Aug. 28, 1951 W. M. KRANTZ 2,565,772

STORM WINDOW AND MOUNTING FRAME

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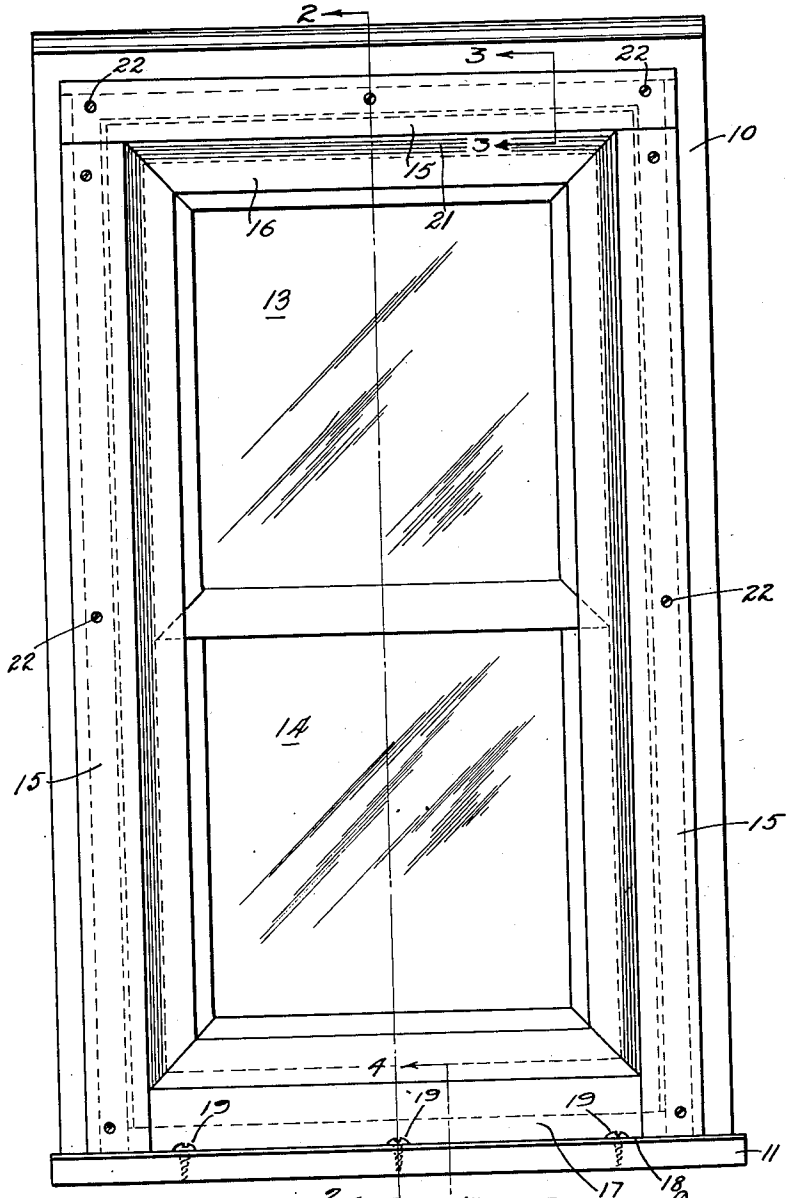


FIG. 1.

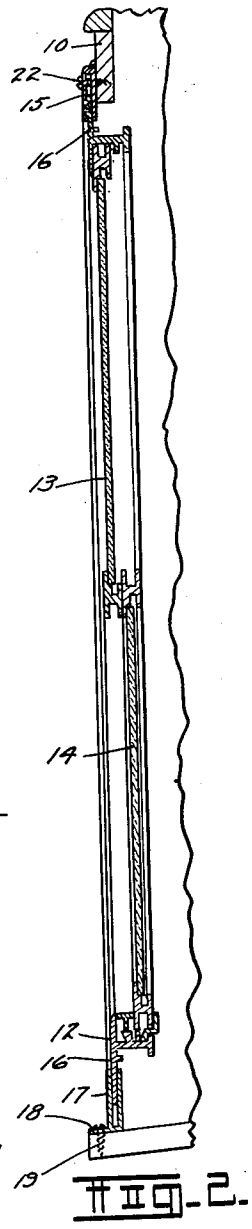


FIG. 2.

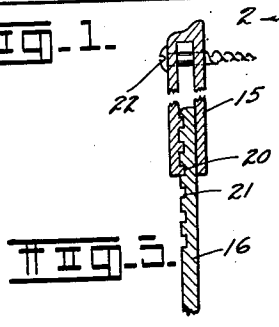


FIG. 3.

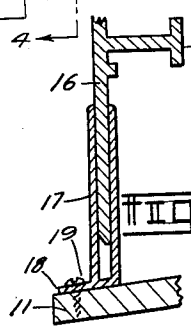


FIG. 4.

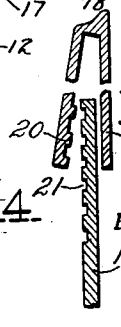


FIG. 5.

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STORM WINDOW AND MOUNTING FRAME

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4 Claims. (Cl. 20—55)

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This invention relates to storm windows and more particularly to means for mounting a storm window on a window opening.

The principal object of the invention is the provision of a storm window and mounting frame.

A further object of the invention is the provision of a simple and inexpensive means for positioning a storm window in desirable location on a window opening.

A still further object of the invention is the provision of a storm window and mounting frame having locking means formed thereon for inter-engagement.

The storm window and mounting frame shown and described herein comprises an improvement in the art of mounting storm windows on window openings and particularly dwelling house window openings. It is well known that many and various types of storm windows are commonly applied to window openings for the insulating effect obtained therefrom. It is also well known that many and various methods have been proposed for mounting the storm window assemblies on the window openings.

The present invention relates to a storm window having a lip type frame provided with a plurality of longitudinally extending grooves formed therein and a mounting frame comprising a bifurcated member slidably engageable on the lip frame of the storm window and having a plurality of longitudinally extending ribs formed therein for registry with the said grooves in the said storm window frame. The storm window mounting frame is adapted to be distorted at its time of installation so as to cause a plurality of ribs therein to register with the plurality of grooves in the storm window frame and thereby lock the same in desired relation on which the storm window and mounting frame is positioned.

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 understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a front plan view of the storm window and mounting frame.

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Figure 2 is a vertical cross section taken on line 2—2 of Figure 1.

Figure 3 is a vertical cross section in enlarged detail taken on line 3—3 of Figure 1.

Figure 4 is a vertical cross section in enlarged detail taken on line 4—4 of Figure 1.

Figure 5 is a cross sectional view, substantially as taken along the line III—III of Figure 1, with the frame member in the undistorted position before engagement with the frame flange.

By referring to the drawings and Figures 1 and 2 in particular it will be seen that a window casing 10 including a sill 11 has been disclosed and defines a window opening as, for example, in a dwelling house. A storm window comprising a main frame 12 having a pair of sash 13 and 14 positioned therein is disposed in the opening defined by the window casing 10 and is secured in the said opening in the casing 10 by a mounting frame 15. The mounting frame 15, as may best be seen by referring to Figures 2, 3 and 4 of the drawings, comprises a bifurcated member defining a deep channel in which an outwardly extending flange 16 of the main frame 12 may be engaged. The mounting frame 15 is identical in cross section, in the vertical side sections and the horizontal top section thereof and differs slightly in the lower horizontal section thereof which is modified for engagement with the sill 11 heretofore referred to.

In Figures 2 and 4 of the drawings the modified sill engaging portion of the frame may be seen and is indicated by the numeral 17. The modified sill engaging portion 17 is provided with an outwardly extending flange 18 through which a plurality of screws 19 may be driven so as to mount the same in upright position on the sill 11 as shown.

By referring to Figures 2 and 3 of the drawings it will be seen that the vertical side sections and the upper horizontal section of the mounting frame 15 are provided with registering ribs and grooves 20 and 21, respectively, the ribs 20 being formed on the mounting frame 15 and the grooves 21 being formed in the flange 16 of the mounting frame 12. It will be observed that a plurality of screws 22 are positioned through the mounting frame 15 so that when they are engaged in the casing 10 they serve to move the bifurcated members of the mounting frame 15 toward one another and hence bring the ribs 20 into positive registry with the grooves 21 heretofore described.

It will thus be seen that the storm window and mounting frame as disclosed herein may be

mounted on the window casing 10 in any desired position with respect to the window opening defined by the window casing 10 by simply engaging the flange 16 of the mounting frame 12 of the storm window in the bifurcated mounting frame members 15—15 and then securing the mounting frame member 15—15 to the casing 10 as by the screws 22. It will be obvious that this method of mounting the storm window on the dwelling house window casing 10 eliminates the need of blocking up the same as has hertofore been customary, as the mounting frame 15 carries the storm window by reason of the interengagement of the ribs and grooves 20 and 21, respectively. The storm window frame 12 is, in effect, hung from the horizontal top member 15 of the mounting frame and secured against sideward movement on the dwelling house window casing 10 by reason of its engagement with the vertical standing members 15—15. The modified sill engaging portion 17 slidably engages the lower horizontal section of the flange 16 formed on the storm window frame 12 and provides the necessary build up to compensate for the drop sill construction common in dwelling house window constructions.

It will thus be seen that a simple and efficient storm window and mounting frame therefor has been disclosed which provides positive interengagement between the storm window frame and the mounting frame and thereby secures the storm window in desired relation on the window opening.

Having thus described my invention, what I claim is:

1. The combination of a storm window including a main frame having a flange, a plurality of grooves formed longitudinally in said flange and a mounting frame comprising a bifurcated member having a plurality of longitudinally extending ribs formed on one of the inner surfaces thereof for registry with the said grooves in the said frame.

2. A storm window including a main frame

having an outwardly extending flange thereon and a mounting frame telescopically engaging the said flange of the storm window frame, and interengaging means formed on the said flange and in the said mounting frame for securing the said storm window frame in predetermined position in the said mounting frame said interengaging means comprising longitudinally extending grooves on said mounting frame and longitudinally extending ribs on said storm window frame.

3. The combination of a mounting frame for a lip type storm window comprising a bifurcated member having a plurality of longitudinally extending ribs formed on the inner surface of one of the bifurcations thereof, and a storm window frame having a plurality of longitudinally extending ribs thereon; and means for mounting the said mounting frame on a window casing for distorting the same so as to engage the ribs of the mounting frame in the grooves of the storm window frame when the same is positioned in the bifurcated frame.

4. The combination of a storm window frame having a lip type flange and a mounting frame therefor comprising a bifurcated member engaging the lip type flange, the said lip type flange and the bifurcated member both having irregular surface patterns for registry with one another so as to secure the said storm window frame against movement in the said mounting frame.

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