D. J. MURNANE.

WINDOW STRUCTURE.

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1,008,667.

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Fig. 1.

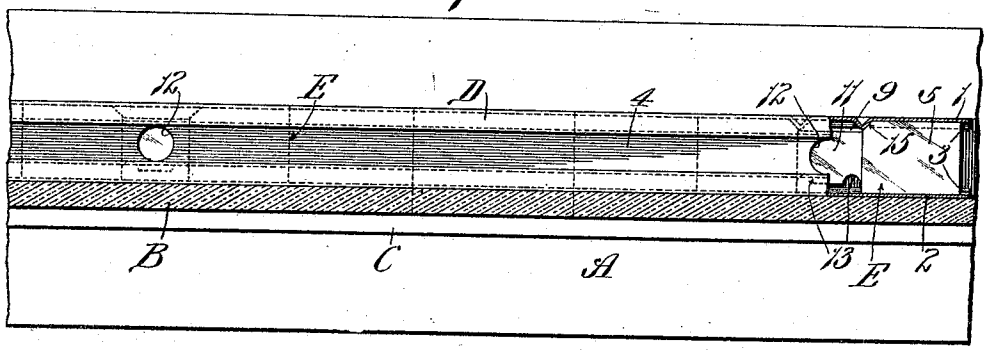


Fig. 2.

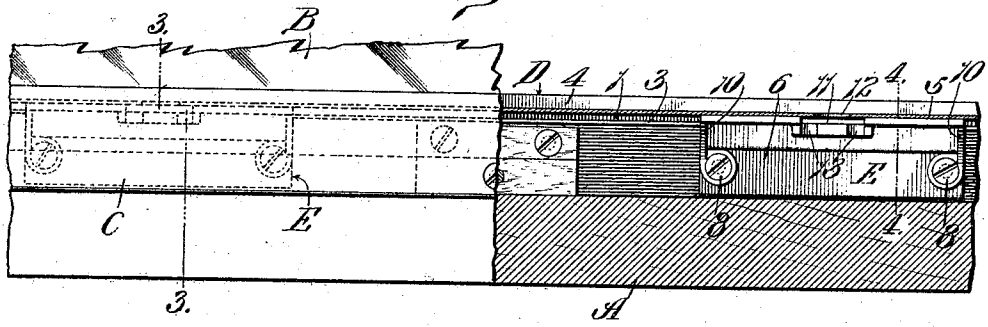


Fig. 3.

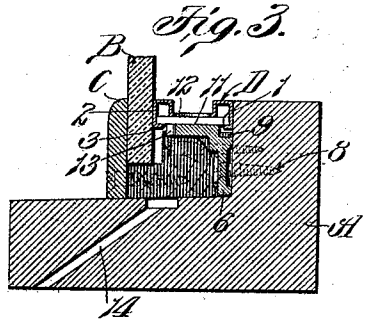


Fig. 4.

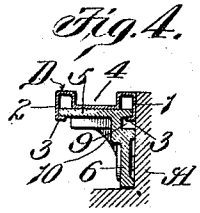
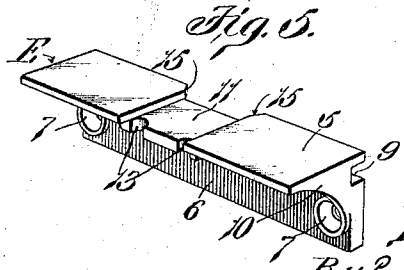


Fig. 5.



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UNITED STATES PATENT OFFICE.

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WINDOW STRUCTURE.

1,008,667. Specification of Letters Patent. Patented Nov. 14, 1911.

Application filed April 3, 1911. Serial No. 618,577.

To all whom it may concern:

Be it known that I, DANIEL J. MURNANE, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Window Structures, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to store-fronts and show-window structures that comprise an inside glass-clamping member arranged in engagement with the inner face of the glass.

One object of my present invention is to provide a structure of the character referred to in which the means that retains the inside glass-clamping member in position is of novel construction and is completely hidden from view.

Another object is to provide a structure of the character referred to in which the inside glass-clamping member is not marred by screws or bolts such as are generally used for retaining the inside glass-clamping member in position.

Another object is to provide an inside glass-clamping member and a supporting means for same, which are so designed that the inside glass-clamping member can be manufactured at a low cost and also set up or installed easily.

Another object is to provide a combined inside glass-clamping member and gutter, and a supporting means for same consisting of a device interlocked with said member and constructed in such a manner that air can circulate up through said member and water can drain out of said member. And still another object is to provide an inside glass-clamping member having flanges which interlock with a supporting device arranged under said member that is adapted to be permanently connected to the stationary frame in which the glass is arranged.

Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 of the drawings is a horizontal sectional view of a window structure provided with my improved inside glass-clamping member, said member being shown in top plan view, and a portion of said member being broken away so as to illustrate the construction of the devices which support said member; Fig. 2 is a front elevational view, the outside glass-clamping member and the glass being broken away so as to more clearly illustrate the construction of the devices which support the inside glass-clamping member; Fig. 3 is a vertical cross sectional view taken on the line 3—3 of Fig. 2; Fig. 4 is a vertical cross sectional view taken on the line 4—4 of Fig. 2; and Fig. 5 is a perspective view of one of the supporting devices for the inside glass-clamping member.

Referring to the drawings which illustrate the preferred form of my invention, A designates the lower sill or cross-piece of a stationary glass-supporting frame, B designates a plate of glass arranged in said frame, and C designates an outside glass-clamping member which may be of any preferred construction and retained in position in any suitable manner.

The inside clamping member D, which is arranged in engagement with the inner face of the glass, is preferably formed from sheet metal, and is provided on its front and rear edges with depending legs 1 and 2 which have horizontally disposed flanges 3 that project inwardly toward each other, as shown clearly in Fig. 4. I also prefer to provide said member D with a longitudinally disposed groove or channel 4 of any preferred shape in cross section that acts as a gutter. The means that I prefer to use for supporting the inside glass-clamping member D and retaining it in position consists of a continuous member or a plurality of separate members E arranged under said inside glass-clamping member and interlocked with the flanges 3 thereon, said members E being securely connected to the stationary glass-supporting frame A, as shown in Fig. 3. The members E may be formed in various ways, each of the members herein shown having a horizontally disposed head 5 that fits snugly between the depending legs 1 and 2 on the glass-clamping member D, a vertically disposed wall or portion 6 having openings 7 for receiving fastening devices 8 that secure said member E to the stationary glass-supporting frame A, and a groove 9 on the rear side of the wall 6 for receiving the flange 3 on the depending leg 1 of the inside glass-clamping member. Gussets 10 are preferably arranged at the ends of the member E so as to reinforce and strengthen

the horizontally disposed head 5 which projects forwardly from the vertical wall 6 of said member, and a recess or depressed portion 11 is formed in the top face of said head, as shown in Figs. 2 and 5, so as to provide a passageway between the inside clamping member D and the device E which supports same. The inside clamping member D is provided with openings 12 which aline with the depressed portions 11 in the heads of the members E, and notches 13 are formed in the front edges of said depressed portions, as shown in Fig. 5, so as to permit air to circulate up through the openings 12 in the members D or water to escape through said openings 12, the sill A being provided with ventilating and drain openings 14 which communicate with the atmosphere. To insure proper alinement of the openings 12 in the inside clamping member D and the depressed portions or recesses 11 in the heads of the members E, I have formed a notch 15 in the rear edge of the head 5 in alinement with the recess or depressed portion 11 so that the depending leg 1 on the inside clamping member D can be bent inwardly into the notch 15 after the parts have been assembled, and thus lock the members E and the inside glass-clamping member together.

The members E herein shown are formed from cast metal but it will, of course, be obvious that pressed or forged members of suitable shape could be used for supporting the inside glass-clamping member D and that said supporting members could be formed in various ways without departing from the spirit of my invention.

A structure of the character above described presents a neat and ornamental appearance because no fastening devices pass through the inside glass-clamping member, and the means which supports said member and retains it in position is completely hidden from view. Furthermore, such a structure can be manufactured at a low cost because the inside clamping member can be made from light gage sheet metal owing to the fact that the heads 5 of the members E fit snugly inside of the inside glass-clamping member and thus reinforce and strengthen same. In setting up the structure, the members E are simply slid endwise into the inside clamping member D and then moved longitudinally of said member into proper position, after which the fastening devices 8 are inserted so as to connect the members E to the stationary glass-supporting frame A.

While I have herein shown only the inside glass-clamping member that is arranged adjacent the lower edge of the glass it will, of course, be understood that the inside glass-clamping members at the sides and at the upper edge of the glass are constructed in a similar manner.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a window structure, an inside glass-clamping member, a supporting device for said member secured to the stationary frame of the window, and flanges on said member which engage said device and retain said member in position.

2. In a window structure, an inside glass-clamping member arranged at the lower edge of the glass, a supporting member arranged under said glass-clamping member and secured to the frame of the window, and a flange on one of said members that engages the other member and thus retains said glass-clamping member in position.

3. In a window structure, a combined inside glass-clamping member and gutter provided on its under side with flanges, and a device on the frame of the window arranged under said member and in engagement with said flanges for supporting said member and retaining it in position.

4. In a window structure, an inside glass-clamping member provided on its under side with flanges, and a plurality of supporting devices connected to the frame in which the glass is arranged and having portions which lap over said flanges so as to retain said member in position.

5. In a window structure, a horizontally disposed inside glass-clamping member arranged at the lower edge of the glass and provided on its under side with flanges, and supporting members connected to the stationary glass-supporting frame and provided with heads or portions which engage said flanges so as to retain said inside clamping member in position.

6. In a window structure, a combined gutter and inside glass-clamping member provided on its under side with a flange, and devices arranged in sliding engagement with said flange and adapted to be connected to the stationary glass-supporting frame so as to retain said member in position.

7. In a window structure, an inside glass-clamping member provided on its longitudinal edges with laterally projecting legs which have flanges, and retaining devices having heads or portions which lie between said legs and lap over the flanges thereon, said devices being adapted to be secured to a stationary support so as to support and hold said member in position.

8. In a window structure, a substantially hollow inside glass-clamping member formed from sheet metal, a retaining device for said member provided with a head or portion that lies inside of said member and thus reinforces and strengthens same, and a stationary glass-supporting frame to which said retaining device is connected.

9. In a window structure, a combined gutter and inside glass-clamping member provided at its edges with flanges which lie on the under side of said member, a plurality of devices connected to the stationary glass-supporting frame, and heads or portions on said devices which lap over said flanges and thus retain said clamping member in position.

10. In a window structure, a substantially hollow inside glass-clamping member formed from sheet metal, a retaining device having a head that lies inside of said member and a wall that is adapted to be connected to a supporting structure, and a recess or notch in said retaining device which permits said clamping member to be bent toward said device so as to connect said elements together.

11. In a window structure, an inside glass-clamping member provided on its under side with flanges, a device having a head which supports said member and projects over the flanges thereon, said clamping member being provided with an opening, and a recess or depressed portion on the head of said supporting device which alines with said opening.

12. In a window structure, an inside glass-clamping member provided with a gutter in which an opening is formed, flanges on the under side of said member, a supporting device connected to the stationary glass-supporting frame and provided with a head which laps over the flanges on said clamping member, and a depressed portion or recess in the top face of said head that alines with the opening in said clamping member and thus forms a passageway for water or air.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this thirty first day of March 1911.

DANIEL J. MURNANE.

Witnesses:
WELLS L. CHURCH,
GEORGE BAKEWELL.