Sept. 3, 1963 E. E. BURTON 3,102,579

STORM WINDOW AND SCREEN RETAINING STRIP

Filed Dec. 7, 1961

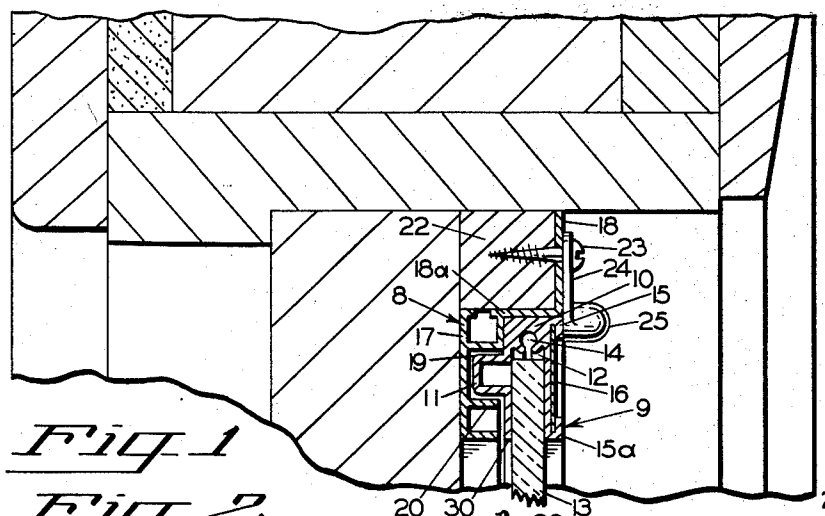


Fig. 1

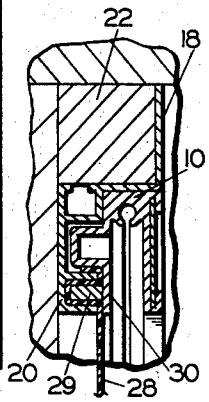
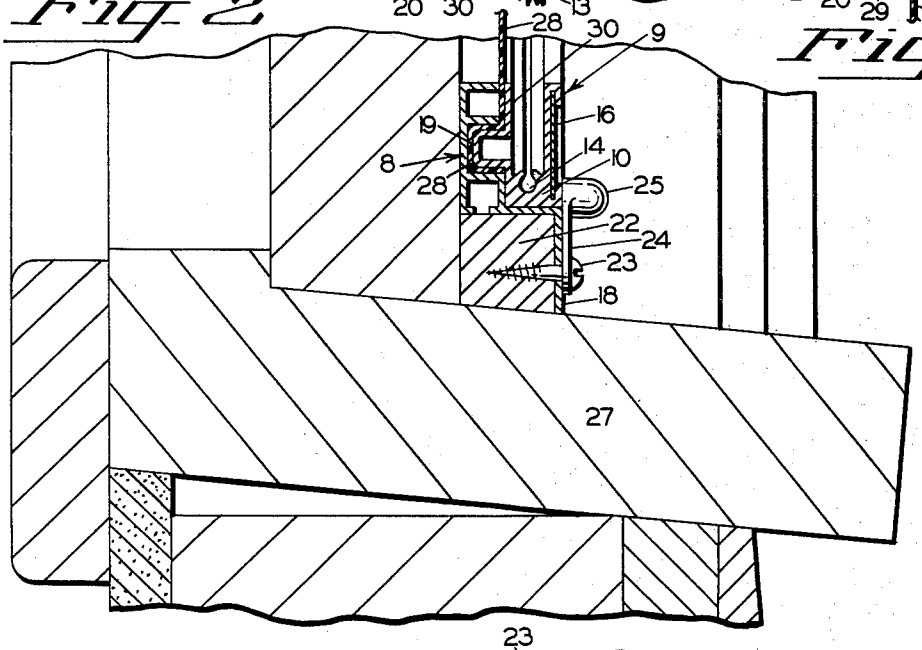


Fig. 4

Fig. 2



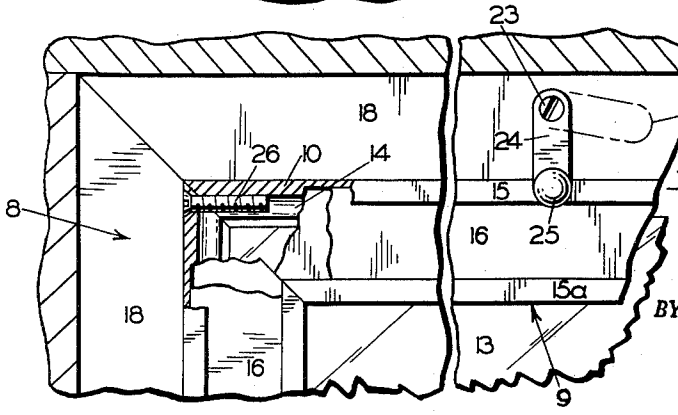


Fig. 3

INVENTOR.
ELWIN E. BURTON

BY Kimmel & Crowell

ATTORNEYS

United States Patent Office 3,102,579 Patented Sept. 3, 1963

3,102,579

STORM WINDOW AND SCREEN RETAINING STRIP

Elwin E. Burton, 12140 SE. Boise, Portland, Oreg.

Filed Dec. 7, 1961, Ser. No. 157,626
1 Claim. (Cl. 160—90)

This invention relates to an improved device for retaining glass storm windows, screens, plastic sheeting, etc. in place on the outside of a standard window.

A primary object of this invention is the provision of a device of this character which is readily adaptable for use with glass, as a storm window; for use with plastic sheeting material, as a storm window; and to retain screen material, or the like, when window screens are desired.

Another object of this invention is the provision of such a device which when once it has been assembled as a companion frame for the storm window or retaining member for screen material and plastic sheeting, is easily installed and its initial cost is extremely low in comparison with pre-existing storm windows and screens.

Another and further object of this invention is the provision of a permanently colored trim strip which is easily changed or replaced with another color as desired.

Still other objects will in part be obvious and in part be pointed out hereinafter and shown in the accompanying drawing wherein:

FIGURE 1 is a cross-sectional view of the upper portion of a standard casement window with the device of the instant invention holding a plate glass in place, the glass being used as a storm window;

FIGURE 2 is a cross-sectional view of the bottom, or sill, portion of a standard casement window showing the device of the instant invention retaining a screen or plastic sheeting material in place;

FIGURE 3 is a fragmentary elevational view illustrating particularly the means of securing the device within its companion fixedly mounted receiving member and, also, the means of fastening this device together at each corner; and

FIGURE 4 is a fragmentary view, similar to FIG. 1, showing a modified form of construction for the retention of the screen or plastic sheeting material, as seen in FIG. 2.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Referring now to the drawing in detail, the device of the instant invention is composed of two separate members, one part generally indicated at 8 affixed to the window frame or sash and designed to receive and hold the other generally indicated at 9, which extends about the perimeter of a glass plate and retains said glass while member 9 is held in place within the first member 8. Member 9 is made in the shape of a generally rectangular shaped frame and retains the screen or plastic sheeting material when the two members are fitted together, as will be explained later.

Referring now to FIG. 1, the glass and screen retaining member 9 comprises a body 10 which has formed on it a tongue protrusion 11 on one side and a recessed cavity 12 formed within it on one end to receive and retain a glass plate 13. Near the upper edge is extruded a generally rounded slot 14, running the entire length of the glass and screen retaining member 9, for a purpose to be explained later. On the outer face of the glass and screen retaining member 10 are two integral opposing L shaped members 15 and 15*a* which, together, form a slideway to receive a colored formica, or the like, strip 16 to serve as a decorative, permanent colored trim around the face perimeter of the glass and screen retaining member 9, as best viewed in FIG. 3.

As best seen in FIG. 1, the glass and screen retaining receiving member 8 comprises a body 17 having a flange 18 perpendicularly disposed to the top surface 18*a* of body 17 and a large groove 19 formed within the body 17. Groove 19 is designed to receive tongue protrusion 11 of the glass and screen retaining member 9 in such a way that a loose fit is obtained. Adjacent to groove 19 is a smaller groove 20, for purposes to be revealed later.

In order to use this device as a storm window, the body 17 is cut into proper lengths to fit and extend about the perimeter of the inside of the window sash with each corner cut and fitted as indicated at 21 in FIG. 3. Each strip, or body 17, comprising the preformed generally rectangular frame, is secured to the sash's blind stop members 22 by suitable screws 23 located near each end of the four body strips 17, comprising the rectangular framework. The frame comprised of strips 17 has its outer surfaces abutting the innter surfaces of the blind stop members 22 and its flanges 18 laying flat against the blind stop members' faces. Associated with each screw 23 is a pivoting locking member 24, the purpose of which is to lock or secure the glass and screen retaining member 9 in place within the receiving member 8. Integral with locking member 24 and located on one of its ends is an operating knob 25. Locking member 24 is held in any given position by the friction maintained by screw 23.

The glass and screen retaining body 10 is cut to size to extend about the generally rectangular perimeter of the pre-cut and sized glass 13. Each corner of the frame formed by the glass and screen retaining bodies 10 is held together by a single screw or bolt 26 which is self-threaded, longitudinally, within rounded slot 14, as best illustrated in FIG. 3. When the resultant glass retaining frame extending about the perimeter of the glass, composed of four suitably cut and joined glass and screen retaining members 9 is formed, tongue protrusion 11 fits loosely within groove 19 of the frame formed by the receiving members 8.

Finally, the rectangular framework, consisting of the four glass and screen retaining members 9, is placed so that tongue protrusion 11 of the glass and screen retaining members 10 are inserted within the corresponding large grooves 19 of the frame formed by receiving members 17, which, as previously stated, is fixedly attached to the blind stops 22 of the window sash. After the glass and screen retaining frame 9 is in place within groove 19 of the receiving framework 8, the locking members 24 are revolved until they are in the locked position, as shown by solid line in FIG. 3. The unlocked position is illustrated also in FIG. 3 but by broken lines.

Referring now to the use of this device as a retainer for screens or flexible plastic sheeting material, this is best seen in FIG. 2. Here this device's lower edge is shown as it abuts the window sill 27 and affixed to the window's blind stop 22. In this case, screen or plastic sheeting material 28 is held across the framework 9 made up by the receiving members 17 and then the retaining frame 9 is pushed into place so as to engage tongue protrusions 11 into groove 19. It is now apparent that the loose fit between tongue 11 and groove 19, as above described, is for the express purpose of allowing the screen or plastic sheeting material 28 to fit snugly between the two aforesaid members. Lastly, the locking members 24 are adjusted to hold the glass and screen retaining frame 9 in place within the receiving frame 8, as previously described.

Referring specifically to FIG. 4, there is shown a modified means for retaining or securing screen or plastic sheeting material 28 in place. This is done by holding the flexible material 28 over the receiver frame, as before, and, by using a plastic strip beading 29, anchoring the

screen or plastic sheeting material 28 within the small groove 20 of the frame 8. To retain beading 29 within small groove 20, screen retaining frame 9 is secured and locked in place within the receiving frame 8. A flange 30 formed on the glass and screen retaining body 10 is forced against the plastic beading 29 and compresses it within the small groove 20 and acts as a closure member bridging the open side of groove 20.

In reference to the colored formica, or the like, strip 16, this is held in place by the opposing L shape members 15 and 15*a*, respectfully, the strips 16 are slidably removable and replaceable allowing a change of decorative trim as desired by the home owner.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative, and not in a limiting sense.

I claim:

A storm window and screen retaining strip for use with a substantially rectangular window frame comprising, in combination, a receiving frame and a securing frame, said receiving frame including a substantially rectangular body having first and second right-angularly disposed flanges for engaging the outside face and the interior periphery, respectively, of the window frame, screw means engageable through said first flange for securing the same to the window frame, means defining a perimetric groove in said receiving frame spaced inwardly from said second flange, and said securing frame including a substantially rectangular body defined by a plurality of elements co-

operating to form corner portions, said last-mentioned body having means defining a peripheral storm window receiving channel extending in the plane of the window frame and a perimetric tongue loosely engageable in said perimetric groove in said receiving frame, said tongue being sufficiently smaller than said groove to receive therebetween in clamping engagement peripheral edges of the screen, means defining rounded slots in said elements adjacent each of said corner portions, and a self-threading bolt engageable through cooperating elements into said rounded slots for securing said elements in related assembly, and latch means carried by said screw means and pivotally mounted thereby on said first flange of said receiving frame, said latch means including end portions engageable over perimetric portions of said body of said securing frame to retain said securing frame in engagement with said receiving frame.

References Cited in the file of this patent

UNITED STATES PATENTS

2,079,283	Etling	May 4, 1937
2,260,451	Gunzelman	Oct. 28, 1941
2,432,889	Herrmann	Dec. 16, 1947
2,569,941	Mastrangelo et al.	Oct. 2, 1951
2,622,676	Cutchin et al.	Dec. 23, 1952
2,701,041	Toth	Feb. 1, 1955
2,736,403	Gwynne	Feb. 28, 1956
2,818,145	Bragman et al.	Dec. 31, 1957
2,913,046	Sharp et al.	Nov. 17, 1959
2,963,084	Daniels et al.	Dec. 6, 1960