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STORM WINDOW AND AWNING UNIT

2 Sheets-Sheet 1

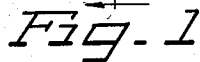


Fig-2

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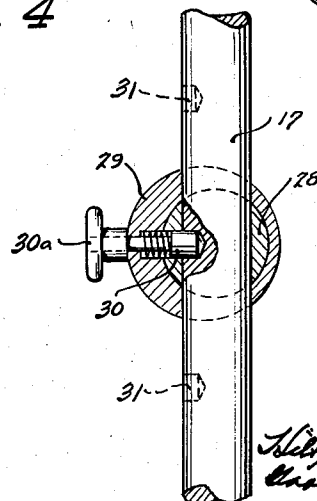
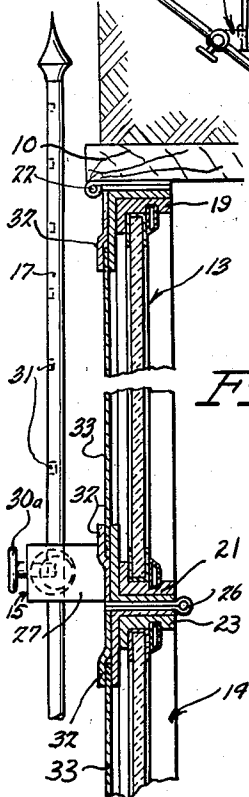
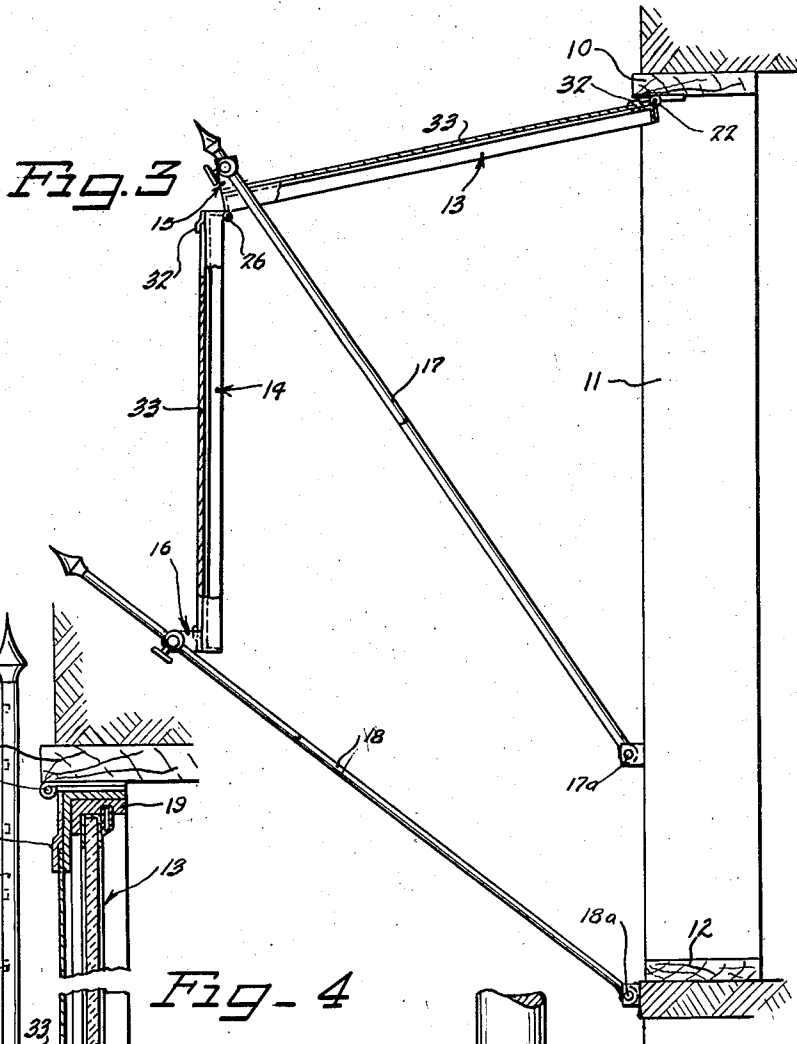
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STORM WINDOW AND AWNING UNIT

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2 Sheets-Sheet 2



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STORM WINDOW AND AWNING UNIT

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4 Claims. (Cl. 160—61)

This invention relates to improvements in a combination storm window and awning unit, and more particularly to a unit mountable over openings, such as windows in a building or the like, wherein the unit may function as a storm window in one instance, or may function as an awning by merely swinging the unit outwardly and upwardly over the window or opening and movably attaching non-transparent inserts over the storm sashes.

In other words, a combination storm window and awning is provided which may be easily converted from a storm window unit to an awning unit, and is thereby suitable for mounting over a window or opening during all seasons.

Heretofore, several combination storm window and awning assemblies have been designed, but in all cases, the construction has been complicated and expensive, the manipulation for conversion has embodied several operations with the requirement of use of tools, and the products have been ultimately too expensive for the commercial market.

Accordingly, it is an object of this invention to provide a combination storm window and awning unit of simple and inexpensive construction and capable of being quickly and easily converted from a storm window unit to an awning unit, or vice versa.

It is a further object of this invention to provide a combination storm window and awning unit having a sectional assembly so arranged and constructed that when the unit is swung outwardly from its upper edge at which it is pivotally mounted over an opening, a lower section will be capable of hanging substantially vertically with respect to the upper section to fashion an awning.

A further object of this invention resides in the provision of the combination storm window and awning unit provided with means for swinging the unit outwardly of the opening and maintaining it in an awning position, and means for receiving non-transparent inserts to reduce or eliminate light from passing through the storm window portions.

A still further object of this invention is to provide a combination storm window and awning unit having a supporting means for maintaining the storm window in an outward position from an opening such as a window to fashion an awning.

Another object of this invention resides in the provision of a combination storm window and awning unit having a plurality of storm window sections hinged together with one of the sections hinged above an opening, and means for selectively adjusting the position of the sections outward from the opening to fashion an awning, and elongated fork-shaped members for removably receiving non-transparent inserts.

Still another feature of this invention resides in the provision of a combination storm window and awning unit which may be maintained in an outwardly swung position from an opening by a plurality of struts or rods mounted adjacent the window and adjustably received by brackets on the storm window portions.

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Other objects, features and advantages of the invention will be apparent from the following detailed disclosures, taken in conjunction with the accompanying sheets of drawings, wherein like reference numerals refer to like parts, in which:

Figure 1 is a front elevational view of a combination storm window and awning unit mounted over a window of a building in accordance with the invention;

Figure 2 is a vertical cross sectional view taken substantially along line 2—2, with parts in side elevation, illustrating the invention functioning as a storm window;

Figure 3 is a side elevational view, with parts in vertical cross section, of the combination storm window and awning unit, illustrating the invention functioning as an awning and having the non-transparent inserts in mounted position;

Figure 4 is an enlarged broken fragmentary vertical cross sectional view, with parts in elevation, showing details of the unit in Figure 1; and

Figure 5 is an enlarged fragmentary detailed view partly in section, illustrating the adjusting mechanism in relation to the supporting arrangement.

Referring now to the drawings, and particularly to Figures 1 and 2, the present invention is illustrated as being mounted over a conventional window assembly of a building, although the invention may be suitably associated with other types of openings in a building. The window assembly includes a top jamb 10, side jambs 11, and a window sill 12.

In general, the invention comprises an upper storm sash 13, a lower storm sash 14, laterally extending brackets 15, 15 on the upper sash, laterally extending brackets 16, 16 on the lower sash, an upper pair of supporting struts 17, 17, and a lower pair of supporting struts 18, 18.

The upper storm sash 13 includes a transparent light or pane bounded by a top rail 19, side rails 20, 20, and a bottom rail 21. A pair of spaced hinges 22, 22 are rigidly secured to the top rail 19 and the top jamb 10 of the window frame to permit the upper storm sash 13 to swing outwardly away from the window frame, as seen in Figure 3.

The lower storm sash 14 includes a transparent light or pane bounded by a top rail 23, a pair of side rails 24, 24, and a bottom rail 25. The top rail 23 is positioned adjacent the bottom rail 21 of sash 13 and hingedly connected thereto by a pair of butt hinges 26, 26 in a similar spaced relationship as hinges 22, 22 for permitting pivotal movement between the upper and lower sashes, as shown in Figure 3. Each of the supporting struts 17 and 18 are pivotally supported laterally of the window frame on the building by stationary pivot plates as indicated by the numerals 17a and 18a, respectively, and the struts carry spired ends for ornamental purposes, as indicated by the numerals 17b and 18b, respectively.

The struts 17 are slidably received by the brackets 15 which extend outwardly and laterally of the lower rail 21 of sash 13. As seen most clearly in Figures 4 and 5, each bracket 15 includes a base section 27 secured directly to the lower rail 21 and being longitudinally bored to receive a pivot pin 28. The outer end of the pivot pin 28 is transversely bored to receive a strut 17 in slidable engagement therewith, this portion also carrying an eccentrically shaped ring 29 which is also transversely bored to receive in slidable engagement therewith the strut 17. The pin 28 is held against lateral shifting by a collar 28a on the inner end (see Fig. 1) and the ring 29 on the outer end. A spring pressed detent 30 is carried in the larger portion of the ring 29 and passes through a suitable bore in pin 28 to selectively engage any one of a plurality of spaced sockets 31 along the strut. A handle or knob 30a is provided outwardly of the ring 29 for op-

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erating the spring pressed detent 30. It will be understood that the brackets 16 which are attached to the lower rail 25 of the lower sash 14 are identical in construction and operation as are the brackets 15 of the upper sash 13. It is noted that the struts 18 are spaced outwardly of the struts 17 so as not to interfere in the operation and movements of each other.

According to the invention, when it is desired to have the combination storm sash and awning unit function as a storm window unit, it is positioned within the window frame as illustrated in Figures 1 and 2, wherein the upper and lower sashes tightly abut each other and snugly fit within jambs and sill of the window frame and the struts 17 and 18 lie adjacent one another and in a vertical position closely adjacent the building.

When it is desired to convert the combination storm sash and awning unit to function as an awning, it is only necessary to release each spring pressed detent of brackets 15 and 16, slide the respective bracket along struts 17 and 18 until the sashes 13 and 14 have maintained a desired position (such as is illustrated in Fig. 3), and then proceed to allow the spring pressed detents to engage in the proper sockets 31 for maintaining the brackets in secured relationship to the struts and allow the sashes 13 and 14 to simulate an awning in locked position. It is understood that the sashes 13 and 14 need not be positioned exactly as shown in Figure 3, but due to the numerous sockets 31 in spaced relationship along the struts 17 and 18, may be positioned in other relationships to simulate various shaped awnings.

In order to reduce or eliminate any light from passing through the transparent panes of the sashes 13 and 14, a pair of elongated fork-shaped members 32, 32 are mounted on the top and bottom rails of each sash. These fork-shaped members face each other and provide slots for slidably receiving a shading or non-transparent member 33, as seen in Figures 3 and 4. The non-transparent member 33 preferably completely overlies the transparent pane area of the storm sashes and may be constructed of fiber glass, linoleum, canvas or other non-transparent material, but preferably a rigid sheet of material. Thus, it is seen that to convert the unit from a storm window unit to an awning unit merely requires the simple and easy manipulation of the brackets 15 and 16 and the struts 17 and 18, so that the sashes 13 and 14 may be swung outwardly, wherein the sash 13 may be substantially horizontally disposed while the sash 14 may be substantially vertically disposed. Then it is only necessary to position the non-transparent inserts 33 over the sashes in their respective fork-shaped members 32.

So it is seen that the instant invention provides a combination storm window and awning unit which may be easily converted to function as either a storm window unit or an awning unit by the mere manipulation of the user.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

We claim as our invention:

1. A combined awning and closure assembly for a window frame comprising top and bottom sashes, means hinging the top sash to the top of the window frame accommodating swinging of the top sash outwardly from the window frame, means hinging the top of the bottom sash to the bottom of the top sash accommodating swinging of the bottom sash from a position aligned with the top sash to a position in selected angular relation therewith, a first pair of struts pivoted at one end at each side of the window frame, a second pair of struts pivoted at one end at each side of the window frame in spaced relation from the pivoted ends of the first pair of struts, first brackets slidably connecting the top sash with the first pair of struts, second brackets slidably connecting the bottom sash with the second pair of struts, locking means associated with said brackets to fixedly secure the

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brackets to the struts, said struts being swingable on their pivots from positions substantially parallel with the window frame to cooperate with the brackets and clamping means in holding the sashes in closed position to positions tilted outwardly from the window frame to cooperate with the brackets and clamping means in holding the sashes in open awning position away from the window frame, said first and second pairs of struts selectively positioning the top and bottom sashes independently of each other, and pivots associated with said brackets to accommodate swinging of the struts.

2. A combined awning and storm window assembly for mounting on a window frame comprising a top sash, a hinge connecting the top of the top sash to the top of the window frame accommodating outward swinging of the top sash, a bottom sash, a hinge connecting the top of the bottom sash to the bottom of the top sash accommodating swinging of the bottom sash from position in alignment with the top sash to a position in angled relationship therewith, a first pair of struts pivoted at their lower ends at each side of the window frame adjacent the bottom of the frame, a second pair of struts pivoted at their lower ends at each side of the window frame in spaced relation above the pivots for the first pair of struts, first brackets slidably connecting the bottom of the top sash with the second pair of struts, second brackets slidably connecting the bottom of the bottom sash with the first pair of struts, pivot means associated with said brackets to accommodate swinging of the struts about their pivots, locking means associated with the brackets to fixedly secure the brackets lengthwise of the struts, said struts being swingable on their pivots from positions substantially parallel with the window frame to cooperate with the brackets and clamping means in holding the sashes in storm window closed position to positions tilted outwardly from the window frame to cooperate with the brackets and clamping means in holding the sashes in open awning position away from the window frame, and each pair of struts selectively positioning the sashes independently of each other outwardly of the window frame to provide a desired awning configuration.

3. A combination storm window and awning unit for a window frame which comprises hingedly connected superimposed glazed sashes having light-transmitting panes, means hingedly connecting the top of the top sash in swingable relation with the top of the window frame to swing the sashes from a storm window position against the window frame to an awning position outwardly from the window frame, a first pair of struts pivoted at one end at each side of the window frame, brackets slidable on said struts pivotally connected to the top sash, a second pair of struts pivotally connected at one end at each side of the window frame in spaced relation from the pivots for the first pair of struts, brackets slidable on the second pair of struts pivotally connected to a sash pivoted to the top sash, clamps on said brackets for locking the brackets against sliding on the struts, each pair of struts selectively positioning the sashes independently of the other outwardly of the window frame, and means on said sashes for holding light-shielding covers in overlapping relationship with said panes.

4. A combination storm window and awning unit which comprises a top glazed sash having a light-transmitting pane, a hinge for connecting the top of the top sash to the top of the window frame, a bottom glazed sash having a light-transmitting pane, a hinge connecting the bottom of the top sash to the top of the bottom sash, a first pair of struts pivoted at their lower ends at each side of a window frame adjacent the bottom of the frame, a second pair of struts pivoted at their lower ends at each side of the window frame in spaced relation above the pivots for the first pair of struts, first

brackets slidably connecting the bottom of the top sash with the second pair of struts, second brackets slidably connecting the bottom sash with the first pair of struts, locking means associated with said brackets to fixedly secure the brackets to the struts, pivot means associated 5 with the brackets to accommodate swinging of the struts about their pivots, said struts being swingable on their pivots from positions substantially parallel with the window frame to cooperate with the brackets and clamping means in holding the sashes in storm window closed 10 position to positions tilted outwardly from the window frame in open awning position away from the window frame, each pair of struts selectively positioning the sashes independently of each other outwardly of the building, and means on each sash for removably sup- 15

porting rigid covers of light-shielding material in overlapping relationship with the panes of the sashes,

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