

M. I. HANSEN.
STORM WINDOW.

APPLICATION FILED MAY 2, 1910.

Patented Feb. 28, 1911.

3 SHEETS—SHEET 1.

985,740.



Fig. 1.

Witnesses

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3 SHEETS—SHEET 2.

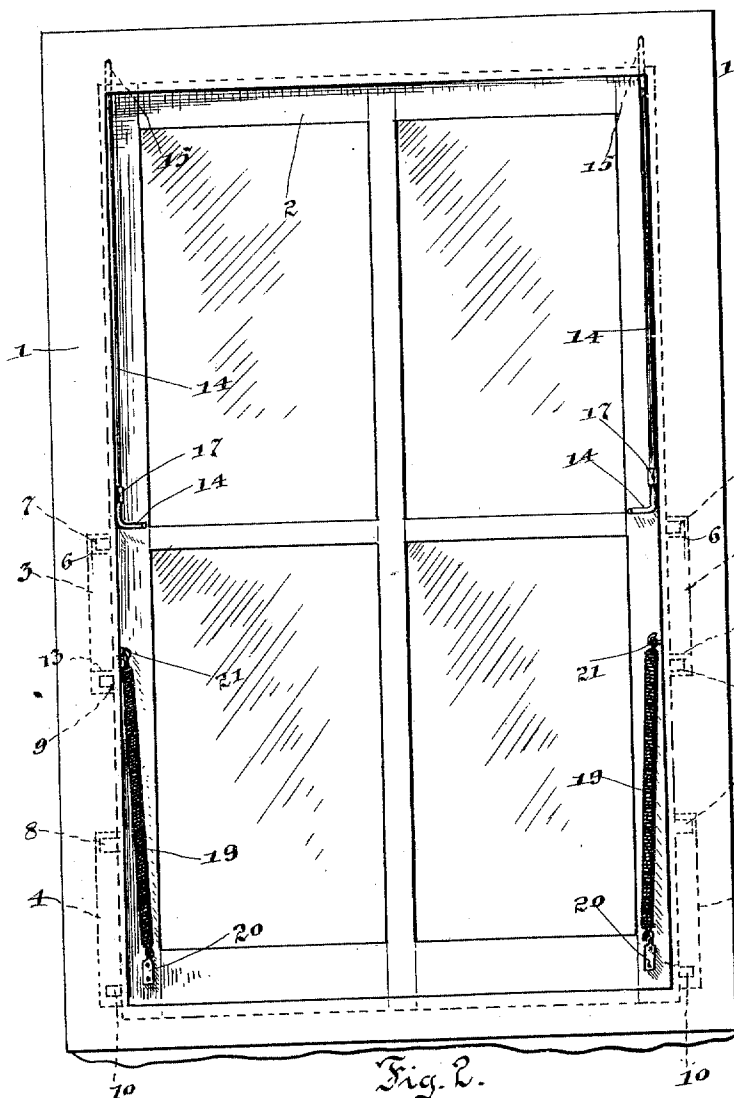


Fig. 2.

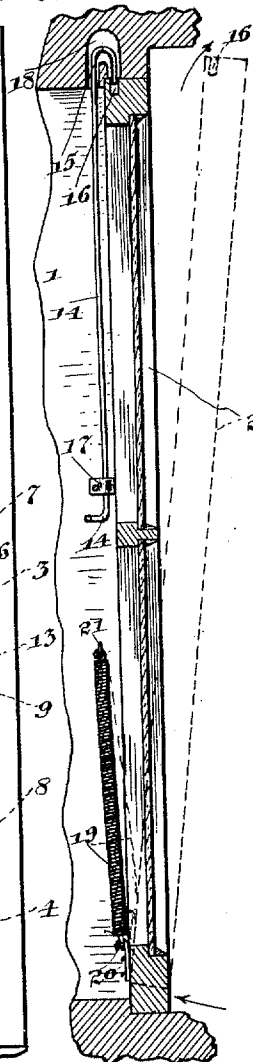


Fig. 3.

Witnesses

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3 SHEETS—SHEET 3.

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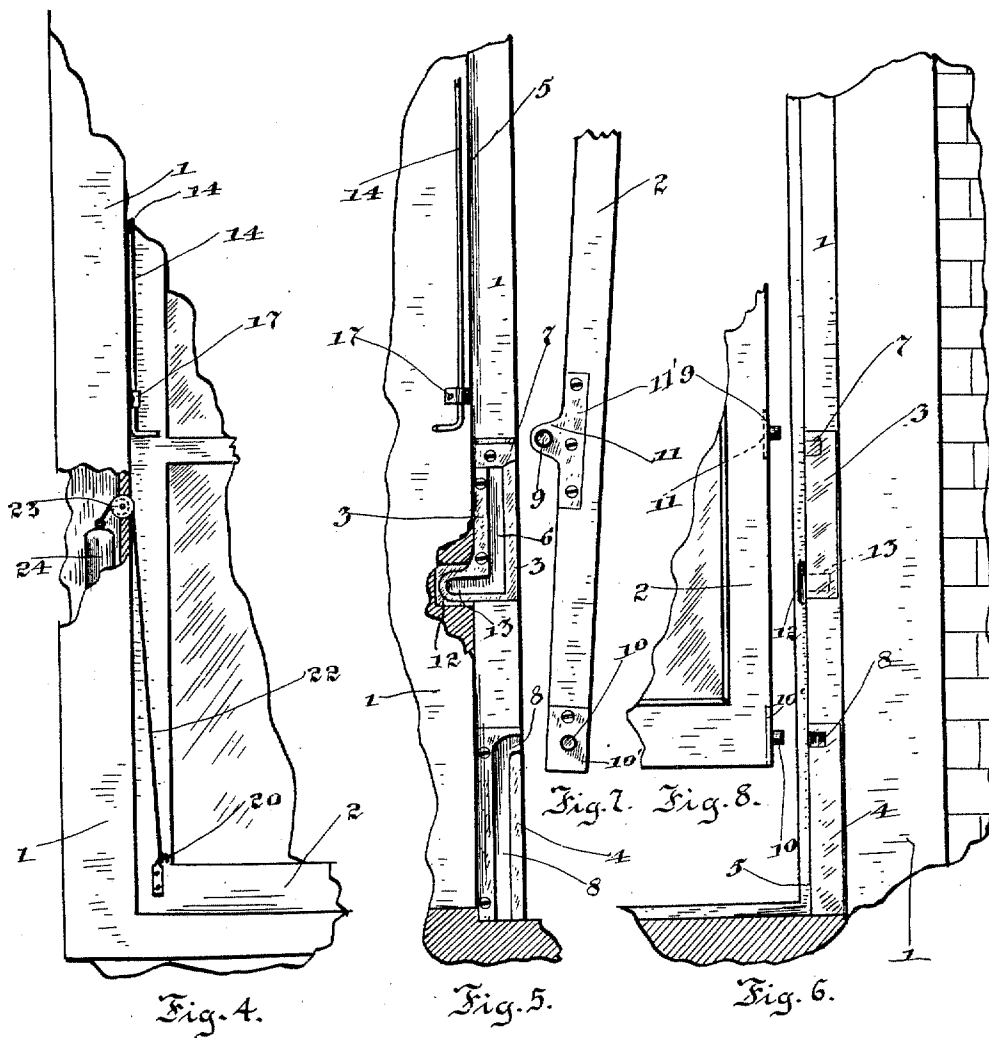


Fig. 4.

Fig. 5.

Fig. 6.

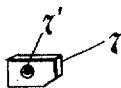


Fig. 9.

Witnesses

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UNITED STATES PATENT OFFICE.

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STORM-WINDOW.

985,740.

Specification of Letters Patent.

Patented Feb. 28, 1911.

Application filed May 2, 1910. Serial No. 558,965.

To all whom it may concern:

Be it known that I, MONS I. HANSEN, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Storm-Windows, of which the following is a specification.

My invention relates to improvements in storm windows and has for its object the production of an improved storm window which shall be easily manipulated and efficient in use, and readily removed for safe storage.

A further object of my invention is to provide a storm window which shall be simple of construction, inexpensive to manufacture and of a neat and trim appearance.

Other objects will appear hereinafter.

With these objects in view my invention consists in the novel construction and arrangement of parts which will be hereinafter fully described and more particularly pointed out in the appended claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which—

Figure 1 is an outside perspective view of my improved storm window in its preferred form, Fig. 2 is an inside view showing the window closed, Fig. 3 is a vertical section showing the window closed and an inclined open position of the same indicated by dotted lines, Fig. 4 is an inside elevation showing a modification of my invention, Fig. 5 is a sectional elevation showing the window frame rabbet, Fig. 6 is an outside view also showing the window frame rabbet, Fig. 7 is a view of a portion of a lateral edge of the window sash, Fig. 8 is a view of a portion of the outside of the window sash, Fig. 9 is a view of the plate closing the slots 6.

The preferred form of my invention as illustrated in the drawings comprises a window frame 1 and a window sash 2 detachably secured therein. Mounted in vertical alinement in the frame 1 are slotted members 3 and 4, the same being secured to the rabbet 5 of the frame as indicated in Fig. 5. The slots 6 of the members 3 are vertically disposed and the openings of the same are adapted to be closed by means of plates 7 which serve a purpose to be described hereinafter. The vertical slots 8 of the members 4 are in vertical alinement with the

slots 6 and their upper ends are open as shown in the several figures. Outwardly projecting studs 9 and 10 are provided on the lateral edges of the sash 2 and the same are adapted to be inserted in the slots 6 and 8, respectively. The studs 9 are offset from the plane of the sash 2, the same being integral with the lugs 11 which project inwardly from the plates 11'. To make clearance for the lugs 11 slots 12 are formed in the rabbets 5, as clearly shown in Figs. 5 and 6. At the lower ends of the slots 6 inwardly extending horizontal slots 13 are formed to make clearance for the studs 9.

In order to insert the sash 2 in the window frame 1 the same is thrust outwardly through said frame when the lower ends of the sash are so placed that the studs 10 are in registering position with the upper ends of the slots 8. Then the sash is drawn inwardly and slightly lowered, when the studs 9 will be in registering position with the upper ends of the slots 6. Then the sash 2 is allowed to fall, the same being guided by the studs 9 and 10 which slide downwardly in the slots 6 and 8, respectively. When the sash 2 has reached its lowest position the studs 9 will register with the slots 13 when the sash may be fully closed, said slots being provided to make clearance for the studs 9, as aforesaid.

The object of the offset studs 9 is to cause the sash 2 to assume the inclined or dotted line position as shown in Fig. 3 when air will circulate freely by the same as indicated by arrows for ventilating purposes.

In order to lock the sash 2 when in the fully closed position a rod 14 having a U-shaped end 15 is provided, said end 15 being adapted to enter a recess 16 provided at the upper end of said sash. Rod 14 is guided by means of a plate 17 and the recess 18 formed in the frame 1, said rod being adapted to have vertical movement only.

In order that sash 2 may be raised easily a counterbalancing tension helical spring 19 is provided and attached to the sash 2 by means of a hook 20 and to the frame 1 by means of a hook 21. The plates 7 which are provided with the screw holes 7' are secured in position at the upper end of the slots 6 after the studs 9 are inserted in said slots, hence said studs will be retained in said slot and not be forced out of the same by the action of the spring 19.

The modification of my invention shown

in Fig. 4 comprises means for raising the sash 2 which may be substituted for the spring 19. This means comprises a cord 22 which is attached to a hook 20 and passes
 5 over a pulley 23 which is rotatably mounted in the frame 1 as indicated in Fig. 4. A suitable weight 24 is attached to the other end of the cord 22 to counterbalance the weight of the sash 2.

10 While I have shown what I deem to be the preferred form of my improved storm window I do not wish to be limited thereto as there might be various changes made in the details of construction and arrangement of
 15 parts described, and hence I desire to avail myself of such changes and modifications as fairly fall within the spirit and scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a storm window, the combination with the frame and sash thereof, of oppositely disposed plates secured to the central
 25 portions of the sides of said frame, each of said plates being provided with a vertical slot and a horizontally inwardly extending slot at the bottom of said vertical slot, the slots in said plates corresponding with each
 30 other in position; oppositely disposed plates secured to the bottom portions of the sides of said frame, each of said plates being provided with vertically disposed slots; studs
 35 of said sash and operating in said central slots, said studs being offset inwardly from the plane of said sash; studs secured to the bottom portions of said sash and operating in said bottom slots; and flexible means arranged to hold said sash in elevated and tilted
 40 position, substantially as described.

2. In a storm window, the combination with the frame and sash thereof, of oppositely disposed plates secured to the central
 45 portions of the sides of said frame, each of said plates being provided with a vertical

slot and a horizontally inwardly extending slot at the bottom of said vertical slot, the slots in said plates corresponding with each other in position; removable plates for closing the upper ends of said slots; oppositely disposed plates secured to the bottom portions of the sides of said frame, each of said plates being provided with vertically disposed slots; studs secured to the central portions of the sides of said sash and operating in said central slots, said studs being offset inwardly from the plane of said sash; studs secured to the bottom portions of said sash and operating in said bottom slots; and
 55 60 flexible means arranged to hold said sash in elevated and tilted positions, substantially as described.

3. In a storm window, the combination with the frame and sash thereof, of oppositely disposed plates secured to the central portions of the sides of said frame, each of said plates being provided with a vertical slot and a horizontally inwardly extending slot at the bottom of said vertical slot, the slots in said plates corresponding with each other in position; oppositely disposed plates secured to the bottom portions of the sides of said frame, each of said plates being provided with vertically disposed slots; studs
 70 75 secured to the central portions of the sides of said sash and operating in said central slots, said studs being offset inwardly from the plane of said sash; studs secured to the bottom portions of the sides of said sash and operating in said bottom slots; yieldable means arranged to hold said sash in elevated and tilted position; and a lock for holding said sash in closed position, substantially as described.
 80 85

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MONS I. HANSEN.

Witnesses:

JANET E. HOGAN,

JOSHUA R. H. POTTS.