Jan. 7, 1941. I. G. BARCLAY ET AL 2,228,044

STORE FRONT CONSTRUCTION

Filed Aug. 17, 1938

Fig. 1.

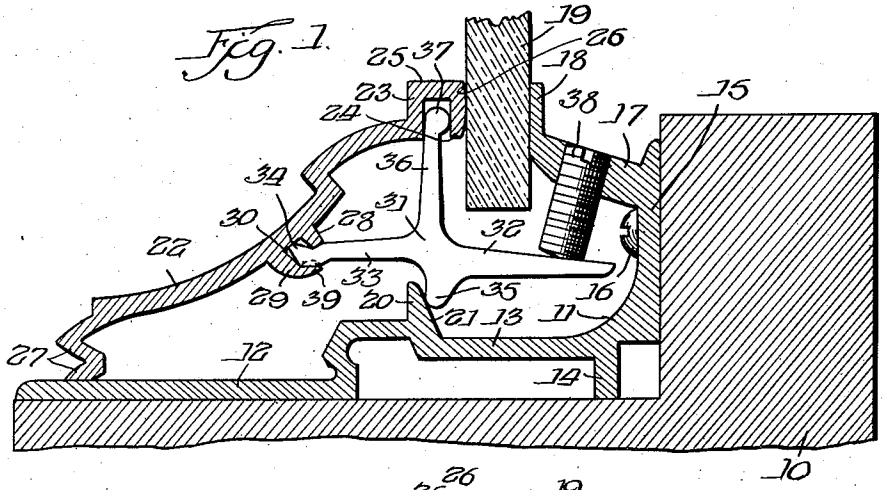


Fig. 2.

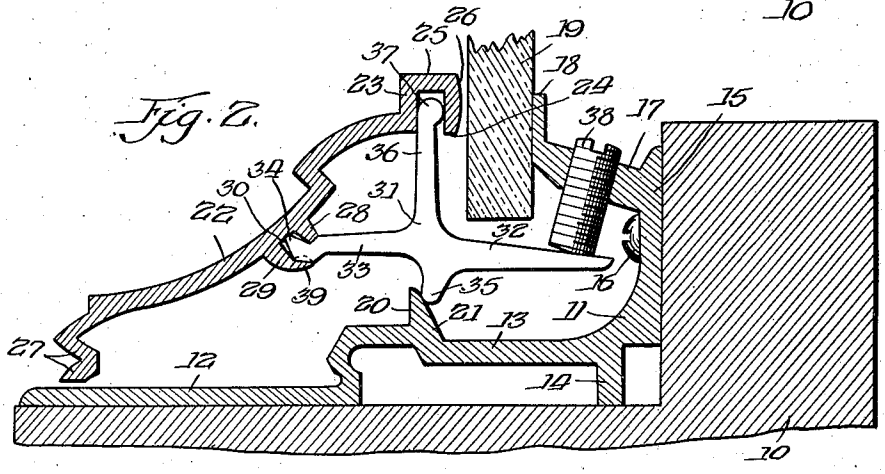
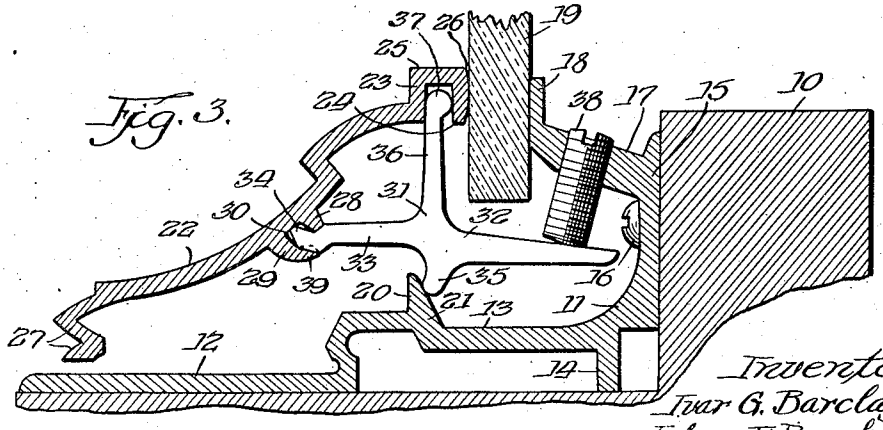


Fig. 3.



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STORE FRONT CONSTRUCTION

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2 Claims. (Cl. 20—56.4)

Our invention relates to a store front construction and has for one of its objects the provision of a store front construction in which a wide range of thickness of glass may be used in making up the store fronts.

Another and further object of our invention is the provision of a structure in which a store front construction is provided having a tight connection between the base of the outer pane engaging section and the inner section or the usual plate on the window sill, and in which instead of a rotative movement about a pivot point the outer sash engaging member is drawn inward and downward particularly at the outer edge, thereby preventing water from seeping in around the edge of the base of the outer section and draining down either on the inside of the construction or into the base against which the store front construction is mounted.

Another and further object of our invention is the provision of a store front construction in which we are able to combine a downward movement of the outer pane engaging section with a horizontal movement of this section, so that in the final tightening of the sections the movement of the section is in an angular direction, thereby insuring that the outer section is held tightly against the glass pane and also is held tightly at its outer edge to prevent water leaking therethrough, thus providing a structure in which the outer edge of the glass pane engaging member adjacent the base is held in such manner that leakage thereunder is prevented.

Another and further object of our invention is the provision of a store front mounting which can be used for an unusually wide range of glass thicknesses and at the same time the outer pane holding section will not cant or tilt enough to admit water under its outer marginal edge when thin glass is used, but instead has adequate holding effect upon the glass and will not allow water to pass under either of its edges.

Another and further object of our invention is the provision of inner and outer sash engaging members in which interengagement of these two members is dispensed with and the outer member is brought into engagement with the upper surface of the base of the inner member and held tight enough against this member to prevent leakage. In constructions of this type heretofore it has been necessary to provide a rib or some other member on the inner sash engaging member or the window casing proper under which the edge of the outer member extends in order that excessive canting of the outer member might be prevented. Thus the cost of manufacture is materially lessened.

Another and further object of our invention is the provision of a structure in which the rotative movement in a clockwise direction of the lever holding the structures together is eliminated, and providing a structure in which if there is any rotative movement it is in a counterclockwise direction, thereby avoiding the canting of the outside member. This result is accomplished by placing the fulcrum point outside of the plane of the glass pane and also elevating this fulcrum point nearer the edge of the glass than what has been used heretofore.

These and other objects of our invention will be more fully and better understood by reference to the accompanying sheet of drawings, and in which—

Figure 1 is a cross sectional view of a store front structure embodying our invention;

Figure 2 is a view similar to Figure 1, in which the parts are shown in the initial stages of fastening; and

Figure 3 is a view similar to the views of Figures 1 and 2, showing the position of the structures at the second step in the fastening operation.

Referring now specifically to the drawing, and in which like reference characters refer to like parts throughout, a window sill 10 of the usual form is shown, with an inner glass pane engaging member designated as a whole as 11. This member 11 is preferably made of comparatively heavy extruded metal and comprises a base portion 12 adapted to fit flush upon the window sill 10, and having an intermediate portion 13 which is spaced upward from the window sill 10. The portion 12 may be omitted if desired and the usual plate for the window sill used instead. A rib 14 extends along the base near the rear portion thereof and is adapted to rest upon the sill 10, the member 11 having an upstanding side portion 15 through which a screw 16 extends which engages in the sill 10. An inwardly extending web portion 17 is provided with an upturned end 18, the inner face of which is adapted to engage a glass pane 19. Extending upward from the portion 13 is a projection 20 having an inclined inner face 21, the face 21 being angularly disposed with relation to the base portion of the pane engaging member at an angle of from 28 to 35 degrees. This angle we have found to be important for the reasons hereinafter given. It will be noted that the projection 20 is located outside of the plane of the glass 19 a considerable distance and is integrally formed with the portion 13 of the inner member

and is also spaced closer to the edge of the glass than is usual in constructions of this type. The positioning of this projection nearer the edge of the glass results in a very small pivotal movement of the lever hereinafter described and an inward and downward direction of travel for the lever during the tightening operation.

An outer glass engaging member 22, also preferably made of extruded metal, is provided having an outer vertical portion 23 at its upper end and an inner vertical portion 24, with a transverse web portion 25 connecting these portions. The projection 24 has a curved face 26 adapted to engage against the outside of the glass pane 19. These sections 23, 25 and 24 form in effect a channel adapted to receive one end of the lever for holding the sections together, as hereinafter described. The section 22 along its outer edge is bent inward and has a portion 27 which is adapted to rest upon the outer base portion 12 of the inner glass engaging member 11, and in the final position of the members is held firmly thereagainst as shown in Figure 1. Extending longitudinally of the member 22 on the under side thereof is an upper rib 28 and a lower rib 29 forming a channel 30, the inner end of the rib 29 being upwardly turned to conform to the contour of one end of the portion of the holding lever and to hold and lock this end portion of the lever securely after the device has been clamped or placed into the proper position as shown in Figure 1.

A lever, designated as a whole as 31, is provided. This lever comprises a free end portion 32 and another portion 33 extending in the same plane as the portion 32. The portion 33 has a hooked end 34 adapted to engage in the channel 30 between the ribs 28 and 29 and is held securely in the channel by reason of the rib 29 passing around under the hooked end 34 of the portion 33. On the under side of the lever 31 is a projection 35 having a rounded end portion adapted to engage against the inclined face 21 on the projection 20. This member affords in effect a sliding fulcrum on the inclined face of the member 20 during the initial tightening of the sections until the projection 35 reaches a fixed point on the inclined face of the projection 21, depending upon the thickness of the glass, so that in effect there is a downward and an inward pull exerted on the outer pane engaging section, thereby causing the outer glass pane engaging member to grip the glass pane tightly as well as form a tight joint between the outer edge of the member 22 and the base portion 12 of the inner glass pane engaging member without canting of the outside member 22. An upstanding portion 36 of the lever 31 is provided, terminating in a head 37 which has a rounded inner face adapted to engage against the inner face of the portion 24 of the member 22 to press or hold this portion of the member into engagement with the glass 19 when the device is placed in final operative position. A screw 38 is provided which is in threaded engagement with the portion 17, the inner end of which engages the end 32 of the member 31 and serves to hold the various members in proper assembled position when the glass is finally set in proper position as shown in Figure 1.

In operation of the device, as shown, the members 11 and 22 are made of extruded metal and have the lever 31 fastened therein by slightly struckup portions 39, 39 on each side of the projections 29, these members being placed in opposite position with the holes formed in the web 17 adapted to receive the screws 38. When the structure is assembled the first position is that as shown in Figure 2. The outer glass engaging member 22 is out of contact with the glass 19 at the upper end and the base plate 27 is pushed into position by tightening the screw 38 by a movement in a horizontal direction. The member 35 travels downward and inward on the inclined face 21, with the slippage taking place between the part of the screw and the end of the lever 32. The outer pane engaging section is thereby moved into the position shown in Figure 3, and further tightening of the screw causes an inward pull and at the same time a downward pull on the outer glass engaging member 22, bringing the portion 27 into engagement with the base 12. In this position the screw is tightened sufficiently to hold the pane 19 in proper position and because of the inward pull on the outer glass pane engaging section 22, a certain tension is placed on this device through the member 33, so that a tight joint is formed between the base 12 and the outer lower edge of the member 27, thereby resisting leakage or the flow of water therein, even though it may be driven against this outer section with considerable force by the wind or the like, during its service. We have found that with a degree of angularity of from 28 to 35 degrees of the face of the projection 20 there is a free movement of the lever on this face in order that a sufficient downward movement is maintained to force the outer edge of the outer pane holding member in tight engagement with the base of the inner pane holding member.

Due also to the fact that there is very little rotative movement of the lever and the fulcrum is placed outside of the plane of the glass, and the fact that the inclined surface 21 can be made fairly long, we are able to provide a section which will receive a glass pane having as much as ⅛ of a variation in thickness and yet provide means for securely clamping or holding the glass pane in position in the store front and secure a watertight structure both at the glass pane engaging points and between the base plate and the outer edge of the inner pane engaging member.

While we have described more or less precisely the details of construction, we do not wish to be understood as limiting ourselves thereto, as we contemplate changes in form and the proportion of parts and the substitution of equivalents as circumstances may suggest or render expedient without departing from the spirit or scope of our invention.

We claim:

1. Store front construction comprising an inner glass pane holding member having a base portion, a side portion and a glass engaging portion, the said base portion having a projection thereon with an angularly inclined face, an outer glass pane holding member one edge of which engages the glass pane and having a channel extending longitudinally thereof intermediate the edges on the under side of the said member, a lever connected at one of its ends to the outer pane engaging section intermediate its edges and having a projection on its under side in engagement with said inclined seat, said inclined seat and projection constituting a sliding fulcrum about which the outer pane engaging member is moved for adjustment, the lever having an extension in engagement with the outer pane holding section at its edge adjacent the glass pane

and having a free end, the free end of said lever being in alignment with the end of the lever connected to the outer pane engaging section intermediate its edges, and a screw extending through the inner glass pane holding member in engagement with the free end of the said lever.

2. Store front construction comprising an inner glass pane holding member having a base portion, a side portion and a glass engaging portion, the said base portion having a projection thereon with an angularly inclined face, an outer glass pane holding member one edge of which engages the glass pane and having a channel extending longitudinally thereof intermediate the edges on the under side of the said member, a lever having a projection on its under side in engagement with said inclined seat, said inclined seat and projection constituting a sliding fulcrum about which the outer pane engaging member is moved for adjustment, the lever having an extension in engagement with the outer pane holding section at its edge adjacent the glass pane and having a free end, and a screw extending through the inner glass pane holding member in engagement with the free end of the said lever extending into the channel intermediate the edges of the outer pane holding section and secured in said channel, the extension on the said lever being at right angles to the end of the lever extending into the said channel.

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