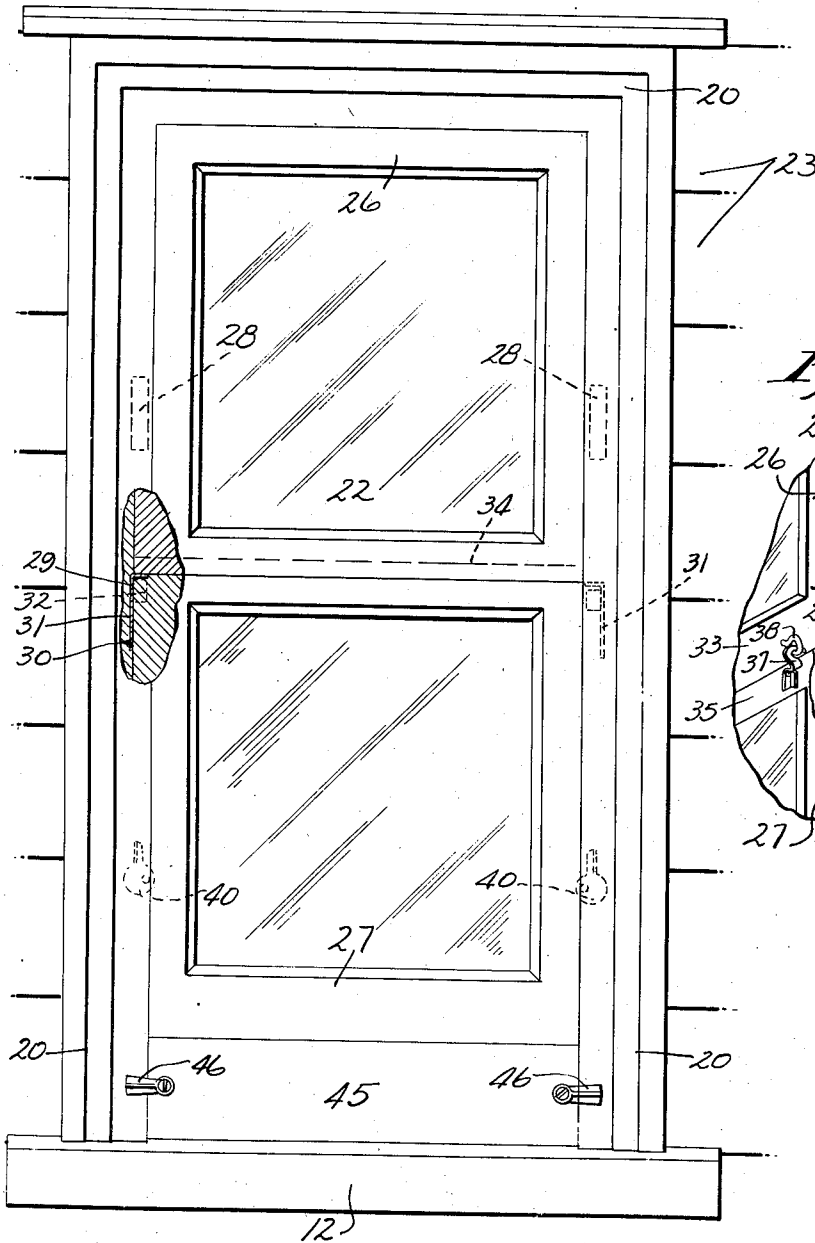
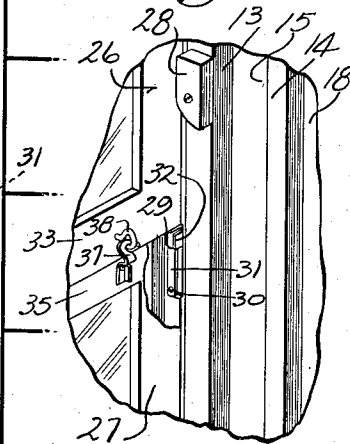


*Fig. 5.*



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## UNITED STATES PATENT OFFICE

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CONSTRUCTION OF WINDOW FRAMES AND  
SASH EQUIPMENT THEREFOR

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Application November 11, 1935, Serial No. 49,132

4 Claims. (Cl. 20—55)

My invention relates to improvements in construction of window frames and sash equipment therefor.

I am aware that general utility sash frames have been provided for substantially permanent installation against the exterior face of blind stops in window frame constructions. However, such frames have proved weak, and sufficiently unstable and inaccurate in their configuration, so that they have substantially disappeared from this art despite a persistent demand for some type of construction embodying a combination screen and storm sash frame whereby a sash of comparatively small dimensions, capable of easy storing and handling, and insertable from within a building may be used.

The object of my invention, therefore, is to provide in a window frame and casing construction a permanent installation of a rigid, accurately dimensioned frame for small storm and screen sash units and to provide, in the equipment and configuration of such sash units, means for facilitating their easy installation from within a building, and at the same time provide for adjustable positioning of a lower storm sash unit to allow for ventilation.

In the drawings:

Fig. 1 is a vertical section through a portion of a frame building provided with a window frame and sash constructed in accord with my invention.

Fig. 2 is an elevation of the exterior of my window frame and sash construction with storm sash in position in my frame.

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

Fig. 4 is a section on line 4—4 of Fig. 1 and showing in detail the installation of the lower sill member of my frame.

Fig. 5 is a perspective of the central side portion of my frame and sash particularly showing the hardware used in conjunction therewith.

Fig. 6 is a detail of my eccentric lower sash lock.

Like parts are designated by the same reference characters throughout the several views.

In the construction adopted as standard in the recent past, window frames have been provided with an exterior casing or flashing extending to within a short distance of the edge of a blind stop. A storm window or screen sash fitted within the confines of the casing whereby to rest against the blind stop has usually been constructed in a single, large unit intended to protect the entire window frame opening and attempts have been made to provide a "subframe" or auxiliary frame

receivable against the blind stop and provided with insertable small unit screen and storm sash to be assembled in the auxiliary frame. Such auxiliary frames, however, being without cross members or other reinforcing devices, were weak and these auxiliary frames became deformed and inaccurate in their configuration so as to be useless after a comparatively short period of time. In any event, they have not been successful on the market and have disappeared.

In the drawings accompanying this specification I show my improved construction in a window frame which includes a vertical stile or jamb 10 at either side to form side members of the frame and a horizontal head jamb 11 at the top to form the top of the frame. A sill 12 forms the bottom member of the frame. At 13 I provide a member which, in the old style construction, was a blind stop and in my improved construction may be still designated by that term, since it performs the function of a stop to be used in conjunction with a parting stop at 14 to demark a channel 15 in which the upper sash 16 may be slidably positioned. A molding 17 demarks the channel 18 within which the lower sash 19 may be slidably positioned.

The largest structural elements in my improved construction are the casings 20 secured against the blind stop 13 and provided with a flange 21 extending sufficiently into the window frame opening to provide an abutment against which insertable storm window or screen sash 22 may be positioned from within the building with which my improved window frame construction is equipped. The ordinary siding 23 applied to the exterior of the building may extend to and abut against my casing 20 in much the same manner that siding has abutted casings in previously known construction.

A tongue 24 formed upon the inner face of the casing flange 21 is receivable in a groove 25 in the flange of the sash 22 to provide an additional wind and weather resistance, but it will be noted that no tongue is provided on the flange of the casing member at the top of the window.

With my casing members 20 built into the frame construction, I provide the storm window or screen sash 22 in small insertable units of which there are preferably two for each window opening, one of them, 26, corresponding to approximately the same area as that provided by the upper window sash 16 and the other, 27, of approximately the same area as the lower sash 19 of the window. Insertable sash 26 may be slidably placed in position in the upper portion of the

casing 20 where it is retained in position against the flange 21 by means of a cam block 28 secured to the blind stop as shown most clearly in Figs. 1 and 5. This upper insertable sash 26 is retained in its proper position not only by the cam block 28, but by a supporting clip 29, for the upper sash 26 must be supported while the lower sash 27 is being positioned. The clip 29 is provided with a pivot pin or screw 30 extending into the casing and the casing is slightly recessed to receive the flat strap-like portion 31 of the clip and to permit the clip to be swung from a vertical position wherein a flat horizontal flange tab 32 is in position to hold the upper sash 26 to a horizontal position of the strap 31 which will so position the tab as to free the sash 26 and permit it to be dropped into the lower window opening for removal and storage.

Assuming that the sash 26 is in its uppermost position as shown in Figs. 1 and 2, and the clip 29 is in its vertical position to hold the sash in place, the lower sash unit 27 may be positioned as shown in full lines in Fig. 1. It will be noted that the lower stile 33 of upper sash 26 is provided with a fairly wide groove 34 and the stile 35 of lower sash 27 is provided with a narrow tongue 36 receivable in the groove.

This facilitates the placing of a lower sash 27 by a person installing my improved sash unit and because of the narrow dimension of the tongue 36 and its accurate placement upon the stile 35, the final movement of the sash 27 into position wedges the tongue 36 against the back wall of the groove, thus making a weather-tight joint.

When the lower sash 27 is in position against the flanges 21 of the casing 20, hooks 37 upon the inside face of the stile 35 may be engaged pivotally with eyelets 38 upon the lower stile 33 of sash 26 thereby providing hanger structure to facilitate the inward swinging movement of sash 27 as illustrated in dotted lines in Fig. 1.

On either side stile of sash 27 I provide a pivotally movable cam plate 40 having a lobe 41 of such dimensions as to swing laterally upon the margins of the side stile of the sash as shown in Fig. 6. This provides a locking means for the lower sash 27 as shown in Fig. 1 since the lobe 41 of the plate 40 may be swung into a slot of the detent plate 42. I also provide similar detent plates 43 and 44 in the parting stop and molding respectively so that the sash 27 may be swung alternatively inwardly to the various positions prescribed by the location of these detent plates, thus providing for varied amounts of ventilation.

It will be noted that the sash 27 does not extend to the sill 12, but that a separate sill member 45 is used to close the lower portion of the opening in the casing. This sill member is removable and may be secured in position by buttons 46. Ready removal of the filler piece 45 makes the cleaning of sill 12 an easy operation.

I claim:

1. In a frame and casing adapted to receive

storm and screen sash insertable from the interior margin thereof, said frame having a blind stop, a parting stop and molding in spaced lateral relationship, an upper sash receivable against the casing and supported by a clip, a lower sash provided with swingable supporting connections with the upper sash, and means whereby to secure the lower sash alternatively at an angle to the parting stop or molding.

2. In a window construction the combination with a frame having a parting stop and a molding, of a casing extending integrally into the window frame opening and provided with a ribbed flange whereby to provide an abutment for upper and lower storm or screen sash, hinge connections between the upper and lower sash, means for securing the lower sash in alternative positions of hinged adjustment with reference to the parting stop or molding, a clip for retaining the upper sash in uppermost position and a cam block on the blind stop for holding the upper sash in position against the flange of the casing.

3. A window construction for a building having an opening therefor framed to receive it, said construction including head and side jambs and blind stops secured respectively to the jambs and the frame of the opening to hold the jambs in place, and casing members permanently secured to and disposed substantially entirely outwardly of the outer faces of the blind stops, said members being of substantial width and projecting laterally beyond the inner edges of the blind stops into the window opening defined by said edges, the inner faces of the casing members being shaped to provide seats for storm window or screen units insertable from within the building, said seats being disposed substantially entirely outwardly of the outer faces of the blind stops, whereby the window or screen units are positioned in a plane disposed outwardly beyond the head and side jambs.

4. A window construction comprising a sill, side jambs projecting upwardly therefrom, a head jamb, blind stops secured to the jambs and the building to maintain the jambs in place, and casing members permanently secured to the outer faces of the blind stops and disposed substantially entirely outwardly of the plane of said outer faces, said casing members being of substantial width and having their inner edges projected laterally into the window opening defined by the blind stops beyond the edges thereof, the laterally inwardly projecting portions of said members having seats substantially aligned with the edges of the blind stops and disposed outwardly thereof, said seats being adapted for the reception of accessory window or screen units, insertable into said seats by movement from within the building through the window opening defined by the inner edges of the blind stops.

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