Sept. 21, 1954 C. L. WEBSTER 2,689,386

STORM WINDOW WITH SASH STORAGE BRACKETS

Filed Jan. 20, 1951

FIG. 1.

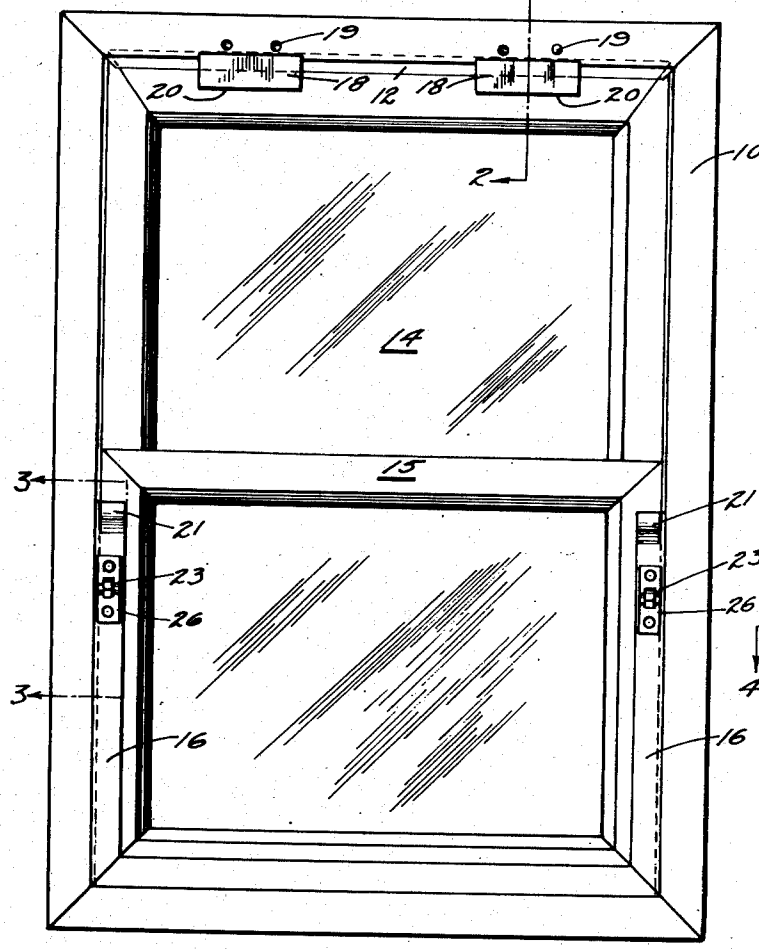



FIG. 2.

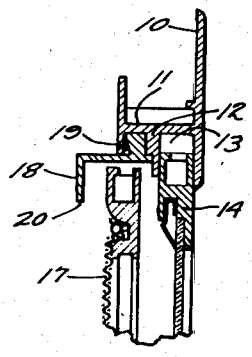



FIG. 3.

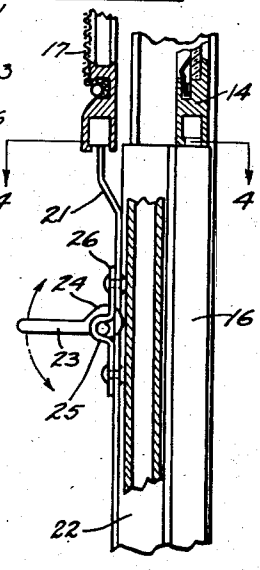



FIG. 4.

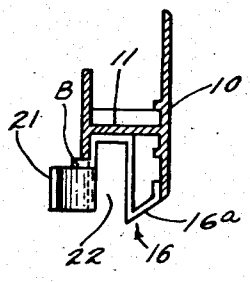
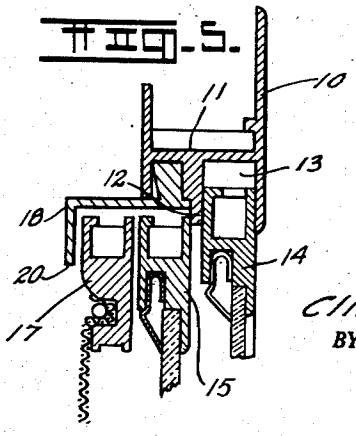



FIG. 5.




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## STORM WINDOW WITH SASH STORAGE BRACKETS

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5 Claims. (Cl. 20—55)

1

This invention relates to storm windows in general and more particularly to aluminum storm windows of the interchangeable type wherein a frame is attached in a window opening in a dwelling house, for example, and a pair of glazed sash and an interchangeable screened sash are removably mounted in the frame.

The invention relates even more particularly to novel means for storing either the glazed sash or the screened sash in elevated relation in the storm window frame so as to enable it to be at hand when it is desired to change the glazed or screened sash in the storm window.

The principal object of the invention is the provision of a simple and inexpensive means of adapting a storm window frame to provide a storage location for a glazed or screened sash.

A further object of the invention is the provision of a storm window frame incorporating modifying members in its lower half portion normally holding the lower sash in position in the frame and so altered as to provide projecting brackets for the reception and positioning of a third sash in storage position in the upper half of the storm window frame.

A still further object of the invention is the provision of a storm window frame with the uppermost portion thereof modified by the addition of a pair of bracket sections forming in effect a third track for the reception of a glazed or screened sash in storage position and enabling the storm window frame to hold all three sash in elevated position if desired.

The construction disclosed herein comprises a simple, efficient and economical means of forming a storm window frame capable of holding a pair of glazed sash in normal double hung relation and a screened sash in storage position and at the same time permit the lower one of the glazed sash to be moved vertically between the other two sash and positioned in desired elevated relation so as to achieve ventilation as desired.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being the intention to cover all changes and modifications of the example of the invention herein chosen for purposes of the disclosure, which do not constitute departure from the spirit and scope of the invention.

The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a back elevational view of a storm window frame showing a pair of glazed sash in position therein and means modifying the frame for the reception of a screened sash in storage position.

2

Figure 2 is an enlarged vertical section taken on the line 2—2 of Figure 1 showing the upper portion of a screened sash in position in the window frame.

Figure 3 is an enlarged vertical section taken on the line 3—3 of Figure 1 showing the lower portion of a screened sash resting at its lower end on a part on the window frame together with a lock for holding the lower glazed sash in position in the window frame.

Figure 4 is a horizontal section taken on line 4—4 of Figure 3.

Figure 5 is a vertical cross section comparable with Figure 2 showing both the lower glazed sash and screened sash in uppermost position in the frame.

By referring to the drawings and Figures 1, 2 and 3 in particular it will be seen that a storm window frame 10 has been disclosed which is formed of four cut and mitered sections which includes a longitudinally extending T-headed flange 11. The T-headed flange 11 has an inwardly extending flange 12 formed thereon and spaced with respect to the main frame 10 to define a channel 13 longitudinally of the frame and which channel is particularly suited for receiving an upper glazed sash 14. A lower glazed sash 15 is positioned in spaced relation to the main frame 10 by filler block portions or sections 16a of modifying members 16. Thus, in effect, two vertical sash positions are obtained; one, the position in which the upper outer sash 14 is normally retained, the same resting on the upper end of the filler block portions or sections 16a of the modifying members 16, and, two, the adjacent position in which the lower inner sash 15 is positioned in channels 22 of the modifying members 16, the sash 15 being movable vertically adjacent the inner surface of the upper outer sash 14.

In order that a third sash such as a screened sash 17 may be positioned in the frame 10, a pair of modifying sections 18—18 are provided on the upper horizontal portion of the frame 10 at the rear side thereof. The modifying sections 18—18 each comprise an inverted semi L-shaped angle section having on the exterior thereof an extension that is of dovetailed shape in cross section and which fits between the head section of the T-headed flange and the flange 12 as shown in Figure 2 and is secured by indenting the inner

edge of the head section of the T-headed flange 11 at intervals therealong, as indicated by the numeral 19. The rearmost portion of the modifying channel section is downturned providing a part 20 which overlies a sash positioned in the lower rear portion of the frame so that a sash moved upwardly thereagainst, as best shown in Figure 5 of the drawings, will be held in the modifying sections 18—18.

By referring now to the lower portion of the storm window frame it will be observed that the uppermost portions of the rear walls of the channels 22 of the modifying member 16—16 which form guide channels for the reception of the lower sash 15 have been slit downwardly to form outturned and upturned brackets 21—21 which are adapted to receive and retain the lower edges of the screened sash 17.

The formation of the brackets 21 is best shown in Figures 3 and 4 of the drawings and by referring thereto it will be observed that the slitting and forming of the brackets 21—21 from the rear walls of the channels 22 of the modifying members 16 provide angular guides with respect thereto facilitating the introduction of the lower sash 15 into the channel formed thereby. This is best illustrated in Figure 4 of the drawings wherein the channel in which the lower sash 15 is normally positioned is indicated by the numeral 22. The modifying members 16—16 will thus be seen to be positioned in the lower part of the storm window frame, secured to the main frame 10 by suitable fasteners and serve to support the upper sash 14 in its normal position. They will thus be seen to provide the channels 22 for the reception of the opposite side edges of the lower sash 15 and to form the brackets 21—21 which also facilitate the introduction of the sash 15 thereinto. The storm window construction as hereinbefore described, it will be noted provides for supporting the upper sash 14 in a vertical plane adjacent the main frame 10, the lower sash 15 in a second vertical plane defined by the channels 22 offset rearwardly with respect to the plane of the upper sash 14, and the screened sash 17 in a third vertical plane different from both of the vertical planes of the sash 14 and the sash 15.

By referring now to Figure 5 of the drawings it will be observed that the screened sash 17 is shown in storage position with its upper end located in the channel defined by the modifying sections 18—18 it being remembered that the lower edge of the screen 17 is normally seated on the brackets 21.

In Figure 5 of the drawings the screened sash 17 is shown in uppermost position similar to Figure 2 of the drawings and the upper edge of the lower sash 15 is also shown in uppermost position in the channels formed by the modifying sections 18—18. It will thus be seen that the construction provides complete flexibility in that any and all of the interchangeable sash, both glazed and screened, can be moved into or out of the storm window frame and moved into and out of storage position or ventilation position as desired.

It will occur to those skilled in the art that some means is desirable for holding the sash 15 in elevated position as when the same is open for ventilating. In order that this may be readily accomplished a pair of cam locks 23—23 are utilized and they are shown in Figures 1 and 3 of the drawings. Each of the cam locks 23—23 comprises a member having a cam surface 24 and an outwardly projecting arm formed thereon



and pivoted over a pivot 25 which in turn is secured to the filler block sections 16 of the window frame by plates 26 which are riveted thereto.

It will thus be seen that a storm window with sash storage brackets has been disclosed which is simple and inexpensive and provides desirable self-storing features in a combination storm window.

Having thus described my invention, what I claim is:

1. In a storm window, a rectangular shaped frame having at the sides thereof and in the lower portion of the same vertically extending oppositely disposed modifying members having vertical guide channels located in the rear portion of the frame to receive a lower sash, said modifying members each having a part disposed in the front portion of the frame for the lower end of an upper sash to rest upon to support the same in the frame in forwardly offset relation to the lower sash, the rear side wall of each of said guide channels having an upper rearwardly offset end portion, said end portions constituting combined guide portions, for the lower sash to facilitate introduction of the same into said vertical channels, and sash supporting brackets, said end portions being located substantially just below the meeting rail portion of the window frame so that the lower end of a sash may rest thereon while occupying an upper position at the rear of the frame.

2. In a storm window, a rectangular shaped frame having at the sides and in the lower portion thereof vertically extending oppositely disposed modifying members having vertical guide channels located in the rear portion of the frame to receive a lower sash, said modifying members each having a part disposed in the front portion of the frame for the lower end of an upper sash to rest upon to support the same in the frame in forwardly offset relation to the lower sash, the rear side wall of each of said guide channels having an upper end portion extending rearwardly and upwardly, said end portions constituting combined guide portions, for the lower sash to facilitate introduction of the same into said vertical channels, and sash supporting brackets, said end portions being located substantially just below the meeting rail portion of the window frame so that the lower end of a sash may rest thereon while occupying an upper position at the rear of the frame.

3. In a storm window, a rectangular shaped frame having at the sides and in the lower portion thereof vertically extending oppositely disposed modifying members having vertical guide channels located in the rear portion of the frame to receive a lower sash, said modifying members having filler block portions in the front part of the frame for the lower end of an upper sash to rest upon to support the same in the frame in forwardly offset relation to the lower sash, the rear side wall of each of said guide channels having an upper rearwardly extending end portion constituting combined guide portions, for the lower sash to facilitate introduction of the same into said vertical channels, and sash supporting brackets, said end portions being located substantially just below the meeting rail portion of the window frame so that the lower end of a sash may rest thereon while occupying an upper position at the rear of the frame.

4. In a storm window, a rectangular shaped frame having at the sides and in the lower portion thereof vertically extending oppositely dis-

posed modifying members having vertical guide channels located in the rear portion of the frame to receive a lower sash, said modifying members each having a part located in the front portion of the frame for the lower end of an upper sash to rest upon to support the same in the frame in forwardly offset relation to the lower sash, the rear side wall of each of said guide channels having an upper end portion bent laterally rearwardly at an upward inclination therefrom and thence upwardly substantially vertically, said end portions forming combined guide portions, for the lower sash to facilitate introduction of the same into said channels, and sash supporting brackets, said end portions being located substantially just below the meeting rail portion of the window frame so that the lower end of a sash may rest thereon while occupying an upper position at the rear of the frame.

5. A storm window of the construction set forth in claim 1 and in which said frame has at the upper part and at the rear thereof transversely extending flange portions substantially L-shaped in cross section, said flange portions forming a transversely extending secondary channel for the reception of the upper marginal portion of a third sash having its lower end resting upon said supporting brackets that are formed by said upper end portions of the rear walls of said vertical channels.



**References Cited** in the file of this patent

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 2,427,915 | Krantz | Sept. 23, 1947 |
| 2,435,008 | Kaufmann | Jan. 27, 1948 |
| 2,509,582 | Webster | May 30, 1950 |
| 2,521,617 | Webster | Sept. 5, 1950 |
| 2,530,846 | Webster | Nov. 21, 1950 |