May 27, 1952 C. SATZ ET AL 2,598,610

STORM SHUTTER ASSEMBLY

Filed July 6, 1949

Fig. 1.

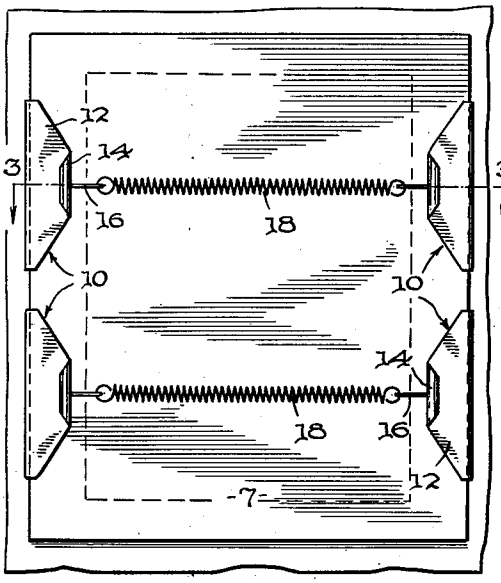


Fig. 2.

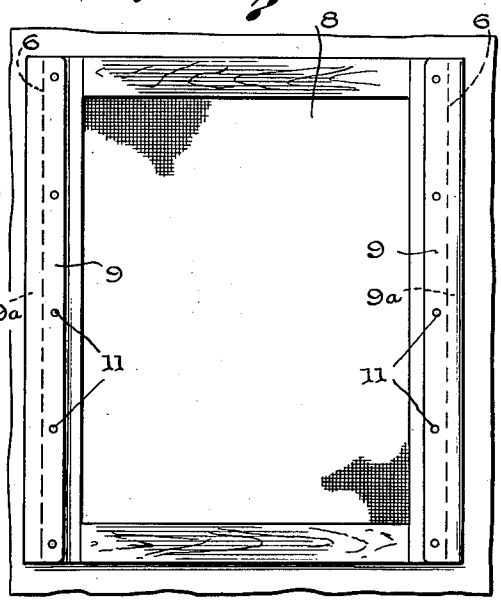
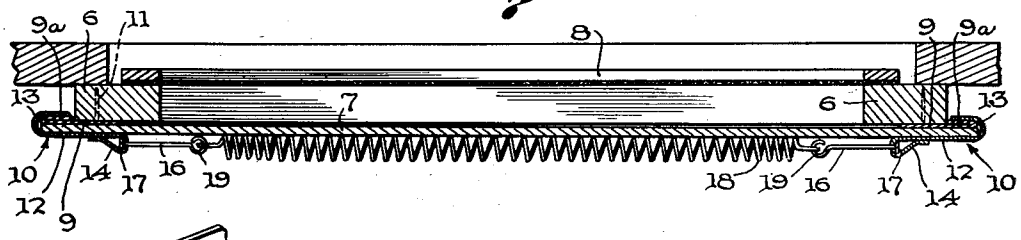


Fig. 3.



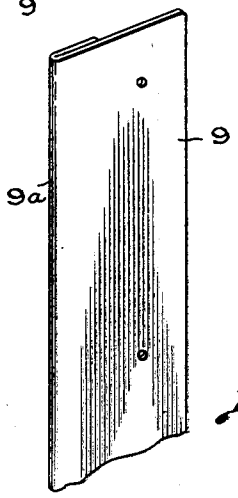


Fig. 5.

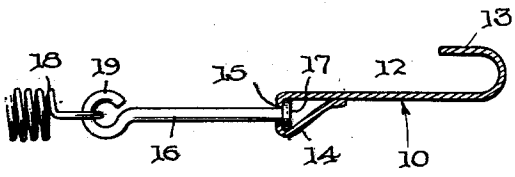


Fig. 4.

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STORM SHUTTER ASSEMBLY

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2 Claims. (Cl. 20—58)

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This invention relates to a storm shutter assembly, and has for its primary object to provide a protective panel and clip assembly that may be readily associated with a window frame on the weather or outer side thereof for protecting the glass and/or screen sash against injury during violent storms, hurricanes, etc.

The protective storm shutter assembly of the present invention is designed primarily for temporary use in an emergency such as occasioned by hurricanes and the like, and to that end comprises a simple assembly of protective panel member for disposition in protective position relative to the window sash and clip means for releasably yet efficiently holding the panel in position and against displacement regardless of the force to which it may be subjected during the course of a violent storm, hurricane or the like.

The invention, togther with its objects and advantages, will be best understood when the following detailed description thereof is read with reference to the accompanying drawing, in which is illustrated what is presently considered a preferred embodiment of the invention, and wherein:

Figure 1 is a plan view of the improved storm shutter assembly as viewed from the outside;

Figure 2 is a fragmentary plan view of a window casing equipped with keeper strips as contemplated by this invention;

Figure 3 is a horizontal sectional view taken substantially on the line 3—3 of Figure 1;

Figure 4 is a fragmentary detail view of a clip and spring connector forming part of the invention, and

Figure 5 is a fragmentary perspective view of a keeper strip forming part of the invention.

At the outset, it might be mentioned that no particular window casing and sash structure is intended to be shown since, as will be apparent as the description proceeds, the storm shutter assembly of this invention may be readily applied to practically any and all known types of window structure.

Referring now more particularly to the drawings, it will be seen that there has been shown for purposes of illustration only, and fragmentarily, a more or less conventional type of window structure having an outer casing which embodies, among other parts, side stiles 6. Sliding sashes or a single sash, such as the screen sash 8 may be mounted in the window frame, completing the window structure.

The storm shutter assembly of the present invention comprises a protective panel 7. This panel 7 consists preferably of a single blank of

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rigid material such as wood, composition wall boarding, or any other similar and readily available material of sufficient strength to withstand any reasonable amount of force to which it might be subjected during the course of a hurricane or other weather disturbance. The dimensions of the panel 7 will of course be determined by the dimensions of the window sash and casing in connection with which it is to be used. In use the panel 7 is disposed against the outer window casing in protective position covering the window sash 8, with its marginal edges overlying the stiles 6 of the casing.

For releasably securing the panel 7 in position, there are secured to the stiles 6, keepers 9. Cooperating with the keepers 9 are clips 10 adapted to embrace the edges of the keepers 9, together with the proximate edges of the panel 7 as shown to advantage in Figure 3 of the drawing.

Keepers 9 are in the form of elongated strips of metal or other suitable material. Each keeper strip has one edge portion thereof rolled or folded back upon itself to provide a reinforced edge 9a.

The strips 9 are perforated and are secured to the stiles 6 through the medium of nails or other fastening elements 11. As shown in Figure 3, the edges 9a of the keeper strips 9 extend laterally beyond the stiles 6. When the panel 7 is in position of use the side edges thereof overlie and are co-terminus with the edges 9a of the keeper strips 9, as clearly shown in Figure 3.

Each of the aforementioned clips 10 is preferably formed from a single blank of metal or other suitable material cut, shaped, and dimensioned to provide a body portion 12 that is substantially triangular in plan. Body 12 at one edge thereof is bent back upon itself to provide an inwardly curved hook 13. These hooks, as previously stated, and as shown in Figure 3, are adapted to embrace the edges 9a of the keeper strips 9, together with the side edges of the panel 7.

Adjacent the apex thereof the body 12 of each hook is bent back upon itself to provide a loop 14 and at this looped edge 14 the body 12 is apertured as at 15 to accommodate the shank of an eye bolt 16 that has an upset end 17 located within the confines of the loop 14.

As clearly shown in the drawing, clips 10 are connected in pairs, the clips of the respective pairs being connected together through the medium of a coil spring 18, the respective opposite ends of which are engaged with the eyes 19 of the bolts 16 as shown.

As is believed to be apparent, the resilient or

spring connections 18 serve to urge the clips 10 of each pair inwardly towards one another for effectively holding the hooks 13 in positive engagement with the keeper strips 9 and proximate edges of the panel 7.

It will, of course, be understood that any number of pairs of clips 10 may be employed. In the present instance two pairs of clips are shown in use for holding the panel 7 in operative position with respect to the sash 8 of the illustrated window structure.

It should be apparent from the foregoing that with this invention the protective panel 7 may be readily placed in position with respect to the window sash and the clips 10 quickly and easily engaged therewith and with the keeper strips 9 for positively securing the panel in position for effectively protecting the sash against damage from the elements during a heavy storm, hurricane or the like.

While the invention has been described in detail in its presently preferred embodiment, it will, of course, be understood that such has been done for purposes of illustration only and not by way of limitation, and therefore only such limitations are to be imposed thereon as may reasonably come within the scope of the appended claims.

What we claim is:

1. In combination with a window frame which includes lateral stiles, a keeper plate superimposed on and fixedly secured to each stile, said plates being substantially coextensive with the length of the stiles, the outer marginal edge of each plate being extended beyond its stile and reversely folded to provide a reinforced edge adjacent the outer marginal wall of the stile, a sash protecting panel engaged completely across said window frame and against the keeper plates, and means for detachably securing the panel to the keeper plates including resiliently connected clips, each consisting of a blank to provide a body bent back upon itself to form a hook, arranged in pairs and adapted to be flexed over opposite margins of the protective panel and keeper plates.

2. In combination with a window frame which includes lateral stiles, a keeper plate superimposed on and fixedly secured to each stile, the outer marginal edge of each plate being extended beyond its stile and reversely folded to provide a reinforced edge adjacent the outer marginal wall of the stile, a sash protecting panel engaged completely across said window frame against the keeper plates, and a pair of resiliently connected hook clips, each consisting of a blank to provide a body bent back upon itself to form a hook, adapted to be flexed over the opposite margins of the protective panel and keeper plates for detachably securing the panel to the window frame.

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