C. SINGER.

WINDOW CONSTRUCTION.

APPLICATION FILED DEC. 14, 1914.

1,184,582.

Patented May 23, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

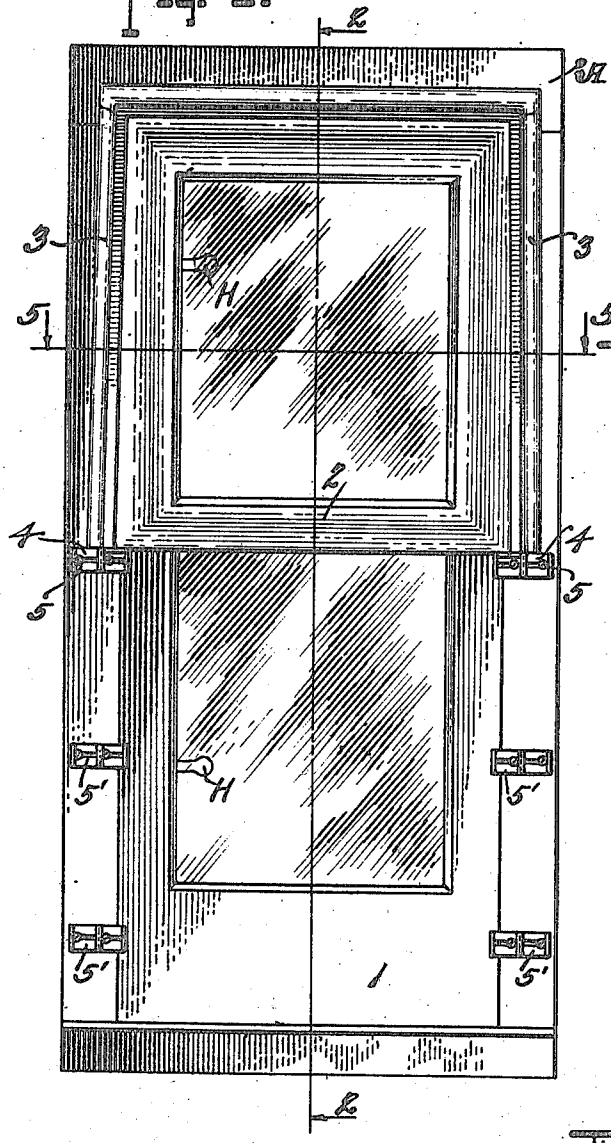


Fig.7.

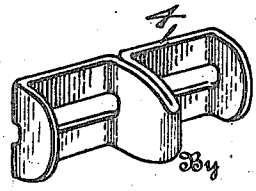
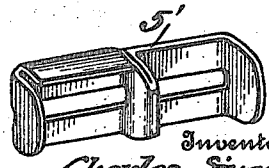


Fig.6



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2 SHEETS—SHEET 2.

Fig. 3.

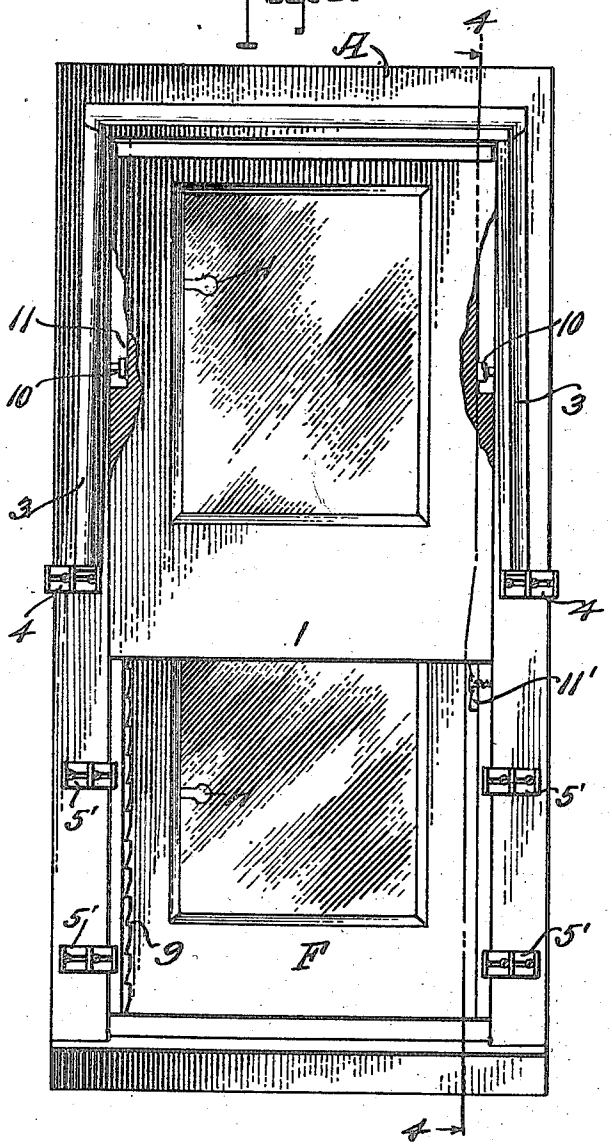


Fig. 4.

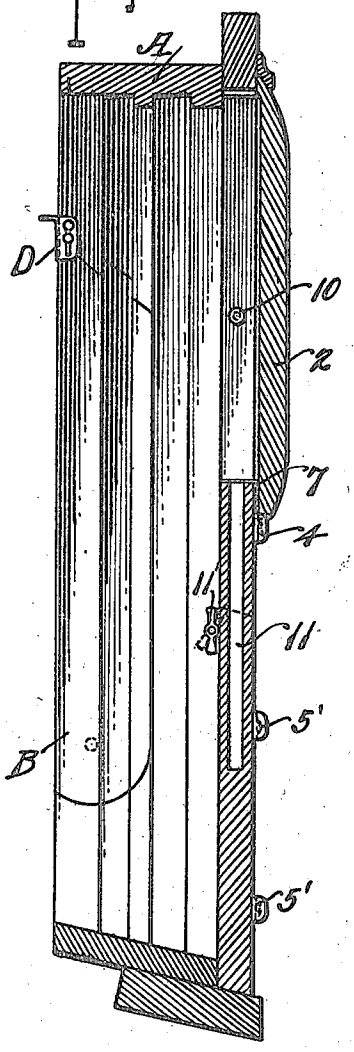
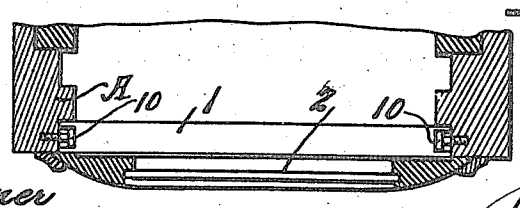


Fig. 5.



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WINDOW CONSTRUCTION.

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To all whom it may concern:

Be it known that I, CHARLES SINGER, a citizen of the United States, residing at Winfred, in the county of Lake and State of South Dakota, have invented certain new and useful Improvements in Window Constructions, of which the following is a specification.

My present invention relates to improvements in window constructions and in particular to the type involving storm sashes.

My main object is to provide a storm window which consists of coöperating sections or double sashes designed especially with a view to facilitating the handling of the window in removing the same or operating its members when in use to either close or open them for ventilating purposes. In other words, the storm window members of my device are slidable relative to each other in a similar manner to the ordinary window sashes but are so arranged that they may be disconnected from the window frame quickly and from either the interior or exterior of the window frame.

The above and other objects as may hereinafter appear are attained by the novel construction, combination, and arrangement of parts to be hereinafter specifically described and claimed.

Reference will now be had to the accompanying drawings forming a part of this specification, wherein:

Figure 1 is an elevation of a window construction forming the embodiment of my invention. Fig. 2 is a vertical sectional view on the line 2—2 of Fig. 1 and showing more clearly the action of the swinging frame for an interior window sash of this device. Fig. 3 is a front elevation of the window construction with the upper storm window section removed and the lower coöperating section in elevated position, parts being broken away to show the interlocking guide projections for the last-mentioned sash. Fig. 4 is a vertical sectional view taken on the plane indicated by the line 4—4 of Fig. 3, but showing the lower storm window sash lowered and the upper storm window sash replaced. Fig. 5 is a horizontal sectional view on the line 5—5 of Fig. 1; and Figs. 6 and 7 are perspective views of the slidable catches or buttons employed in this device.

Throughout the following detailed description, and on the several figures of the drawings, similar parts are referred to by like reference characters.

Referring to the drawings and specifically describing the embodiment of my invention, A denotes the main body of a window frame which may be of the usual type and form, but which preferably consists of a swinging frame comprising the pivoted side members B having pivotal connection with the main frame at C. These side members B have their upper edge beveled upwardly and said edge inclined downwardly so that when swung into normal position the swinging frame is held tightly against the sides of the main frame and may then be locked in such position by means of sliding catches D on the edge of the main frame A. Slidably mounted in the frame A is the upper window sash E and the lower window sash F which have at their meeting ends interlocking metal strips G, G′ constituting weather strips of a known type. It will be observed that the interior window sashes E and F may be easily removed from their sliding positions as most clearly shown in Fig. 2 wherein the lower sash is raised above its lowered position until it is disposed in the swinging frame B which may then be swung outwardly to enable the extraction of this lower sash therefrom. The upper sash E may then be displaced in an obvious manner by lowering the same to a point where it may be withdrawn, the parting strip for guiding the sashes being carried by the swinging frame B for this purpose. These sashes E and F are held at adjusted positions by means of spring plungers H.

The storm window elements of my window construction comprise the lower sash member 1 and the upper sash or section 2, the latter being disposed between the guide strips 3 attached to the exterior surface of the frame at its upper portion. It will be

observed particularly by reference to Fig. 1 that these guide strips converge toward the upper portion of the frame and the upper sash 2 is likewise of converging form on its side edges so as to seat easily in place between said guide strips 3. This is a special feature of my construction since it eliminates any likelihood of binding of the upper storm window sash and facilitates the removal of this sash as will hereinafter more fully appear. The upper storm window sash 2 is held in elevated position normally by means of sliding catches 4 which are slotted and attached to the main frame A by screws 5 or similar fastening members. These sliding catches are best shown in Figs. 6 and 7 and comprise metal strips bent to form supporting flanges and finger pieces for manipulating the same and other similar sliding buttons 5′ are attached to the frame A at intervals adjacent to the edge of the lower storm window sash 1 and these catches 4 and 5′ guide the lower sash in its sliding action with respect to the upper sash 2 as well as support the latter in its elevated position, hereinbefore mentioned. The meeting ends of the storm window sashes 1 and 2 are also provided with interlocking metal strips 7 to perform the usual weather strip function and it will be obvious from this description that a very adequate storm protection is afforded by the arrangement. The lower sash 1 as hereinbefore premised, may be raised and locked at adjusted positions by means of a pivoted latch 8 which engages with a serrated strip 9 secured to the side of the frame A, and the frame is provided at each side and adjacent to its upper portion with projections 10 which operate in grooves 11 formed in the lower sash 1 when said sash is raised. This interlocking action prevents the lower sash from accidental displacement when being raised and particularly when the upper sash 2 is removed.

One of the essential characteristics of this construction is the utilization of sectional storm window members that enables an operator to remove them from the interior of the house to which they may be attached. This is accomplished by raising the lower storm window sash after opening the interior window sashes and holding it at its extreme upper position by engaging the pivoted button member 11′ beneath its edge. The sliding members 4 are then moved outwardly from beneath the lower edge of the upper sash 2 which will then drop downwardly and when the upper portion reaches a point intermediate the length of the guide strips 3 where the distance between said strips is equal to the upper edge of the sash 2 it will be possible to entirely remove said sash from its guide members, and carry said sash through the window frame. By moving the sliding members 5′ outwardly and disengaging the locking member 11′ from the lower sash 1, this member may be lowered until the projections 10 are disengaged from the slots 11 whereupon said sash may be carried through the window frame.

The window construction of this invention is of a very simple character and may be cheaply manufactured because it does not radically depart from an ordinary window construction in its essential characteristics, and the facility with which its elements may be manipulated enhances its commercial value. It is particularly pointed out that instead of a storm window the sashes 1 and 2, which have been described, might equally as well constitute screens so that the construction may be considered either a storm window construction or a sectional screen construction depending upon what the sashes are provided with, that is whether glass or screening.

Having thus described my invention, what I claim as new is:

1. In combination, a window frame, a storm window therefor comprising a relatively stationary section and a movable section, exterior guide strips connected to the frame for coöperation with the stationary section normally preventing outward displacement thereof, and a plurality of catch members connected at intervals to the face of the frame adjacent to the movable section for guiding normal movement of the last mentioned section and preventing outward displacement thereof when the stationary section is displaced, certain of said catch members being arranged to engage and hold the stationary section in its normal position aforesaid.

2. In combination, a window frame, a storm window therefor comprising a relatively stationary section and a movable section, exterior guide strips connected to the frame for coöperation with the stationary section normally preventing outward displacement thereof, a plurality of catch members connected to the frame adjacent to the movable section for guiding normal movement of the last mentioned section and slidable laterally for disengagement from the movable section to permit of outward displacement of the last mentioned section, certain of said catch members being disposed adjacent the lower edge of the stationary section for engaging the latter to hold the same in its normal position coöperative with the guide strips aforesaid, interlocking connections at the meeting edges of the stationary and movable sections preventing

accidental displacement of said movable section when the slidable catches are disengaged therefrom, and projections on the frame adapted to interlock with the edges of the movable section when the latter is in raised position for displacing the stationary section whereby to coact with certain of the slidable catches to hold the movable section during the displacement of the stationary section just mentioned.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES SINGER.

Witnesses:
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M. A. CHAPIN.