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2,593,239

STORM WINDOW STRUCTURE

Filed Nov. 18, 1946

2 SHEETS—SHEET 2

FIG. 3.

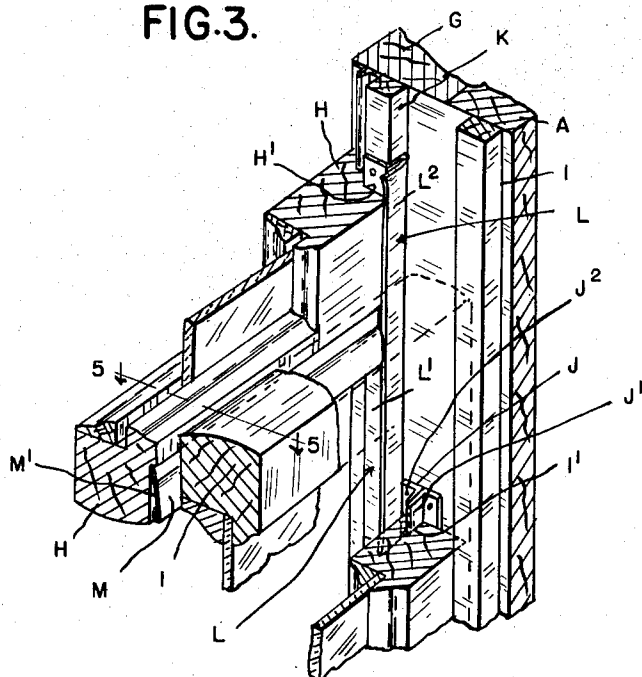


FIG. 5.

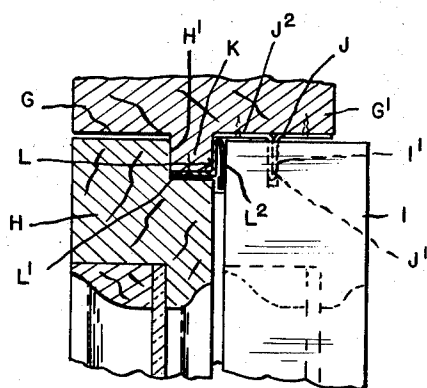
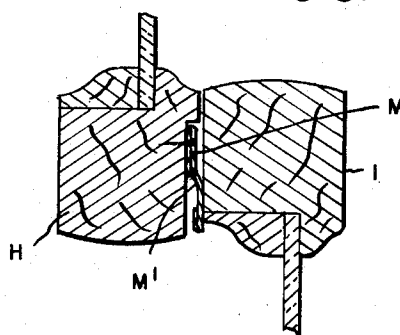


FIG. 4.



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STORM WINDOW STRUCTURE

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2 Claims. (Cl. 20—52.4)

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The invention relates to storm window and screen equipment for window frames and more particularly to a construction in which auxiliary sashes are mounted in the portion of the window frame which is outside of the main sashes and retaining stops therefor. Preferably, these auxiliary sashes are mounted in an auxiliary window frame which is placed within the outer portion of the regular window frame and having an inside width dimension no greater than the clearance between the stops for the main sashes. Thus, the auxiliary sashes are restricted to dimensions which will pass through the window when one of the main sashes is open thereby facilitating the removal or exchange of an auxiliary sash at any time. The instant application forms a continuation in part of my former application Serial No. 619,556, filed October 1, 1945, now Patent No. 2,478,222 issued August 9, 1949.

It is the object of the invention to obtain a construction of the type above described in which the storm window sashes are thoroughly weatherproofed and without in any way interfering with their removability. To this end the invention consists in the construction as hereinafter set forth.

In the drawings:

Fig. 1 is a vertical section through a window frame provided with my improved storm window and screen equipment illustrating the manner of removing one of the auxiliary sashes through the window frame from the inside thereof;

Fig. 2 is an elevation of one side of the auxiliary frame illustrating the slideways for the auxiliary sashes and also the weatherproofing means therefor;

Fig. 3 is a sectional perspective view showing a portion of the auxiliary sashes in engagement with the frame;

Fig. 4 is a cross-section on line 4—4, Fig. 1; and

Fig. 5 is a vertical section on line 5—5, Fig. 3.

A window frame A of usual construction is provided with the regular stops B, C and D for slideably holding lower sash F and upper sash E, also of usual construction. In the portion of the frame A which is outside of the sashes E and F and their retaining stops is an auxiliary frame G. This has a portion G' which fits within the main frame and a flange portion G² which overlaps the outer end of said frame. Within the auxiliary frame are detachably mounted exchangeable upper and lower sashes H and I which may be either storm window sashes or window

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screen frames. Each of these auxiliary sashes has its opposite side rails grooved as indicated at H' and I' so as to be engageable with metallic strips J forming slideways therefor. The strips J are preferably of a substantially T-shaped cross-section having a return bent central portion J' forming the stem of the T and oppositely extending flange portions J² which are nailed or otherwise secured to the frame G. The strips J do not extend the full length of the auxiliary frame G but leave sufficient space beyond the same for the insertion or removal of the corresponding auxiliary sash. This leaves a gap between the strips respectively for the upper and lower auxiliary sashes in which said sashes are not thoroughly weatherproofed. However, such gap is essential as otherwise the auxiliary sashes could not be readily engaged with or disengaged from their slideways.

As above stated, it is an object of the invention to obtain a construction in which the auxiliary storm window sashes are thoroughly weatherproofed in all portions thereof which engage the window frame, which is accomplished as follows. Transversely between the metallic strips J for the upper and lower auxiliary sashes is a parting stop K which extends the full length of the auxiliary frame G. Secured to this parting stop is a weatherproofing strip L which extends the full length of the gap between the strips J for the upper and lower sashes and beyond the same so as to overlap said strips. The strip L has a portion L' which is nailed or otherwise secured to the front face of the stop K and has also a return bent portion L² which is in the crevice between the stop K and the lower auxiliary sash I. The resiliency of this portion L² causes it to press the sash I inward thereby forming a tight fit between the strip J and one side of the groove in the sash. Also, this portion L² of itself forms a tight fit with the outer face of the side rail of the sash I thereby weatherproofing the latter in the portion thereof beyond the strip J. The meeting rails of the auxiliary sashes H and I are weatherproofed by a resilient strip M secured to the rail of the sash H and having an obliquely inclined portion M' which bears against the rail of the sash I. This strip M extends the full length of the meeting rails and, in normal position, has its opposite ends in contact with the strip L. For weatherproofing the joint between the lower auxiliary sash I and the window sill, there is preferably provided an auxiliary sill N, which is arranged above the sill A' of the window frame A, and has its opposite

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ends grooved to engage with the strips J by which it is retained in position. A resilient weatherstrip O extending along the auxiliary sill N contacts with the lower rail of the sash I and, thus, all portions of this sash have a weatherproof joint formed between the same and the window frame including weatherproofing means between the meeting rails of the sashes H and I.

What I claim as my invention is:

1. A storm sash and screen combination comprising a window frame, upper and lower sashes having grooved side rails and meeting rails, a parting stop between the side rails of said sashes extending the full length of the frame, combined weatherstrips and slideways secured to said frame on opposite sides of said parting stop having resilient portions engaging the grooves of said side rails and being restricted in length to leave a gap between the adjacent ends thereof which overlaps the meeting rails of said sashes when in closed position, and a weatherstrip of angle cross section with a return bend in one portion thereof and being of a length to bridge said gap

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and overlap the slideways, said weatherstrip being secured to the outer face of said parting stop with the return bend portion lying adjacent the side of said stop between the same and the side rail of the lower sash.

2. The construction as in claim 1 having the side rail of the upper sash grooved to fit said stop, and the return bend of said weatherstrip extending outward beyond said stop to form sealing contact with the side rail of the upper sash.

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REFERENCES CITED

The following references are of record in the file of this patent:

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