Oct. 23, 1934. M. KATZ 1,978,090

WINDOW GLASS MOUNTING

Filed March 25, 1933

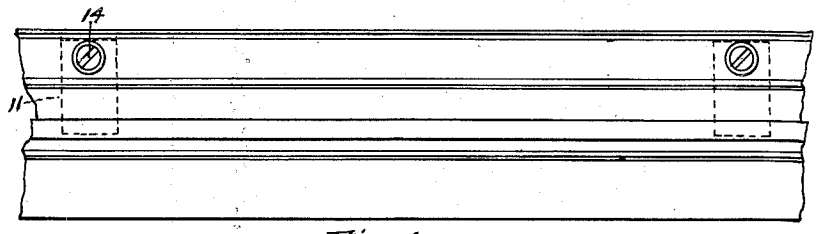


Fig. 4

Fig. 1

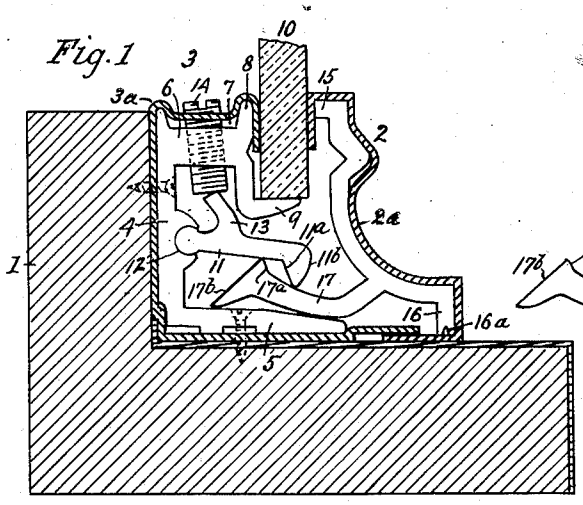
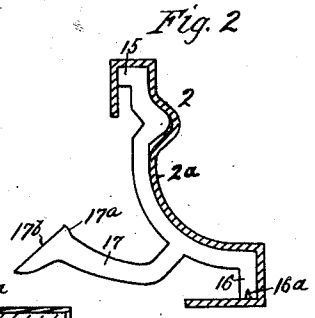


Fig. 2



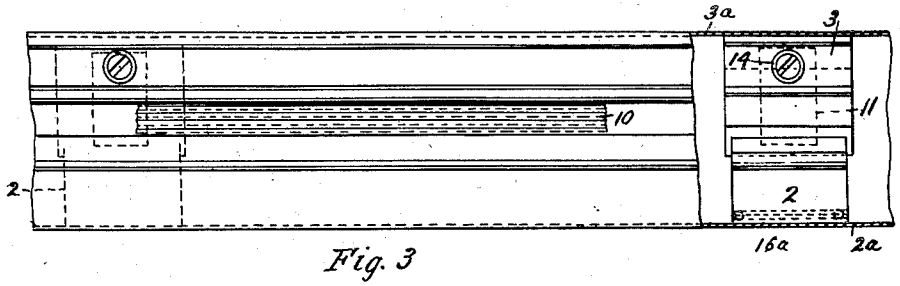


Fig. 3

INVENTOR
Martin Katz

BY
Wm Bodge ATTORNEY

Patented Oct. 23, 1934

1,978,090

UNITED STATES PATENT OFFICE

1,978,090

WINDOW GLASS MOUNTING

Martin Katz, Brooklyn, N. Y.

Application March 25, 1933, Serial No. 662,717

7 Claims. (Cl. 20—56.4)

The present invention relates to improvements in window glass mountings for store front construction of the class consisting of front and rear sash members between which the glass is supported along the opposite marginal side edges thereof.

As commonly constructed the sash members are operated by a series of screws adapted to exert considerable local pressure that tends under ordinary conditions to check or crack the glass.

The objects of this invention include means for regulating the screw actions in a manner to avoid breaking the glass, and at the same time affording a positive locking device for supporting the sash members in operative position.

An object also is to provide means, to a certain degree automatic, whereby the front sash member may be quickly secured in detachable relation with the fixed rear sash member to suit glass of variable thickness.

For further comprehension of the invention, and of the objects and advantages thereof, reference is had to the following description and accompanying drawing, and to the appended claims in which the various features of the invention are more particularly set forth.

Referring to the drawing in which similar characters of reference designate like parts throughout the several views:

Figure 1 is a transverse assembly view, partially sectional, of a pair of opposite sash members comprising relatively thin metal outer walls internally reinforced with operating block sections formed of extruded metal as embodied in the present invention.

Figure 2 is a view showing the removable front sash member detached from the fixed back member.

Figure 3 is an extended top plan view of Fig. 1 showing the top plates partially removed to more clearly disclose the interior construction thereof.

Figure 4 is a top plan view of a pair of opposite sash members formed throughout of extruded metal having transverse sections corresponding with the view of the reinforcing block sections shown in Fig. 1, the relatively thin metal outer walls shown therein being dispensed with.

Referring to Figs. 1 and 2 of the drawing, numeral 1 indicates a fixed frame or sill on which is mounted a pair of opposite front and rear sash members respectively indicated generally by 2 and 3, the outer surfaces of the members being formed of relatively thin metal shaped to conform with and secured to interior supporting block sections, spaced apart from one another, and formed of extruded metal.

The blocks supporting the rear sash member 3 are formed with a back wall 4 and a base wall 5 secured by screws to the sill 1, and are also provided with a top wall 6 formed with an upper drainage trough 7, and side and edge supports for the glass, indicated respectively by 8 and 9, the glass being shown at 10. A locking lever 11 is pivoted at one end in a socket 12 formed in the back wall 4, and intermediate its ends the lever is formed with a projecting lug 13 adapted to be releasably engaged by an operating screw 14. About its pivot end the locking lever 11 is free to turn a limited amount controlled by the spaced jaws of the socket, that retain the lever in its movements and allow the outer free end thereof to fall by gravity, said latter end constituting a head provided with inclined projecting faces 11*a* and 11*b*.

The blocks supporting the front sash member 2 are preferably formed as a molding having at their upper ends a clamping member 15 for the front marginal edges of the glass, and at their lower ends a leg 16. Adjacent their lower ends these blocks are provided with an inwardly projecting arm 17 adapted to aline with and bear upon the base wall 5 of the sash member 3, and in connection with the leg 16 is adapted to manually receive inward and outward parallel movements over said base wall 5 and the outer face of sill 1 to adjust its position relative to the thickness of the glass. The free end of arm 17 is also provided with inclined projecting faces 17*a* and 17*b* as shown in Fig. 1, in which the opposite front and rear sash members are indicated as locked together with the glass in assembled position by the screws 14, the inclined projecting faces 11*a* and 11*b* of lever 11 and the coacting parts 17*a* and 17*b* of the arm 17 constituting in their movements interengaging cam sections.

For the removal of the glass the screws of the rear sash members are sufficiently released to free the levers 11 and permit of the outward manual removal of the front sash members, and in which movements the inclined faces 17*a* of the arms 17 engage the inclined faces 11*a* of the levers 11 and automatically raise and free the latter at its locking end from the arms, whereby the front sash members may be completely removed, while the weight of the glass is held by the edge supports 9 of the rear sash members, and from which position the same is free to be readily removed.

In assembling the parts, the screws 14 being released, the process is reversed by placing the glass upon the edge supports 9 and inwardly sliding the front sash members together with the fixedly connected arms 17 over the outer face of sill 1 and the base members 5 of the rear sash members, the inward movements of arms 17 serving by means of engagement of the inclined surfaces 17*b* thereof with the front beveled surfaces 11*b* of levers 11 to automatically raise and pass under the locking end of said levers, allowing the latter to fall by gravity upon said arms intermediate the length thereof. Also in the inwardly sliding movements of the front sash members the upper clamping members 15 thereof exert a manual pressure against the front marginal edge of the glass in opposition to the corresponding lateral support 8 of the rear sash members, the said manual pressure from the front sash members being sufficient to adjust and hold the glass without injury thereto, and in which position the opposite sash members are detachably locked together against accidental displacement and independently of said manual pressure by the locking members consisting of the base wall 5, arm 17, lever 11 and screw 14, the said levers, arms and base members being shaped to receive from the screws their full locking pressure without disturbing the relative position of the front sash members with respect to the latter's manual pressure against the glass. Variable thicknesses of the latter are also provided for by the self-adjusting action of the locking members shown as controlled by the variable positions of the front clamping face of the glass.

As indicated in Figs. 1, 2 and 3, 2*a* and 3*a*, respectively represent the relatively thin outer metal surfaces of the pair of sash members, and extending lengthwise at the base of leg 16 a groove 16*a* is formed that serves to fix the position of the blocks within the outer shell of the front sash member by means of indentations extending from the thin outer wall into said groove, and for a similar purpose indentations or notches are formed along the free edges of the socket 12 on opposite sides of the relatively narrow lever 11 to laterally position the same within the rear sash member, and in alinement with the screws 14.

In Fig. 3 the blocks are shown as cut into relatively short lengths from long lengths of extruded metal, each block constituting a complete operative unit adapted to act through the outer shell to secure the glass without danger of injuring the latter, while in Fig. 4 relatively long metal lengths are employed without the outer shells and are similarly operable to lock the members together with spaced levers and screws as shown.

It is to be understood that while I have illustrated and described the preferred embodiment of the invention, it is susceptible of various changes as regards its form, proportions, detail construction, and arrangement of parts without departing from the essential spirit and scope or sacrificing any of the advantages of the invention.

I claim:

1. In a glass mounting, a fixedly supported rear sash member disposed to engage the rear marginal edges of the glass and provided with a base wall, a front sash member disposed to engage the front marginal edges of the glass and provided with a projecting arm engaging said base wall, a lever pivotally supported within said rear sash member, and means acting through said lever to clamp said arm to said base wall.

2. In a glass mounting, a fixedly supported rear sash member disposed to engage the rear marginal edges of the glass and provided with a base wall, a front sash member disposed to engage the front marginal edges of the glass and provided with a projecting arm engaging said base wall, a lever pivotally supported within said rear sash member, and a screw engaging said lever and acting therethrough to effect a clamping pressure between said arm and base wall.

3. In a glass mounting, a fixedly supported rear sash member disposed to engage the rear marginal edges of the glass and provided with a base wall, a front sash member disposed by manual adjustment to engage the front marginal edges of the glass and provided with a projecting arm engaging said base wall, a screw actuated clamp lever disposed to detachably lock said arm to said base wall and thereby secure said front and rear sash members together as positioned by said front sash member, and means upon the release of said lever for disconnecting said front sash member for the release of the glass.

4. In a glass mounting, front and rear sash members composed of relatively thin metal outer walls, said rear members being fixed and the front members removable, reinforcing blocks disposed within said front and rear members, the blocks of said rear members having supporting means for the rear marginal faces of the glass and provided with base walls, the blocks of said front members having supporting means for the front marginal faces of the glass and provided with projecting arms disposed to engage the base walls of said rear blocks, means for manually adjusting the inward position of the front sash members and blocks with respect to the glass, and means for locking said arms and base walls together as positioned by the manual adjustment of said front sash members.

5. In a glass mounting, a fixedly supported rear sash member disposed to engage the rear marginal edges of the glass and provided with a base wall, a front sash member manually disposed to exert a clamping pressure on the front marginal edges of the glass and provided with a projecting arm having its free end slidably engaging said base wall, a lever pivotally supported at one end within said rear sash member, and a screw engaging said lever and acting therethrough to clamp said arm to said base wall and lock said front sash member as manually positioned with respect to the glass.

6. In a glass mounting, a fixedly supported rear sash member disposed to support the rear marginal edges and the extreme outer edges of the glass and provided with a base wall, a front sash member disposed by manual adjustment to support the front marginal edges of the glass with respect to the rear sash member and provided with a projecting arm engaging said base wall, a screw actuated lever pivotally supported within said rear sash member, and means acting through said lever to clamp said arm to said base wall and lock said front sash member as manually positioned with respect to the glass.

7. In a glass mounting, a fixedly supported rear sash member disposed to engage the rear marginal edges of the glass and provided with a base wall, a front sash member disposed for manually urged engagement with the front mar-

ginal edges of the glass and provided with a projecting arm slidingly engaging said base wall, a screw-actuated locking lever pivotally supported within said rear sash member and adapted to clamp said arm to said base wall, and interengaging cam-shaped sections formed on the free ends of said arm and lever whereby upon the release of the screw action of said lever the front sash member is free to be slid outwardly or inwardly to automatically raise and lower said lever and respectively release and reposition said front sash member and locking parts.

MARTIN KATZ.