Sept. 8, 1936. P. A. RISSMANN 2,054,003

STORM WINDOW

Filed Jan. 21, 1935 2 Sheets-Sheet 1

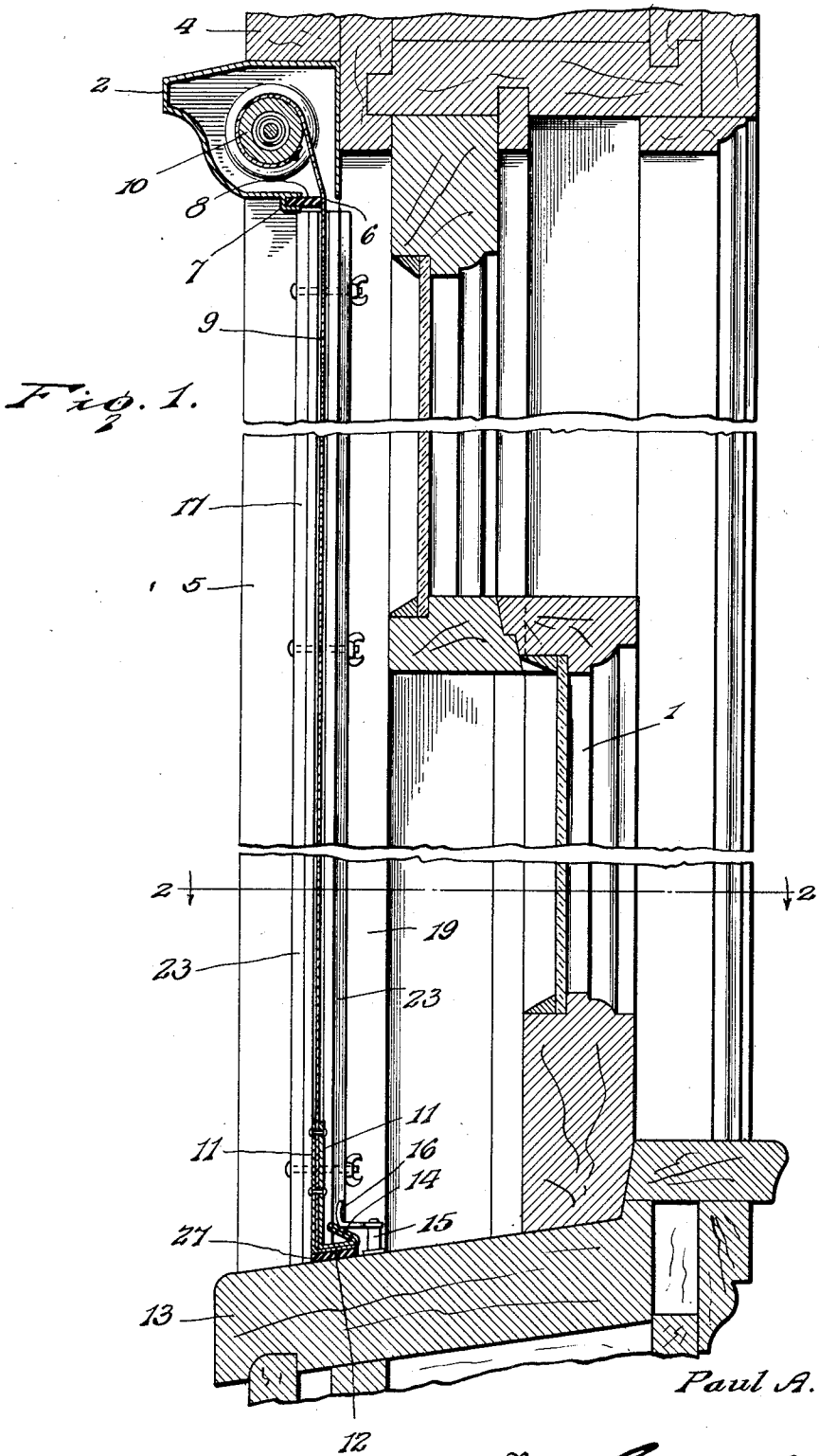


Fig. 1.

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Filed Jan. 21, 1935 2 Sheets-Sheet 2

Fig. 2.

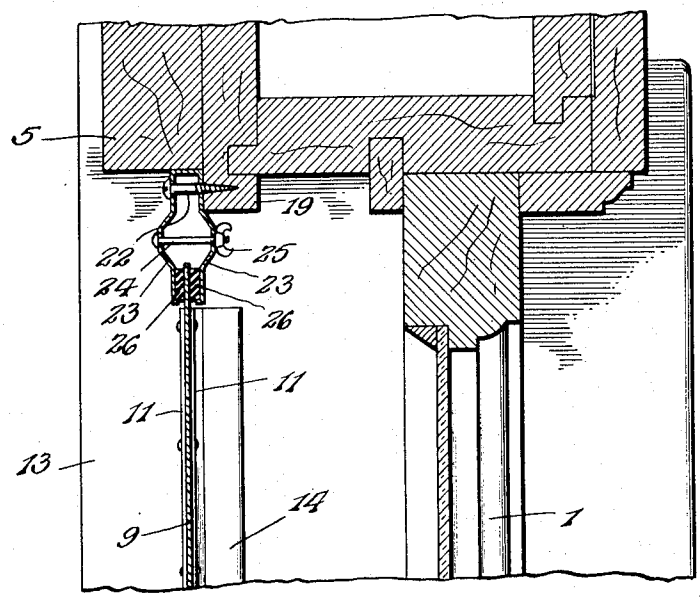


Fig. 3.

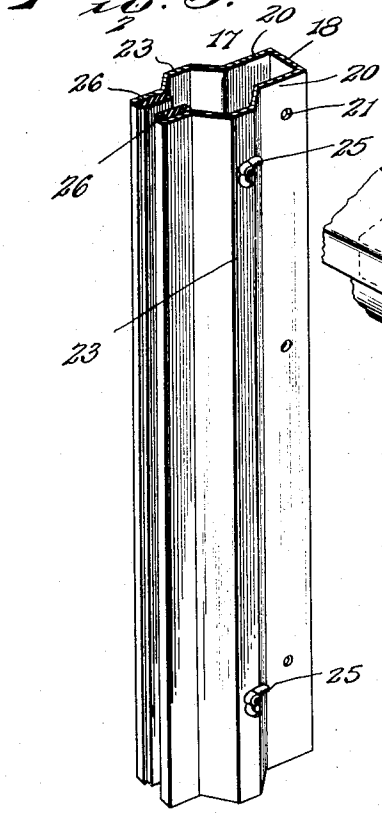


Fig. 4.

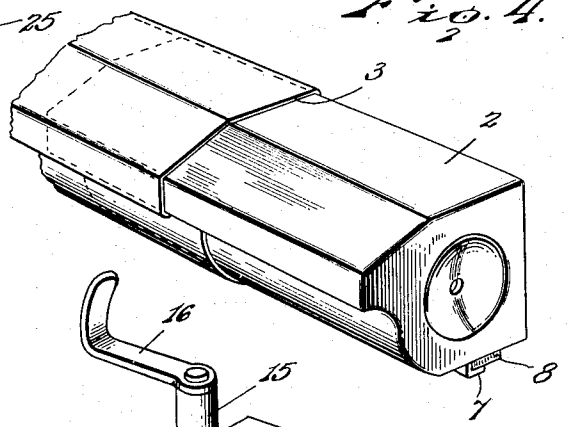


Fig. 5.

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UNITED STATES PATENT OFFICE

2,054,003

STORM WINDOW

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Application January 21, 1935, Serial No. 2,784

4 Claims. (Cl. 20—40)

This invention relates to storm windows and has for its object the provision of a simple and inexpensive structure whereby a transparent weatherproof member may be placed in position at either the outer side or the inner side of any window and prevent the entrance of strong air currents and drafts. It is an object of the invention to provide a flexible transparent sheet or pane which may be rolled into compact form within a housing or drawn out from the housing so as to cover the entire expanse of a window at will, and it is also an object to provide means at the sides, top and bottom of the transparent member to prevent the passage of outside cold air past the structure to find entrance into the building or room. These stated objects, and other objects which will appear in the course of the following description, are attained in such a device as is illustrated in the accompanying drawings, and the invention resides in certain novel features which will be particularly defined in the appended claims.

In the drawings:

Figure 1 is a vertical section through a window having the storm window or guard applied thereto.

Figure 2 is a horizontal section on the line 2—2 of Figure 1.

Figure 3 is an enlarged perspective view, with parts in section, of the guides for the curtain or transparent member.

Figure 4 is a detail perspective view of the upper housing.

Figure 5 is a detail perspective view of the lock or retainer which holds the storm window in its extended position.

The drawings show a double sash window 1 of the usual construction. In carrying out the present invention, there is provided a housing 2, preferably constructed of sections, one of which fits slidably within the other, as shown at 3 in Figure 4. This housing is constructed of copper or other non-corrosive metal and is generally secured to the outer side of the window frame, although it may be secured upon the inner side of the frame if so desired. The housing is located so that it bears against the head jamb 4 and the side jamb 5 and may be secured thereto in any preferred manner. The bottom of the housing terminates short of the back wall thereof so as to provide an opening 6 through which the storm window or curtain may pass when it is withdrawn for use. On the under side of the bottom of the housing is formed a retaining lip or flange 7 in which is fitted a strip 8 of rubber or felt which bears against the outer face of the curtain or transparent sheet so that the access of cold air into the housing and thence into the building through the space at the rear of the sheet will be prevented. The curtain or transparent sheet 9 may be of any material now on the market or which may be later produced having flexibility and transparency and it will be of proper dimensions to entirely cover the window opening when it is extended, as shown in Figure 1. The upper end of the transparent sheet or curtain is secured to a spring roller 10 which is mounted in the housing 2 and tends constantly to withdraw the curtain and wind the same, as will be understood. The lower end portion of the curtain or transparent sheet is fitted between the marginal portions of a metal plate 11 which clamps the sheet and holds the lower end portion of the same smooth and extended. From the side marginal portions 11, the plate is bent inwardly and upwardly, as shown at 12, at an angle corresponding to the incline of the window sill 13. The portion 12 of the clamping plate is carried inwardly a short distance and then bent upwardly and inwardly to form the inclined lip or flange 14, as clearly shown in Figure 1, it being noted that the plate is doubled medially upon itself and then bent into the desired shape so that the portions 12 and 14 will be sufficiently rigid and strong to withstand the effects of storms and other conditions of use. A latch post or barrel 15 is secured upon the window sill, and mounted in this barrel or on the post is a latch 16 which is adapted to be turned over the flange or retaining lip 14 and thereby hold the curtain in its extended position against the force of the spring roller. The side edges of the curtain or transparent sheet fit within and are guided by tracks 17 which are secured to the sides of the window frame and each of which consists of a single sheet metal member bent to form a back wall 18 which will fit against the side jamb 5 and against the outer bead 19 of the window frame. Projecting from the back wall 18 at a right angle thereto are side walls 20 having openings 21 therethrough at intervals to receive fastening bolts 22 which are inserted through said side walls into the bead 19 or other adjacent portion of the window frame so as to secure the track firmly in place. The side walls are extended beyond the bead and are expanded laterally, as shown at 23, so as to form more or less resilient jaws which are held together by retaining bolts 24 inserted therethrough and equipped at their inner ends with wing nuts 25 which are turned home against the innermost

jaw and thereby hold them toward each other. The free edge portions of the jaws are disposed in parallelism and on their inner sides carry strips 26 of rubber or felt which bear against the opposite faces of the sheet or curtain 9, as shown most clearly in Figure 2 so as to hold the side edges of the sheet smooth and also cut off the passage of air or wind currents around said edges. A rubber or felt strip 27 is also secured on the under side of the lower stop member 12, as shown clearly in Figure 1.

When the storm window is not to be used, the latch 16 is turned out of engagement with the retaining strip or flange 14 and the spring roller thereupon will withdraw the curtain into the housing 2, the upward winding movement of the curtain being arrested by the strip 14 impinging against the lower edge of the back wall of the housing in an obvious manner. The tracks terminate immediately adjacent the housing, as shown in Figure 1, so that in its retracted position the curtain will still have its side edges engaged in the tracks and when it is desired to again put the curtain in use it is not necessary to lose time endeavoring to properly enter the side portions thereof into the tracks. The retaining lip or stop flange 14 also serves as a handle whereby the end of the curtain may be easily grasped and the curtain drawn into its lower extended position. The device may be readily fitted to windows of various widths by reason of the telescopic construction of the housing and its use will avoid the inconvenience of having to remove a rigid window in the spring and replacing it at the beginning of winter. When the winter season is over the transparent curtain may be removed and a rolling screen substituted therefor so that the housing will be available at all seasons and the room or building supplied with the invention may be kept comfortable under all conditions. The storm window is exceedingly simple in construction and may be easily operated and readily installed at a slight expense.

Having thus described the invention, what is claimed as new is:

1. A storm window comprising a housing to be secured upon a window frame at the top of the window opening therein, a flexible transparent curtain mounted in the housing and adapted to be extended therefrom, means at the lower end of the window opening to hold the curtain extended thereover, tracks at the sides of the window opening comprising mating resilient jaws extending at opposite sides of the side edges of the curtain, cushioning strips on the opposed faces of the jaws to bear upon the side portions of the curtain, and means for tightening the jaws and clamping the curtain in a set position whereby leakage past the tracks will be prevented.

2. A storm window comprising a housing, a flexible transparent curtain mounted in the housing and adapted to be extended therefrom for closing an opening, means at the lower end of the opening for retaining the curtain extended, tracks at the sides of the opening, said tracks including side walls extended medially and reduced toward their free ends to provide mating resilient jaws, bolts inserted through the extended portions of the jaws and adapted for clamping the curtain in a set position, and cushioning strips on the opposite faces of the jaws for protecting said jaws and preventing leakage past the jaws and curtain into the opening.

3. In a storm window, a housing adapted to be secured upon a window frame, a flexible transparent curtain mounted in the housing and adapted to be projected therefrom, clamping plates secured to the opposing faces of the curtain at the free edge of the same, said plates being bent to extend laterally and being again bent upwardly and inwardly to define a stop flange having an inclined wall, and a latch mounted in the window frame and adapted to engage the inclined wall of the stop flange for retaining the transparent curtain in an operative position.

4. In a storm window, a housing to be secured upon a window frame at the top of the window opening therein, a flexible transparent curtain mounted in the housing and adapted to be extended therefrom, tracks carried at the sides of the window opening and comprising mating resilient jaws, and means carried by the tracks for clamping the jaws into engagement with an edge of the curtain whereby leakage past said jaws and curtain edge will be prevented.

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