Jan. 7, 1958 R. G. LOHR 2,818,918

COMBINATION SCREEN AND STORM WINDOW

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Fig. 1.

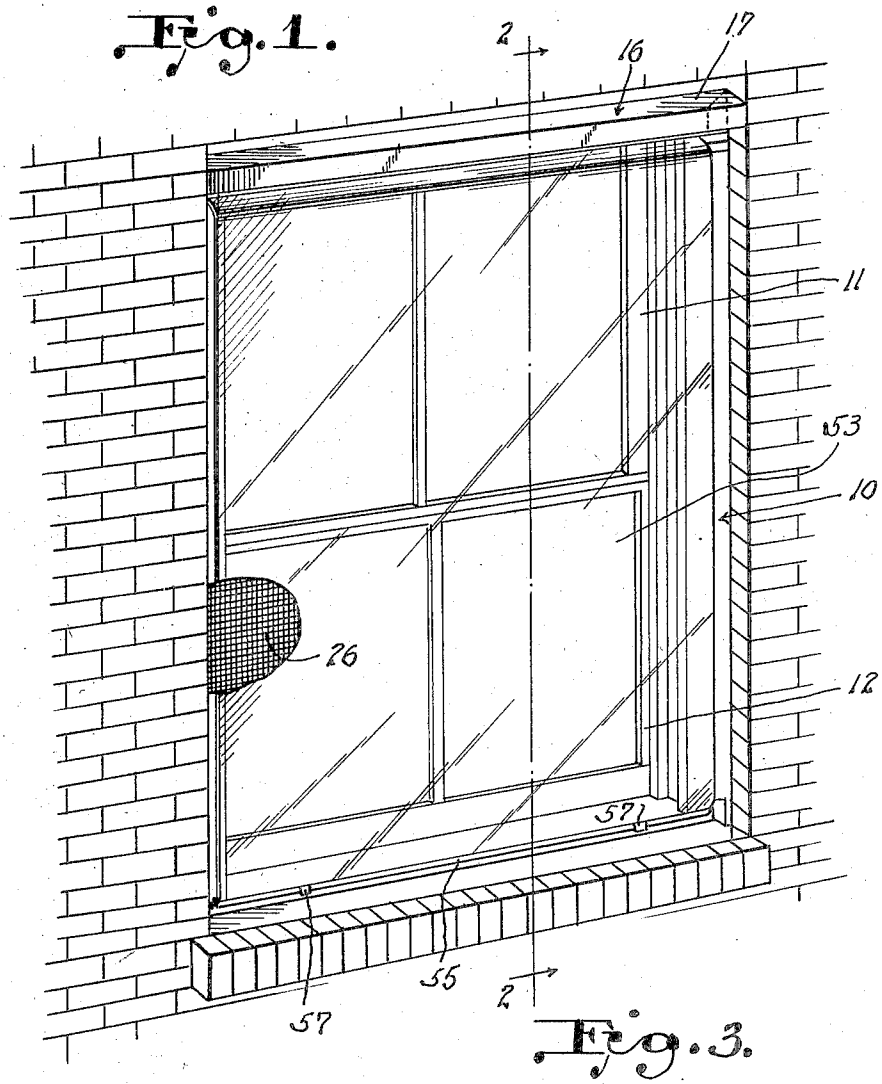
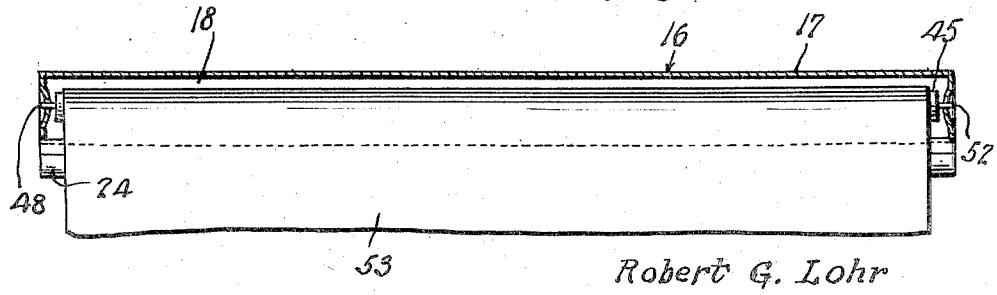


Fig. 3.



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Fig. 2.

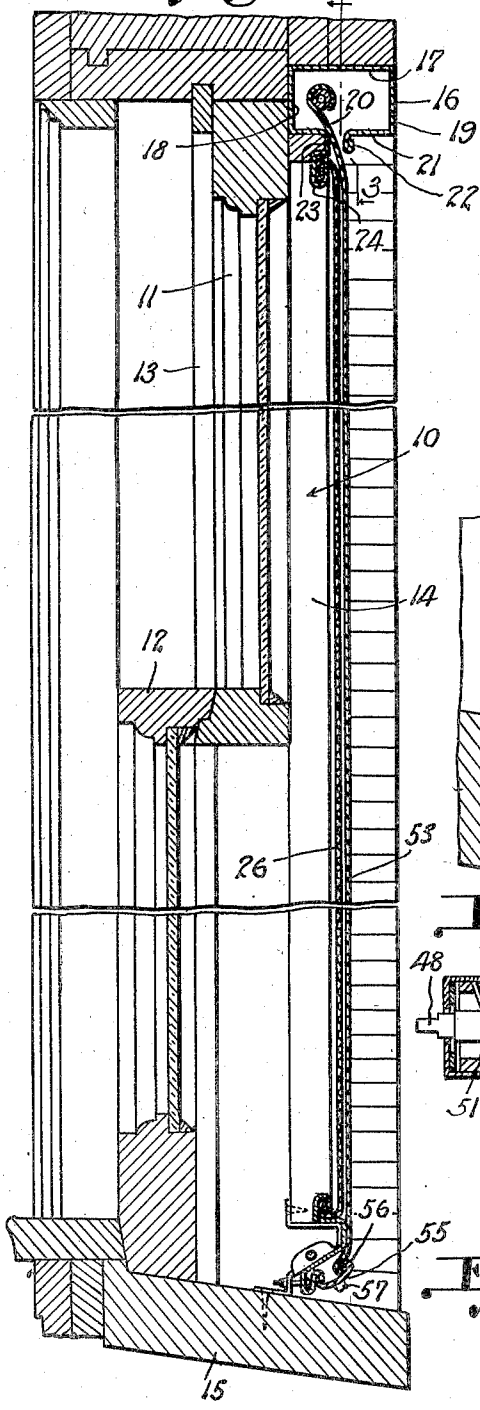


Fig. 4.

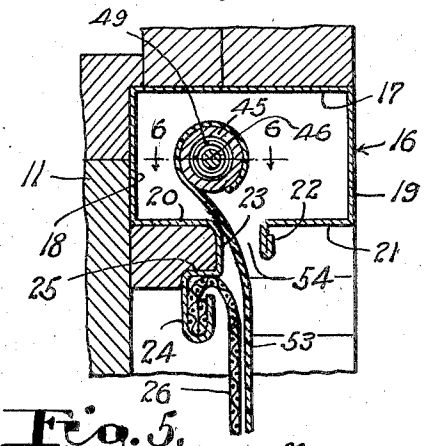


Fig. 5.

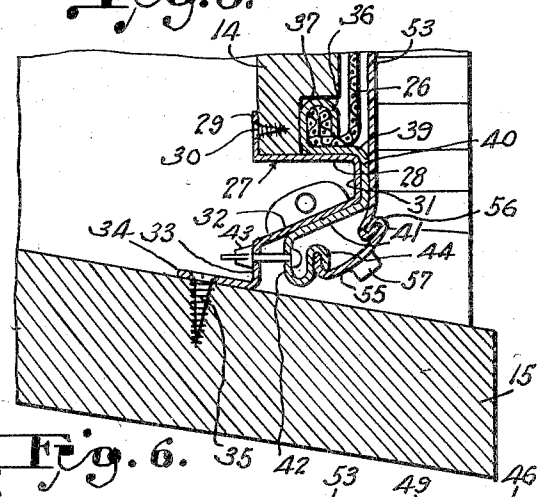


Fig. 6.

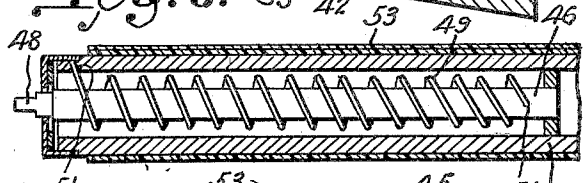
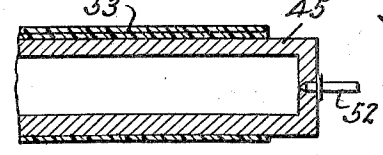


Fig. 7.



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COMBINATION SCREEN AND STORM WINDOW

Robert G. Lohr, Lexington, N. C.

Application June 26, 1956, Serial No. 593,883

1 Claim. (Cl. 160—23)

This invention relates to a combination screen and storm window construction.

An object of this invention is to provide in a window structure, a flexible transparent sheet and means supporting the sheet on the outer side of the windows.

Another object of this invention is to provide in a sliding window structure a means for securing a screen to the window frame, and for selectively securing a plastic storm panel on the outer side of the screen.

A further object of this invention is to provide an improved storm window panel wherein the panel is formed of a flexible transparent sheet carried by a spring tensioned roller, with a channel shaped bar secured to the free edge of the sheet, and a keeper secured to the bottom of the window frame for locking the sheet in window covering position.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, hereinbefore more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawings:

Figure 1 is a perspective view of a storm window assembly constructed according to an embodiment of this invention.

Fig. 2 is a vertical section partly broken away, taken on line 2—2 of Fig. 1.

Fig. 3 is a fragmentary sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is a fragmentary vertical section on an enlarged scale showing the upper portion of the device.

Fig. 5 is a fragmentary vertical section taken through the lower portion of the device.

Fig. 6 is a fragmentary horizontal section taken on line 6—6 of Fig. 4.

Fig. 7 is a fragmentary horizontal section similar to Fig. 6 showing the opposite end of the roller.

Referring to the drawings the numeral 10 designates generally a window frame structure having upper and lower sashes 11 and 12 slidable therein. The sashes 11 and 12 have disposed therebetween an intermediate stop 13 and an outer or blind stop 14 is secured to the frame 10 and is adapted to engage the outer side of the upper sash 11. The frame 10 also includes a sill 15 which is downwardly and outwardly inclined, as shown in Fig. 2.

In order to provide means for attaching a screen to the window frame 10, outside of the sashes 11 and 12, I have provided a horizontally disposed housing generally indicated at 16. This housing 16 includes an upper wall 17, an inner wall 18, an outer wall 19, and a pair of bottom wall members 20 and 21. The bottom wall 21 extends inwardly from the front wall 19 and has a depending flange 22 which is spaced outwardly from a depending flange 23 which projects downwardly from inner bottom

wall member 20. A substantially U-shaped holder 24 is formed integral with the flange 23, there being also provided an inwardly projecting flange 25 extending from the flange 23. The upper end of a switch 26 is reverted and secured within the U-shaped holder 24, as shown in Fig. 4. A horizontally disposed channel member, generally indicated at 27, is disposed across the lower portion of the window frame 10 and the channel member 27 includes a horizontal upper wall 28 having a vertical flange 29 extending from the inner end thereof, which is secured by fastening means 30 to the stop member 14. The channel member 27 also includes a front vertical wall 31 and a downwardly and forwardly inclined lower wall 32, which merges with a vertical inner wall 33. The inner wall 33 has extending therefrom a flange 34 which is secured by fastening means 35 to the upper side of the sill 15. The lower end of the screen 26 is secured in an inverted U-shaped clamping member or holder 36 which is disposed in a cut-out 37 formed in the lower end of each stop member 14. The holder or clamping member 36 has extending from the lower end of the inner leg or side thereof, a forwardly projecting flange 39 which engages on the upper side of the upper wall 28. The flange 39 has extending downwardly therefrom a front wall 40 bearing against the vertical wall 31 and a downwardly and inwardly inclined wall 41 extends from the wall 40 and bears against the inclined wall 32. The inclined wall 32 forms with the horizontal wall 28 a substantially wedge-shaped holder with which the similarly shaped member comprising the flange 39 and the walls 40 and 41, is adapted to be tightly secured. The wall 41 has extending vertically downwardly from the inner end thereof, a flange 42 which is spaced from the wall 33 and one or more thumb screws 43 are extended through the flange 42 and the wall 33. An inverted U-shaped keeper 44 is formed integral with the flange 42, the purpose for which will be hereinafter described.

The housing 16 has disposed therein a spring tensioned roller 45 which includes a shaft 46 disposed in a bore 47 and the shaft 46 extends from one end of the roller 45 and is provided with a flat end portion 48. The shaft 46 has a coil spring 49 wound thereabout with one end 50 of the spring 49 secured to the shaft 46 and the other end of the spring 49 being secured as indicated at 51, to the roller 45. The other end of the roller 45 as shown in Fig. 7, has a stud 52 extending therefrom for rotatable engagement with an adjacent end wall of the housing 16.

The roller 45 has wound thereabout a transparent plastic sheet 53. One end of the sheet 53, as shown in Fig. 4, is fixed to the roller 45 and the sheet is then extended through the slot 54 and is then extended downwardly over the outer side of the screen 26. The extended or free end of the sheet 53 has fixed thereto a transversely curved bar 55 formed with a U-shaped clamping edge 56 which is adapted to tightly grip the free end of the plastic sheet 53. The bar 55 has one or more knobs or handles 57 extending from the outer side thereof and the edge of bar 55 opposite from the reverted portion 56 is formed with an obliquely inclined locking tongue 58 which is engageable in the inverted U-shaped keeper 44.

In the use of this storm and screen assembly when the screen 26 is to be used alone, such as in warm weather, the transparent storm sheet 53 will be disposed in its upper position with the bar 55 bearing against the flanges 22 and 23. The flexible sheet 53 is under spring tension at all times and when it is desired to extend the sheet 53 the bar 55 is pulled downwardly so as to engage the locking tongue or member 58 with the keeper 54. At this time the transparent sheet 53 will be disposed in substantially contacting relation with the outer side of the screen 26 and will be under sufficient spring tension so that the sheet 53 will be held straight and will not flap or wrinkle.

What is claimed is:

A storm window assembly comprising an elongated roller housing adapted to be secured to the upper portion of a window frame, said housing including a bottom wall having an elongated opening, a pair of depending flanges extending from opposite edges of said opening, one of said flanges terminating in an upwardly reverted screen holding flange, a spring-tensioned roller in said housing, a transparent flexible sheet wound about said roller and extending downwardly through said opening, an elongated bar fixed along one edge thereof to said sheet, a reverted locking flange carried by the opposite edge of said bar, and

a bracket including an inverted U-shaped keeper fixed to the lower edge of the window frame, said locking flange engaging with said keeper to hold said sheet in extended position, said bracket also including an upwardly extending flange terminating in a downwardly reverted screen holding flange opposed to said first mentioned screen holding flange.

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