May 8, 1928. 1,668,701

M. F. STRASSER

STORM WINDOW

Filed Feb. 7, 1927

Fig. 1.

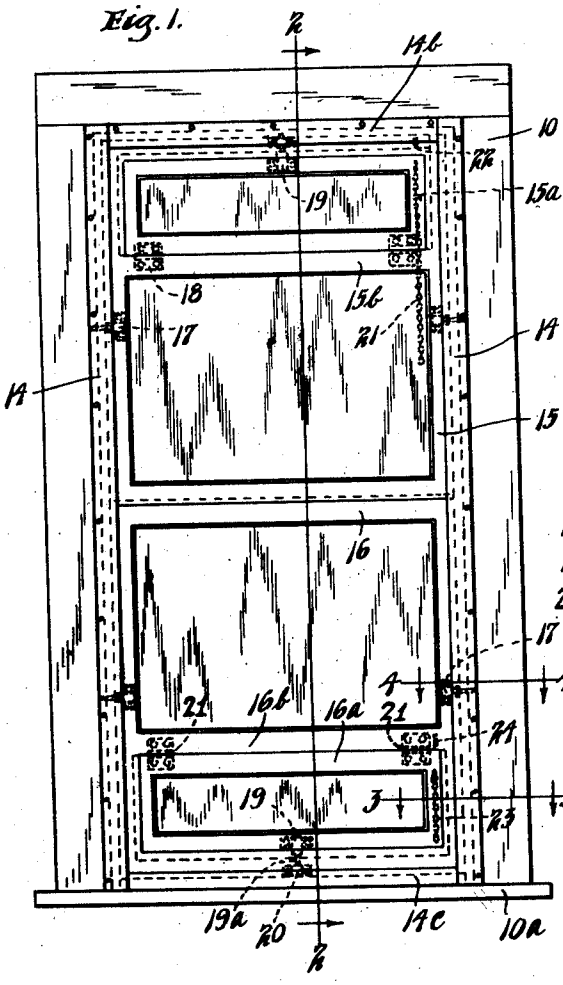


Fig. 2.

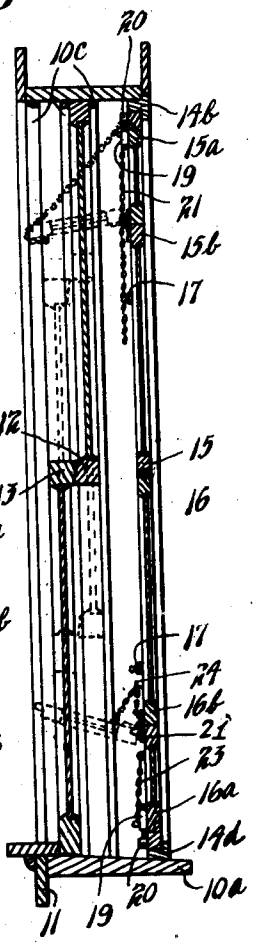


Fig. 6.

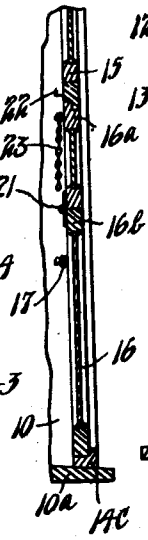


Fig. 3.

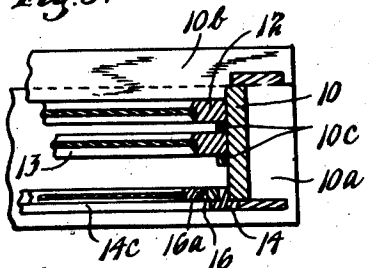


Fig. 4.

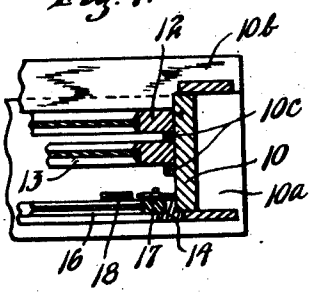
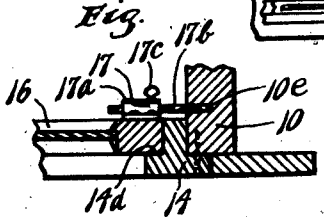


Fig.



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UNITED STATES PATENT OFFICE.

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STORM WINDOW.

Application filed February 7, 1927. Serial No. 166,430.

This invention relates to a window and screen structure and particularly to a structure of storm window. As is well known, storm windows are now used in the colder portions of the country, and one common form of storm window is a sash which is usually placed in the window frame at the outer side thereof, and is of a size to cover the entire frame. Such storm windows are customarily put up in the fall and taken down in the spring and it has been the common procedure to place the storm windows in position from the outside of the building, the same being held by buttons or other fastening means. As the storm windows are used on the upper as well as the lower stories, it is quite a task to manipulate the same and position them properly, especially if a wind be blowing.

It is an object of this invention, therefore, to provide a storm window of such structure that the same can be placed in position from the interior of the building and securely fastened in place in the window frame.

It is another object of the invention to provide a storm window of such structure that it may be placed in position from the interior of the building and which also has provision for ventilating the building without moving the entire storm window.

It is more specifically an object of the invention to provide a storm window structure comprising upper and lower sash which may be placed in position from the interior of the building, each of which has a hinged section which may be swung open to provide ventilation.

These and other objects and advantages of the invention will be fully set forth in the following description made in connection with the accompanying drawings, in which like reference characters refer to similar parts throughout the several views and in which:—

Fig. 1 is a view in front elevation as seen from the exterior of the windows;

Fig. 2 is a vertical section taken on line 2—2 of Fig. 1; as indicated by the arrows, certain parts being shown in different positions in dotted lines;

Fig. 3 is a horizontal section taken on line 3—3 of Fig. 1, as indicated by the arrows;

Fig. 4 is a horizontal section taken on line 4—4 of Fig. 1, as indicated by the arrows; and

Fig. 5 is a partial view similar to Fig. 4, shown on an enlarged scale.

Fig. 6 is a partial vertical section similar to that shown in Fig. 2, illustrating a modification.

Referring to the drawings, a window casing or frame 10 of the usual construction is shown, having the usual side and top members and the lower outer sill 10^a. The inside sill 10^b is shown as is the inside stile strip 11. The frame is provided at its inner side with the beads or parting strips 10^c which form the usual guideways for the sliding upper sash 12 and the lower sash 13.

In accordance with the present invention, the window frame is provided with grooves or rabbetted strips 14 at the outer sides thereof, between which extend the top strips 14^b and the bottom strips 14^c. The strips are each provided with the alining right angle groove or rabbet 14^d. A pair of storm window sash 15 and 16 are provided, forming respectively the upper and lower sash, and these are constructed and arranged to fit against the strips 14, 14^b and 14^c and to fit in the grooves or rabbets 14^d. The sash 16 at its bottom side is also shown as rabbetted at 16^a to fit within the strip 14^c. The frame 16 is shown as having the pointed ridge along its top surface fitting into a corresponding V-shaped groove in the bottom of the upper sash 15. The sash frames 15 and 16 fit outwardly against the strips 14, 14^b and 14^c and are held from inward movement by catches 17. While these catches may be of any desired form, in the embodiment of the invention illustrated they are shown as comprising small bearings 17^a and bolts 17^b slidable therein, said bolts having thereon the handle pieces 17^c. The bolts 17^b are adapted to enter holes 10^c formed in the side members of the window casing. The upper sash frame 15 has disposed therein at its upper end a swinging section 15^a connected to a cross bar 15^b of said frame by the hinges 18. The section 15^a is held in closed position by the small catch member 19 secured to its upper side. While the catch member 19 may be of any desired form, in the embodiment of the invention illustrated it is shown as of the same type as the catch 17. The bolt member 19^a of the catch 19, however, is adapted to enter a keeper 20 carried on the

top of the frame 15. Suitable means are provided for holding the swinging section 15^a in different open positions, and while various means might be used for this purpose, in the embodiment of the invention illustrated, the section 15^a is shown as provided with a chain 21 adapted to have various links thereof engaged over a hook 22 secured in the upper portion of the frame 15. The section 15^a has a glass panel 15^c therein. The lower sash frame 16 also has the swinging section 16^a at its lower portion, pivoted to the cross bar 16^b by the hinges 21, said section 16^a being adapted to be held in closed position by the catch member 19 similar to the catch member 19 on the section 15^a, and which also co-operates with a keeper 20 carried on the lower portion of sash frame 16. Suitable means are also provided for holding the swinging section 16^a in different open positions and while various means might be used for this purpose, in the embodiment of the invention illustrated a short chain 23 is secured to a side of said section adapted to have various links thereof engaged over a hook member 24 carried in the cross bar 16^b.

The section 16^a can be held as stated above, in various open positions, by manipulating the chain 23. The desired ventilation can thus be obtained through the lower sash without moving or disturbing the storm window sash frame 16. In like manner, the upper inner sash 12 can be lowered as indicated in dotted lines in Fig. 2 and the section 15^a swung inwardly, which section can be held in different positions by manipulating the chain 21. The desired ventilation is thus obtained through the top of the upper sash. Obviously both the sections 15^a and 16^a may be opened at the same time if desired. It is thus not necessary to disturb or move either of the sash frames 15 or 16 in order to secure ventilation for the frame.

By omitting the beveled or grooved arrangement at the meeting line of frames 15 and 16 and making the bottom of frame 16 in one plane as shown in Fig. 6, the sash 16 could be inverted if desired so that the swinging section 16^a would be at the upper portion thereof.

It will be noted that the inner side of the strips 14, 14^b and 14^c are within the inner lines of the parting strips or beads 10^c. When it is desired to place the storm windows 15 and 16 in position, the lower sash 13 will be raised to its highest position. The sash 16 can then be passed through the opening left by the sash 13 and can be fitted outwardly against the strips 14^a and 14^c. The catches 17 will then be moved to position to hold the frame 16 in place. The upper sash 12 is then lowered to its lowest position and the storm window 15 can then be inserted through the opening left by this sash. The window 15 is placed downward on top of the window 16 and then moved outwardly against the strips 14^a and 14^b and the catches 17 moved to hold the window in place. The storm windows are now tightly and securely in position and as described, they are positioned without having to work from or at the exterior of the building. When it is desired to ventilate, the lower sash 13 can be raised and the section 16^a swung inwardly as much as desired. Frames similar to frames 15 and 16 could obviously be used to carry screens for use in the summer season, which frames could be positioned similarly to frames 15 and 16.

From the above description it is seen that applicant has provided a very simple and efficient structure of storm window. The storm window sash can easily and quickly be placed in position from the interior of the building and securely held in place. The desired ventilation can be obtained without bodily moving the sash and by a comparatively small opening of the inside sash. The storm windows are easily made and the installation thereof requires very little change in the standard window frame.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the parts, without departing from the scope of applicant's invention, which, generally stated, consists in a device capable of carrying out the objects above set forth, in the novel parts and combinations of parts disclosed and defined in the appended claims.

What is claimed is:—

1. A storm window structure comprising a two part sash frame, means on the window casing against which said frame abuts, said sash frame extending throughout substantially the whole area of the opening in said casing, means at the inside of said frame for holding the same in position, said frame having a smaller section therein hingedly mounted in each of said parts for free swinging movement.

2. In combination with a window casing and the usual upper and lower sash therein, of a storm window structure comprising upper and lower sash in engagement at their upper and lower edges respectively, means on the window casing outside of said first mentioned sash against which said frames abut, means at the inner side of said frames adapted to engage the window casing to hold the said frames in position, each of said frames comprising a freely swingable hingedly mounted auxiliary frame hinged for inwardly swinging movement and means independent of said first mentioned sash for holding said auxiliary frame in different open positions.

3. In combination with a window casing and the usual upper and lower slidable sash

therein, of a storm window comprising upper and lower sash frames disposed substantially in the same plane and being in engagement at their adjacent edges, means on the window casing for preventing outward movement of said frames, means adapted to engage the window casing and said sash frames for preventing inward movement of said frames, the upper of said frames having therein a hingedly mounted auxiliary frame at its top portion adapted to swing inwardly about a horizontal axis adjacent its top, a flexible member secured to said auxiliary frame for holding it in different open positions, said lower frame having therein a hingedly mounted auxiliary frame adjacent its lower end adapted to swing inwardly about a horizontal axis adjacent its bottom and flexible means for holding said last mentioned auxiliary frame in various open positions whereby ventilation from the exterior may be had by said auxiliary frames at the top or bottom of the casing and by raising or lowering respectively said slidable sash.

In testimony whereof I affix my signature.

MARCHETTA FRITSCHE STRASSER.