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DOUBLE GLAZED SASH AND FASTENING MEANS THEREFOR

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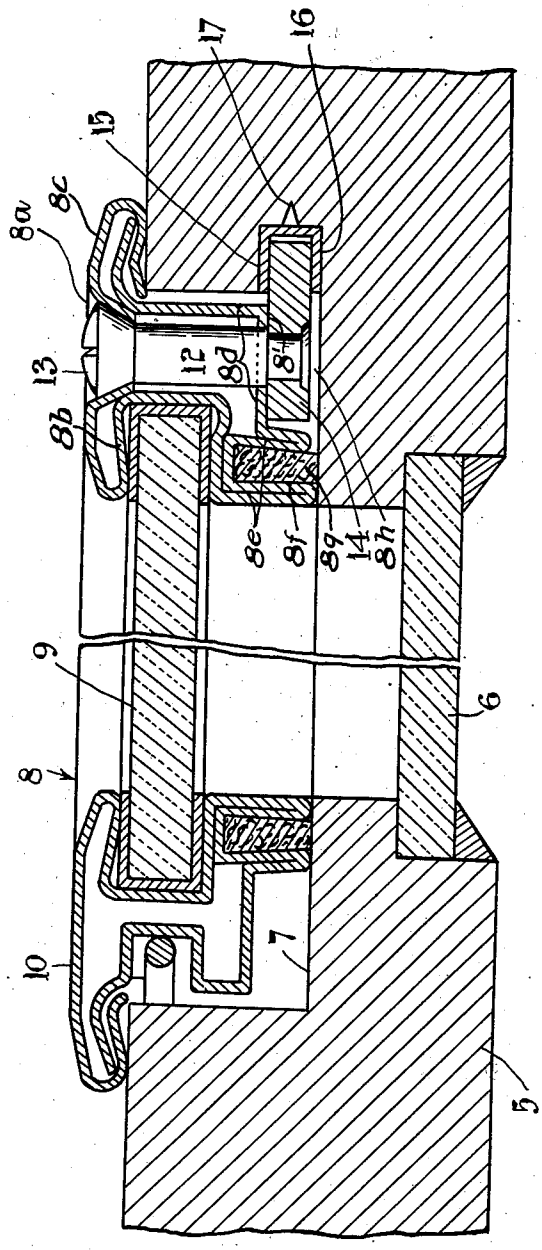


FIG. 1

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DOUBLE GLAZED SASH AND FASTENING MEANS THEREFOR

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In Canada July 23, 1940

1 Claim. (Cl. 20—56.5)

This invention relates to improvements in the type of double glazed sash disclosed in Canadian Patent 223,345, granted Sept. 5, 1922, and also in the co-pending application of C. T. Cresswell, filed March 18, 1940, under Serial No. 324,605.

The above mentioned patent discloses a double glazed sash in which the outer glazing is permanently secured in the outer portion of a main sash frame, the inner glazing being carried by a supplementary frame removably fitted in a recess at the inner side of the main frame. The two frames are secured together by a plurality of fastening devices in the form of turn buttons. These turn buttons are mounted in casings countersunk in the rails of the main sash frame and are adapted to be projected into or withdrawn from suitable keeper casings or sockets provided in the corresponding rails of the supplementary sash. Owing to the number and nature of the fastening devices employed in this construction considerable time and work is involved in the mounting and removal of the inner sash. Another objection is that the supplementary sash must be completely detached from the main sash whenever it is desired to obtain access to the inner surface of the outer glazing for cleaning or other purposes.

According to the present invention the two sashes are fastened together by one or more turn button fastening devices mounted in one or more rails or frame members of the inner sash, the two sashes being preferably hinged together as disclosed in the aforesaid application 324,605 or in Canadian Patent 359,131, granted July 14, 1936.

Another advantage of the present invention is that the mounting of the turn buttons in one or more rails of the supplementary sash frame enables the turn buttons to be engaged in recesses in the main frame which are concealed from view when the two frames are fastened together. With this arrangement only the heads of the rotatable members which carry the turn buttons are exposed to view when the sash frames are secured together, whereas, in the usual double glazed window of this type, the turn buttons are mounted to operate in casings which are recessed into the inner face of the main frame and present an unsightly appearance.

Proceeding now to a more detailed description reference will be had to the accompanying drawing, in which the single figure (Fig. 1) is a sectional view of a double glazed sash assembly embodying our invention.

Referring more particularly to the drawing, 5 designates the main sash frame in which the outer glazing 6 is permanently secured in any suitable manner. The inner side of frame 5 is provided with a recess 7 adapted to receive the supplementary sash frame 8 in which the inner glazing 9 is permanently secured.

Sash frames 5 and 8 are fastened together by suitable hinge connections generally indicated at 10. These hinge connections may be constructed either in accordance with Canadian Patent 359,131 or in accordance with the co-pending application Serial No. 324,605.

As here shown the rails of frame 8 are of hollow metal construction, the inner side of each rail being shaped to provide a channel 8*b* in which a marginal portion of the glazing panel 9 is fitted and the outer side of each rail being shaped to provide a flange 8*c* which overlies frame 5 when the two frames are fitted together as shown in the drawing. Each rail 8*a* is also shaped so that its outer marginal portion, generally indicated at 8*d*, is reduced in thickness as compared with the inner marginal portion generally indicated at 8*e*, the latter being recessed at 8*f* to receive a suitable packing or sealing strip indicated at 8*g*. Owing to the difference in thickness between the inner and outer marginal portions of the rails of frame 8 it will be seen that, when the inner marginal portions of said rails are fitted against the bottom wall of the recess 7, a definite clearance space 8*h* is reserved between said wall and the opposing surfaces 8[1] of the outer marginal portions of the rails. The rail 8*a* remote from the hinge connection 10 carries a rotatable member 12 provided with a slotted head 13 at its outer end. The member 12 extends through and is rotatably mounted in the outer marginal portion 8*d* of rail 8*a*, the head end 13 of said member being fitted in a recess 13*a* so that it is countersunk with reference to the indoor side of frame 5. The opposite end of member 12 projects beyond the rail surface 8[1] and has riveted thereto a turn button 14 which works in the clearance space 8*h*. When the sash frames 5 and 8 are fitted together as shown in the drawing, they may be secured against separation by turning member 12 to engage turn button 14 in a metal socket or casing 15. This casing 15 is fitted in a recess 16 in frame 5 and is anchored in place by means of the prongs 17. When it is desired to swing frame 8 to open position the member 12 is turned to withdraw the turn button 14 from the socket 15. It will be noted that the recess 16 is formed immediately adjacent the bottom

wall of the main recess 7 so that recess 16 and casing 15 are thus disposed opposite the clearance space 8h in which the turn button 14 works.

It will be understood that the fastening means described herein is not limited in its application to double glazed windows of the type in which the inner glass frame is hingedly connected to the main sash frame. On the contrary, it is within the scope of this invention to provide a double glazed sash frame in which the inner or supplementary sash frame is held in place solely by fastening devices constructed in accordance with this invention. In this case two or more rails of the supplementary sash will be provided with turn button attachments 14 adapted to engage in casings 15 recessed into the corresponding rails of the main sash.

Having thus described what we now conceive to be the preferred embodiment of this invention it will be understood that various modifications may be resorted to within the scope and spirit of the appended claim.

Having thus described our invention, what we claim is:

A double glazed sash assembly comprising a main sash frame, an outer transparent pane mounted in said frame adjacent the outdoor side thereof, the inner marginal portion of the indoor side of said frame being rabbeted to provide a recess having one defining wall thereof lying in a plane located inwardly of but parallel with said transparent pane, a supplementary sash frame fitted with a second transparent pane located adjacent the indoor side thereof, said second pane constituting the indoor pane of the sash assembly when said main and supplementary frames are fitted together, said supplementary frame being composed of rails formed so that the outdoor sides of the inner marginal portions of said rails lie parallel with but project beyond the corresponding sides of the outer marginal portions of said rails, said supplementary sash frame rails being fitted in said recess so that the outdoor sides of the inner marginal portions of said rails are butted against the wall of the recess which lies parallel with said outer transparent pane while the outdoor sides of the outer marginal portions of said rails are spaced from said wall to provide an intervening clearance space and means for fastening said frames together comprising a rotatable member extending entirely through the outer marginal portion of at least one of said supplementary sash frame rails and provided, at its inner end, with a laterally projecting locking member arranged to work in the clearance space reserved between the said outer marginal portions of said rails and the opposing wall of the recess, the remaining wall of the recess being provided with a socket to receive said locking member and the outer end of said rotatable member being provided with means whereby it may be turned to rotate said locking member into or out of said socket.

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