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F. E. HOFFMAN

STORE FRONT CONSTRUCTION

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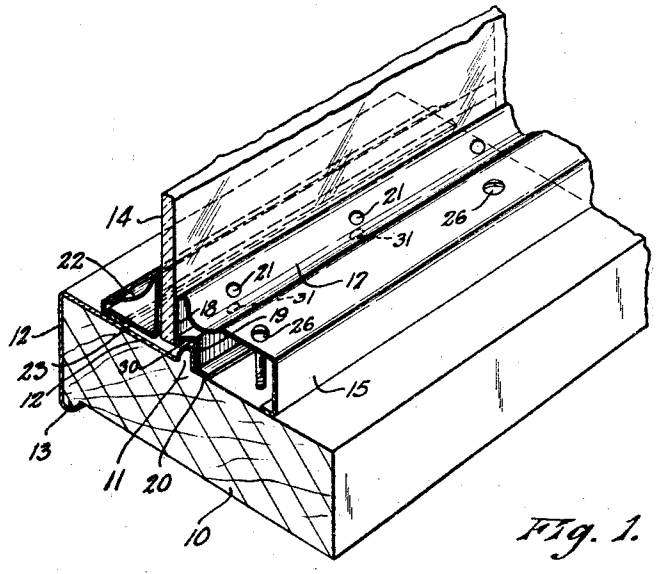


Fig. 1.

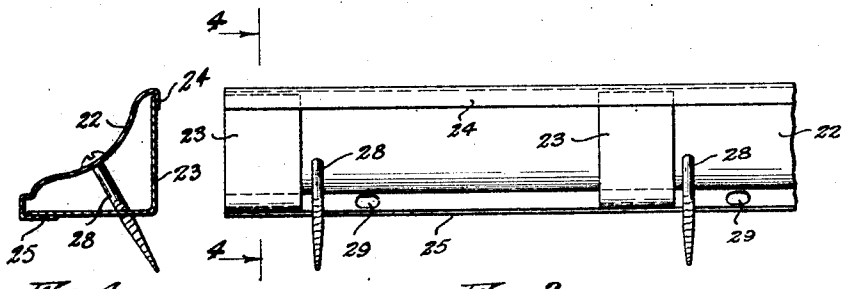


Fig. 4. Fig. 3.

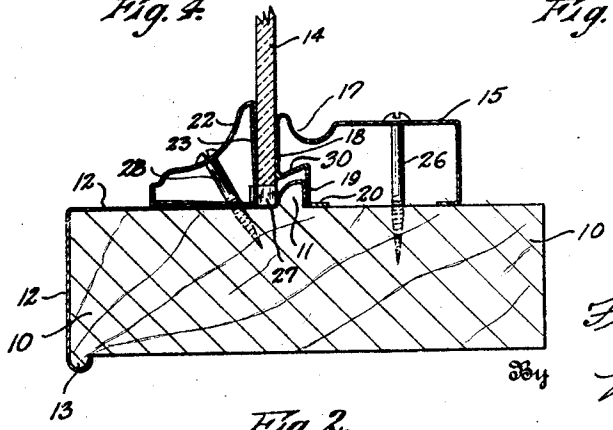


Fig. 2.

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STORE-FRONT CONSTRUCTION.

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This invention relates to a store front construction, particularly to a construction for mounting the plate glass in these constructions. It has for an object to provide a construction of this character which will yield to relieve the strains on the glass without breakage, and in which there are no screws under the edge of the glass, so that should the supporting blocks fail the glass cannot rest on the screws and become broken.

It is also an object of the invention to simplify the construction so that it may be much more easily installed, doing away with a number of the operations required in the old constructions, and thus will be much cheaper to install.

It is a further object of the invention to provide a construction of this type in which there is a definite stop or locating element which may be accurately located for the purpose of aligning the supporting structure, and thus prevent strains on the glass by tightening the supporting members and preventing breakage.

With the foregoing and other objects in view, I have devised the construction illustrated in the accompanying drawing forming a part of this specification, similar reference characters being employed throughout the various figures to indicate corresponding elements. In this drawing,

Fig. 1 is a perspective view showing my improved construction installed, and with one end in section.

Fig. 2 is a transverse section through the construction.

Fig. 3 is a side elevation of the outside molding looking from the inside thereof, and

Fig. 4 is a transverse section through the molding substantially on line 4—4 of Fig. 3.

In the construction shown the member 10 is a wooden sill member provided in its top surface with a longitudinally and upwardly extending stop or locating lip or rib 11. This sill is formed accurately to size and shape and then a strip of sheet metal 12, preferably copper, is drawn onto this sill in a die so that it accurately fits the surface of the sill member. This covering of sheet metal extends over the lip or rib 11 and out around the forward edge, and then around and under the rib 13 on the under side of the sill at its forward edge, so that this metal covering is firmly held in place on the sill. At the inner side of the glass plate 14 is a sheet metal bar 15 bent substantially to the shape shown, the top wall being concave at 17 near the surface of the glass to form a gutter for drainage purposes, and then extends downwardly to form a wall 18 to engage the surface of the glass. It is then bent backwardly over the top of the lip 11 and then downwardly as shown at 19 to form a shoulder to engage the inner wall of the lip, and to give a stronger and better construction it is then bent inwardly at 20 to form a foot to engage the top of the sill 10. The wall of the gutter is provided with openings 21 for ventilating purposes. The front portion of the bar 15 is mounted so that it may yield inwardly under expansion of the glass but is resilient so as to always properly engage the glass. The glass is supported on the outside by a molding bar or sash 22 bent substantially as shown in Fig. 4, and this with the inner bar 15 are made of sheet metal, preferably copper. At suitable distances throughout the molding are angle members 23 forming supports for the molding bar to prevent its free edges yielding inwardly and to hold it rigid. They will also form in effect feet for this molding bar to prevent it from turning, so that it will stand up square against the glass and will also have a good footing on the top of the sill. The ends of the angle members 23 are set back of the free edges or flanges 24 and 25 of the molding bar as shown in Fig. 4, and brazed or soldered thereto.

In installing, the sill is mounted in proper position, and as the lip or rib 11 is accurately positioned it will form a definite stop or locating means for the remainder of the structure. The inner bar 15 may be quickly and accurately located by means of this rib and the shoulder 19, and may then be secured by merely inserting the screws 26. The glass 14 may then be placed in position against the outer yieldable wall 18 on this inner bar, and resting on any desired number of blocks 27 of rubber or any other suitable material under the edge thereof. The molding bar or outer sash member 22 may then be placed snugly against the outer wall of the glass, as shown in Figs. 1 and 2, and secured by the obliquely positioned screws 28 passing through openings in the bar and into the sill. Tightening up on these screws will tightly press the glass against the outer yieldable wall 18 on the inner bar. The glass is thus yieldingly mounted and will

move under expansion and contraction and wind pressures to equalize the strains so that the liability of breakage is reduced to a minimum. Because of the angle members 23 the outer sash may be placed snugly against the glass and there will be no danger of its turning out of position, and it will stand up squarely against the surface of the glass. It will be noted from Fig. 2 that the screws 28 do not pass under the edge of the glass so that should the blocks 27 break or move out of position the edge of the glass cannot engage these screws and thus become broken. It is also to be noted that there is no wooden block required in the inner bar 15. The molding 22 may be provided with suitable ventilating openings 29.

It will be apparent that this construction is very simple and that the operations required in installing are reduced to a minimum, but that the glass is so mounted as to yield to equalize the strains and pressures. In the old types of construction it is difficult to properly locate the glass supporting bars, and especially to get them in proper alignment throughout the frame, so that when they are tightened up on the glass the glass is not placed under lateral strain or broken. With this construction, however, the bars are practically self aligning because the lip or rib 11 is accurately made when the sill member is made. Thus when the sill is installed this rib is in the proper position and alignment, and the inner bar 15 is accurately located by merely moving the shoulder 19 against the inner wall of this lip. It is also to be noted that by inclining the portion of the wall 30 upwardly between the glass engaging wall 18 and the shoulder 19 a trough is provided for carrying away moisture which may pass to the inside of the bar, this wall being provided with openings 31. It is further to be noted that this wall with the shoulder 19 forms a double check to prevent to a large extent the passage of dust but at the same time allowing for ventilation. Furthermore, the lip 11 effectively prevents moisture running in from the outside.

Having thus set forth the nature of my invention, what I claim is:

1. In a window construction, a sill member having a longitudinal, upwardly extending lip on its top wall, a hollow sheet metal bar having a yieldable side wall to engage one side of the glass and said yieldable wall having a longitudinal shoulder to engage one side of the lip to position the bar, and a molding engaging the other side of the glass.

2. In a window construction, a wooden sill member having a longitudinal upwardly extending lip, a sheet metal covering drawn over and covering one side edge of said member and said lip, a sheet metal bar having a yieldable side wall to engage the glass and said yieldable wall being provided with a shoulder to engage the lip to position the bar, and a molding to engage the other side of the glass.

3. In a window construction, a sill member, an inner sheet metal bar having a yieldable front wall to engage the glass, means on the sill to cooperate with said yieldable front wall to position the bar, a sheet metal molding bar on the other side of the glass, and means for securing the latter bar to the sill and pressing it against the glass.

4. In a window construction, a sill member, an inner sheet metal bar having a yieldable front wall to engage the glass, means for securing said bar to the sill, a sheet metal molding bar having one edge to engage the outer surface of the glass and another edge to rest on the sill, angle members extending between said edges and forming supports to prevent the molding turning on the sill and to retain it in an upright position, and means for securing the molding to the sill.

5. In a window construction, a sill member having a longitudinal, upwardly extending lip on its top wall, a sheet metal bar secured to the sill and having a yieldable side wall to engage one surface of the glass, said yieldable wall also extending backwardly over the rib and then downwardly to the sill to form a shoulder to engage the lip and position the bar, a molding bar to engage the other side of the glass, and means for securing the latter bar to the sill.

6. In a window construction, a sill member, a sheet metal bar secured to said sill member, the top wall of said bar being concaved adjacent its front edge to form a trough and having drain openings therein, the front wall of said bar extending downwardly to form a glass engaging surface, then backwardly and upwardly to form a drain and then downwardly to the sill member, and a molding bar secured to the sill to engage the other side of the glass.

In testimony whereof I affix my signature.

FRED E. HOFFMAN.