June 16, 1942. H. CRESCENTINI 2,286,899

CASEMENT WINDOW

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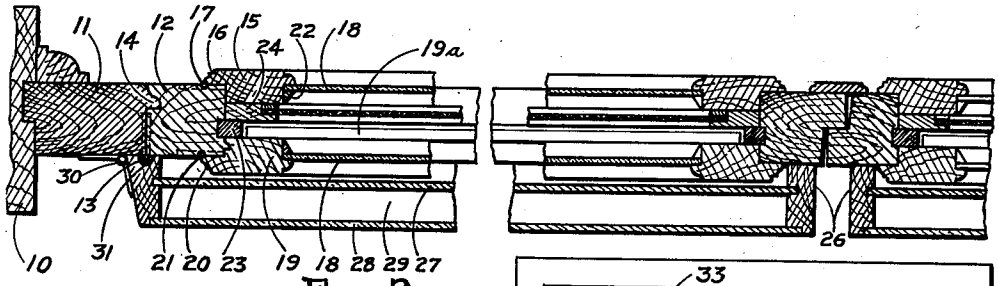


Fig-2-

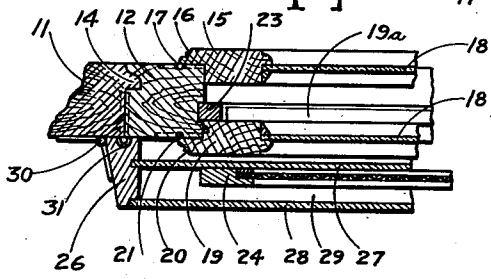


Fig-3-

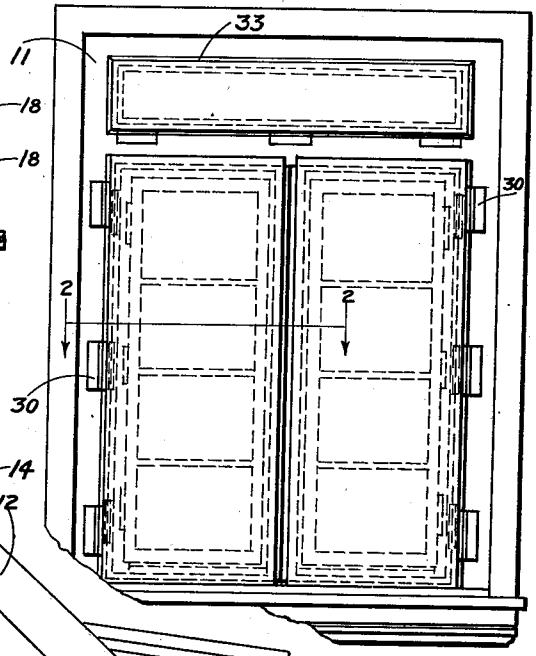


Fig-1-

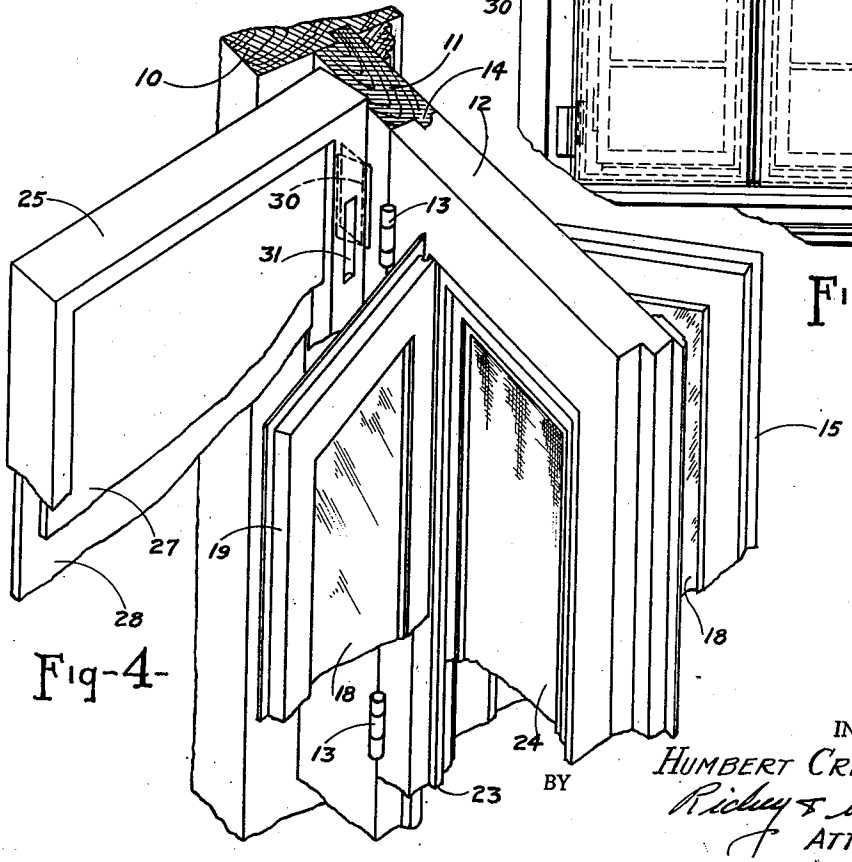


Fig-4-

INVENTOR.
HUMBERT CRESCENTINI
BY
Ricley & Watts.
ATTORNEYS.

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CASEMENT WINDOW

Humbert Crescentini, Youngstown, Ohio

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1 Claim. (Cl. 20—53)

This invention relates broadly to casement windows and more specifically to an improved organization of sash members which comprises, generally, a hinged frame, a storm window, an inner casement and a shutter or blind which is formed to envelope the inner casement and overlie the outer marginal edges of the frame.

One of the objects of the invention is to provide a casement structure of the character described above which is adapted to accommodate the ready removal of the storm window while the frame is swung inwardly in the building, a structure which is adapted to facilitate the washing of both sides of the glass in the storm and casement windows from the interior of the building and a structure which when adjusted in its closed position will form a substantially air tight closure.

Another object of the invention is to provide a blind for a casement window structure which is provided with a closed compartment for the storage of the storm window or the screen carried by the casement structure.

Another object of the invention is to construct a hinged building member such as a casement window, transom or door which embodies a swinging sash and storm window and a blind hinged to overlie the joints about the member yet arranged, when open, to facilitate the manipulation of the sash and storm window from the interior of the building structure.

Other objects and advantages more or less ancillary to the foregoing and the manner in which all the various objects are realized will appear in the following description, which considered in connection with the accompanying drawing, sets forth the preferred embodiment of the invention.

Referring to the drawing wherein the preferred embodiment of the invention is illustrated:

Fig. 1 is an elevational view of the improved window structure showing the appearance thereof from the interior of the room, the blind or shutter shown therein being adjusted in its closed position;

Fig. 2 is a transverse sectional view through the window structure shown in Fig. 1, the section being illustrated upon an enlarged scale and being taken on a plane indicated by line 2—2 in Fig. 1;

Fig. 3 is a fragmentary transverse sectional view of the window structure shown in Fig. 2, illustrating the position of the screen when stored in the compartment or chamber provided in the shutter; and

Fig. 4 is a fragmentary view of the improved casement window shown in perspective, portions of the framing elements and sash being broken away in the interest of clarity and shown in section.

The wall 10 defining the opening in the building wall may be of any conventional form and framed in any suitable manner which will accommodate the anchorage of the window stiles and lintels or casing 11. As illustrated, the improved window structure comprises a pair of frame members 12 mounted on hinges 13 to swing inwardly into the interior of the building. The frame members are preferably formed with grooves in the side edges thereof disposed for the reception of tongues 14 in the casing 11 to seal the joint between the casing and frame.

The frames 12 are provided with storm sashes 15 snugly engaged within the opening in the frame and are formed with flanges 16 about the marginal edge thereof disposed to overlie and seal the opening in the frame. The storm sashes are preferably retained upon the frame by hinges 17 having draw pins thereon to facilitate the ready removal of the sash from the frame. The storm windows 15 are mounted to swing outwardly so that the inner and outer surfaces of the glass 18 mounted therein may be washed from the interior of the room when the frame 12 is adjusted in its open position.

The opposed face of the frame 12 is provided with a casement window 19 formed with a flange 20 about the marginal edges thereof, which is disposed to overlie the inner face of the frame 12. The sash 19 is mounted to swing inwardly into the interior of the building, the hinges 21 therefor being preferably of a type which may be locked in adjusted position to arrest further pivotal movement of the sash. The glass 18 in the inner and outer casement members 15 and 19 is retained, as shown, by molding strips 22 bradded or otherwise secured to the sash members.

As will be seen in Fig. 2, the frame 12 is constructed with a bead 23 forming a ledge within the opening in the frame for the support of a screen frame 24. The bead is preferably rabbeted in the frame 12 and arranged to span the joint between the frame and the casement window 19 in order to preclude the seepage of water or admission of air into the building. The lower framing member of the sash 19 is provided with a molding strip 19a disposed to overhang the bead 23 and formed with a groove in the lower face thereof to perform the function of a drip stone. The screen may be retained from lateral

movement within the frame by hooks or spring pressed plungers, not shown, disposed for engagement with keepers in the stiles of the frame.

The improved window structure further includes a shutter or blind **25** formed of side and end rails **26** designed as shown in Figs. 2 and 3, to overlie the top, bottom and outer edges of the frame and thus seal the joint between the casing **11** and frame **12**. This structure is particularly effective in sealing the top and bottom edges of the frame and provides a burglar proof closure and seal for the window when the house is closed for a long period of time. The shutter rails are relatively deep and are constructed to support an inner fixed panel **27** and an outer removable panel defining a chamber or compartment **29** for the storage of either the screen **24** or storm window **15**. The shutter is mounted upon the casing **11** through hinges **30** arranged to facilitate the swinging movement of the shutters into the interior of the building.

As will be seen in Figs. 2 and 3, the outer stiles of the rails **26** are beveled to facilitate adjustment of the shutters beyond a position normal to the plane of the face of the casing **11**. The rails **26** are further formed with recesses **31** therein to provide a clearance for the hinges **13** supporting the frame **12** upon the casing **11**.

As shown in the several figures of the drawing, the body of the inner and outer sash members **15** and **19** is arranged in telescopic engagement in the frame **12**, the flanges **16** and **20** respectively constituting a complete closure medium for the joints intermediate the sash members and casing **12**. It will be seen that the rails **26** of the shutters overlie the joint between the frame **12** and casing **11**, thus sealing the joint between such members and providing a weather proof and substantially air tight window structure.

It will be noted that the chamber in the shutter is designed to accommodate the reception of the screen which may be stored therein in the winter months and/or the storm window **15** which may be stored therein during the summer months.

As shown herein the window embodies a double casement structure. Obviously, when the window is framed for a single sash, the shutter may be formed to span the joints between the casing and the four sides of the frame member **12**. The window may likewise be formed with a transom **33**, as shown in Fig. 1, which is of identical structure to that of the casing and sash members illustrated in Fig. 2, save that the blind and frame **12** are hinged from their horizontal edges.

As contemplated herein the shutter or blind may also be employed with a door of the type having a removable storm window and screen, the shutter in such case being designed to seal the opening joint between the door and sash and to receive either of the members when not in use.

The improved casement window may be made of wood, as shown, or constructed from structural steel members configured to accommodate the principle and functions contemplated herein. The use of steel or other metal parts in the construction of the design contributes the added advantage of providing a burglar proof structure particularly when the panels in the blind are formed of metal.

A further advantage of the construction resides in the insulating value of the air cell provided by the chamber in the blind, the chamber between the blind and casement sash and the chamber between the casement and storm sash members. It is noteworthy that the virtue of this feature is present in the improved design irrespective of whether the window is made of wood, metal or a combination thereof or even other materials.

Although the foregoing description is necessarily of a detailed character, in order that the invention may be completely set forth, it is to be understood that the specific terminology is not intended to be restrictive or confining, and that various rearrangements of parts and modifications of detail may be resorted to without departing from the scope or spirit of the invention as herein claimed.

I claim:

A casement window comprising a fixed casing, a frame embodying top, bottom and side rails defining a rectangular opening, said frame being of the same thickness as the casing and flush therewith, hinges on the inner face of one of the side rails and casing, a removable storm sash mounted within the opening in said frame, flanges about the marginal edges of said sash overlying the outer face of said frame, hinges connecting one of the vertical flanges with the frame, a window sash mounted within the opening in said frame in spaced relation with said storm sash, flanges about the marginal edges of said sash overlying the inner face of said frame, hinges connecting one of the vertical flanges with the frame, a removable screen intermediate said storm sash and window sash, a blind hinged upon said casing, said blind comprising top, bottom and side rails overlying the crack between said casing and frame and the hinges on the inner face of the casing and side rail, inner and outer panel plates supported by said rails, said inner panel being inset from the face of said rails and defining a recess for the reception of the flanged portions of said window sash and for sealing the crack between said sash and frame, the outer panel being removable and arranged in spaced relation to said inner panel to define a chamber for the storage of said screen or said storm sash.

HUMBERT CRESCENTINI.