May 5, 1942. N. JASPERSON 2,282,061

COMBINATION STORM AND SCREEN SASH

Filed Feb. 8, 1941

Fig. 1.

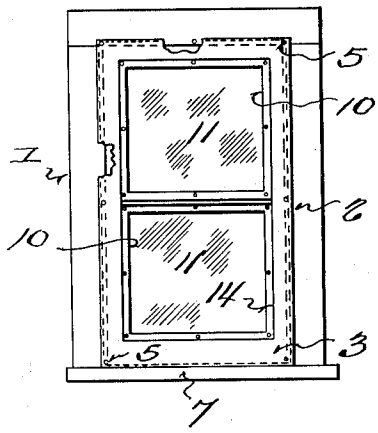


Fig. 2.

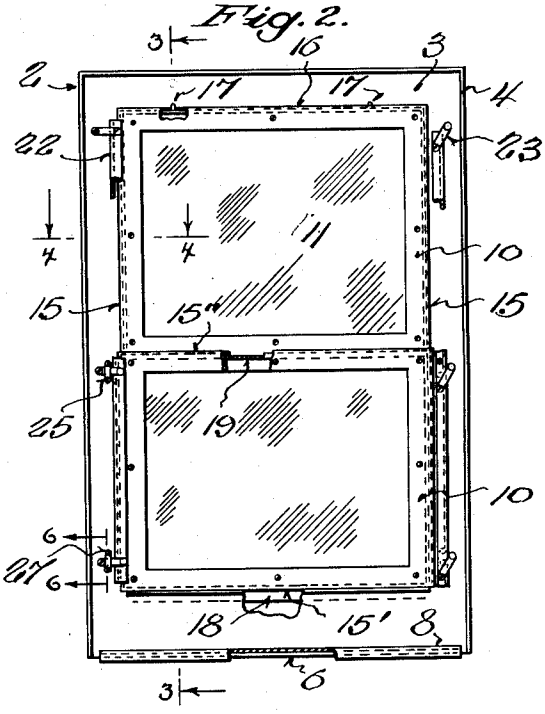


Fig. 3.

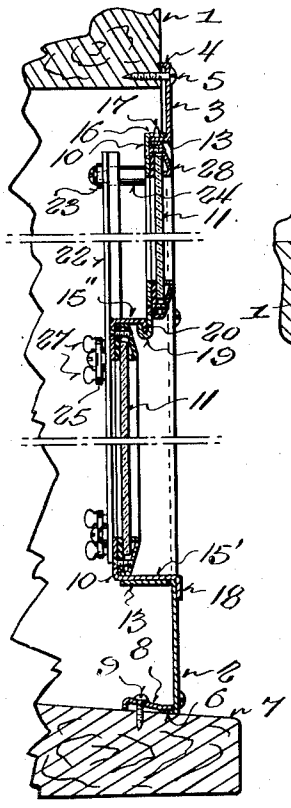


Fig. 4.

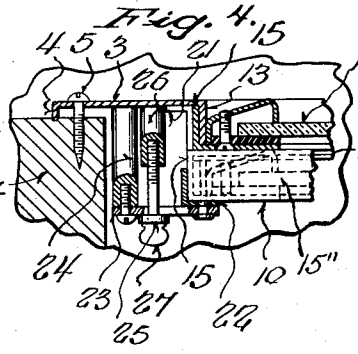


Fig. 5.

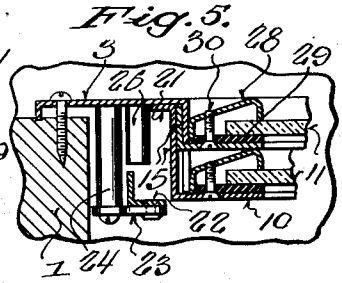


Fig. 6.

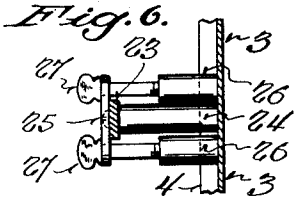
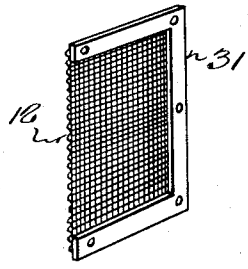


Fig. 7.



Inventor
N. Jasperson

By

Attorneys

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COMBINATION STORM AND SCREEN SASH

Nickolas Jasperson, Oshkosh, Wis.

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3 Claims. (Cl. 189—64)

This invention relates to a combination storm and screen sash, and has primarily for its object to improve structures of the foregoing by the provision of a frame for permanent attachment to the exterior of a window casing, and having upper and lower sash frames detachably carried by the main frame to permit interchange of glass or screen sashes, the lower sash being slidably mounted on the main frame for ventilation or access.

Incidental to the foregoing, a more specific object of the invention resides in the novel means provided for retaining the sashes on the main frame, and holding the slidable lower sash in raised, adjusted position.

Another object is to provide a novel form of detachable fastener for cushioning and sealing the glass panels in their respective frames.

A further object is to provide an interlocking connection between the upper and lower sash frames to effect a weatherproof closure between the two, and at the same time allow raising of the lower sash.

A still further object resides in the provision of means for embedding the peripheral edge of the main frame into the outer face of the window casing, in combination with a resilient weather strip for the lower edge of the main frame supported upon the window sill.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the novel construction, combination, and arrangement of parts, substantially as hereinafter described, and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the herein disclosed invention may be made as come within the scope of the claims.

In the accompanying drawing is illustrated one complete example of the physical embodiment of the present invention constructed according to the best mode so far devised for the practical application of the principles thereof.

In the drawing:

Figure 1 is a front elevational view of a combination sash constructed in accordance with one form of the invention, and applied to the front of a window casing;

Figure 2 is an enlarged, rear elevational view;

Figure 3 is a vertical section, taken on the line 3—3 of Figure 2;

Figure 4 is a fragmentary, horizontal section taken on the line 4—4 of Figure 2;

Figure 5 is a similar view with the lower sash in raised position;

Figure 6 is a detailed, sectional view, taken on the line 6—6 of Figure 2; and

Figure 7 is a fragmentary perspective view of the screen attachment for the sash frames.

Referring now more particularly to the accompanying drawing, the numeral 1 designates a conventional window casing to which the present invention, comprising a combination storm and screen sash 2, is attached.

The combination sash 2, which is either stamped or fabricated from sheet metal consists of a main, rectangular frame 3, the peripheral upper and side edges of which are provided with rearwardly extending flanges 4 that are embedded in the outer face of the window casing 1, when the frame 3 is attached thereto by screws 5 or other securing means, to form a weatherproof seal around the top and sides of the frame.

The lower edge of the frame 3 is also provided with an inturned flange 6 preferably supported upon the sill 7 of the window casing 1, as best shown in Figure 3.

Inasmuch as the lower edge of the frame 3 is not embedded in the sill, it is proposed to utilize a flexible weather strip 8, which is attached to the sill by screws 9, and extends over the lower flange 6 to provide a weather seal.

Detachably mounted upon the inner face of the main frame 3 are upper and lower sash frames 10, which may carry either storm panels 11 or screens 12, such as shown in Figure 7.

An inturned flange 13 surrounds the opening 14 in the main frame, and as will be noted in Figures 3 to 5, the flange 13 is sufficiently spaced from the peripheral edge of the main frame to provide a clearance between the flange 13 and the inner edges of the window casing 1, to accommodate the mechanism carried by the main frame.

The sash frames 10 are also provided with side flanges 15, which straddle the side flanges 13 of the main frame, the upper edge of the top frame 10 is also provided with an inturned flange 16 having openings for reception of pins 17 carried by the top of the main frame flange 13, thus detachably locking the upper edge of the top sash frame to the main frame.

The lower flange 15' of the bottom sash is normally supported upon the top of the main frame flange 13 at the bottom of the opening 14, as best shown in Figures 2 and 3, and a depending lip 18 formed on the outer edge of said flange serves as a closure between the bottom of the lower

sash 10 and the main frame 3, and also as a water shed.

The lower edge of the upper sash frame 10 terminates in an inturned channel 19 for reception of a lip 20 formed on the top flange 15'' of the lower sash frame 10, thus forming a tight seal between the upper and lower sash frames, and at the same time permitting the lower sash frame to be raised when desired.

Inasmuch as the side flanges 15 of the lower sash frame 10 must also straddle the sides of the upper sash frame, in order to permit raising of the lower frame, the inner ends of the side flanges 15 of the lower sash frame terminate in offset flanges 21, which engage the inner face of the main frame 3, to support the lower sash frame 10 in vertical offset relation to the upper sash frame, it being understood that the side flanges 15 of the lower frame are of greater depth than those of the upper frame, as shown in Figures 4 and 5.

To detachably retain the sash frames on the main frame, a pair of side angles 22 are provided, which extend substantially the entire heighth of the combined sash frames. The angles 22 are pivotally connected to parallel links 23 carried by a post 24 secured to the inner face of the main frame 3. It will be apparent that by means of the links 23, the angles 22 may be swung inwardly to overlap the sash frames 10 and retain the same in assembled position on the inner flanges 13 of the main frame, and when the angles are shifted laterally toward the outer edges of the main frame, the frames may be readily removed for replacement.

In order to prevent undesired shifting of the retaining angles 22, and at the same time create tension upon the same to provide a frictional bind between the lower sash frame and main frame, the two lower sets of parallel links 23 are straddled by straps 25, attached to spaced posts 26 mounted on the inner face of the main frame 3, by thumbscrews 27.

For attachment of the storm panels 11, a rubber or resilient strip 29 is positioned between the panels and sash frames 10. Channel retaining strips 28 are then secured to the frames 10 by screws 30 (Figures 4 and 5).

For the screen sashes, the wire mesh 12 is soldered or otherwise attached to frames 31 (Figure 7), which are secured to the sash frames 10 by the screws 30.

From the foregoing explanation considered in connection with the accompanying drawing, it will be apparent that a comparatively simple and effective combination storm and screen sash has been devised of neat outward appearance, in which the sashes may be readily interchanged without the necessity of tools, and in which the lower sash may be raised and held in adjusted position for ventilating purposes.

It will also be noted that in addition to embedding and sealing the main frame on the window casing, the construction of the sashes and method of mounting on the main frame insure a tight, weatherproof seal.

I claim:

1. A metal combination storm and screen sash comprising, a main frame having an elongated central opening surrounded by a rearwardly extending flange, upper and lower sash frames having flanged edges straddling the main frame flanges, an interlocking connection between the top of the upper sash frame and the main frame, the lower sash being vertically slidable on the main frame, an interlocking connection between the bottom of the top sash frame and the upper edge of the lower sash frame, and a pair of side angle bars shiftably mounted on the main frame engaging the lower sash frame for releasably retaitning the sash frames on the main frame.

2. A metal combination storm and screen sash comprising, a main frame having an elongated central opening surrounded by a rearwardly extending flange, upper and lower sash frames having flanged edges straddling the main frame flanges, the lower sash being vertically slidable on the main frame, an interlocking connection between the top of the upper sash frame and the main frame, an interlocking connection between the bottom of the top sash frame and the upper edge of the lower sash frame, a pair of side angle bars shiftably mounted on the main frame for releasably engaging the lower sash frame to retain the sash frames on the main frame, and means for creating tension upon the angle bars to effect a bind between the lower sash frame and main frame.

3. A metal combination storm and screen sash comprising, a main frame having an elongated central opening surrounded by an inturned flange and a peripheral flange for embedding in the outer face of a window casing, flanged upper and lower sash frames straddling the opening flange of the main frame, a pair of side angle bars, parallel links connecting the angle bars to the inner face of said main frame, said bars being shiftable to engage the lower sash frame to retain the same on the main frame, the lower sash frame being vertically slidable past the upper sash frame, an interlocking connection between the bottom of the upper sash frame and the top of the lower sash frame, and means for exerting tension upon the parallel links to create a bind between the lower sash frame and main frame, whereby the lower frame is frictionally held in adjusted position.

NICKOLAS JASPERSON.