March 10, 1942. S. ROSENBLATT 2,275,559

WINDOW SASH CONSTRUCTION

Filed June 1, 1939

Fig. 1.

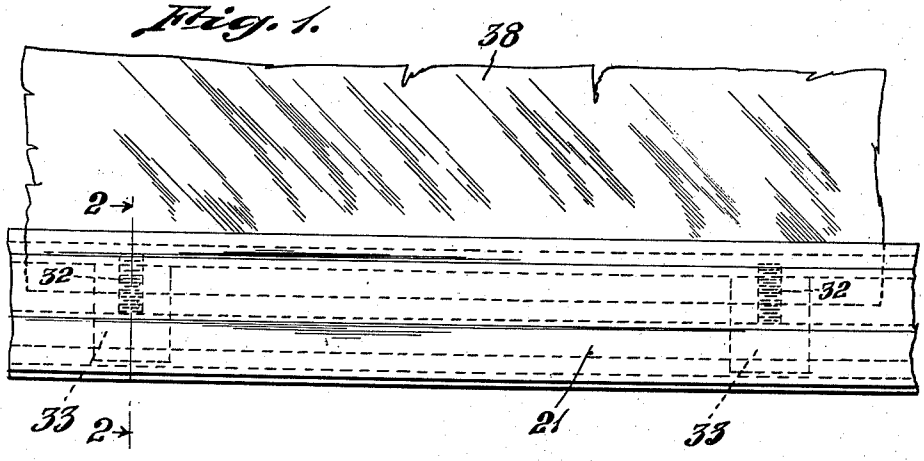


Fig. 2.

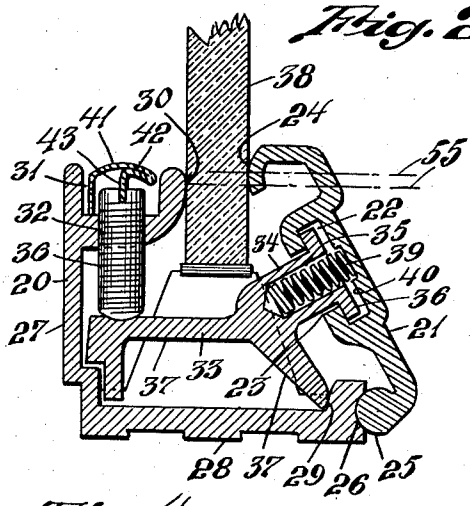


Fig. 3.

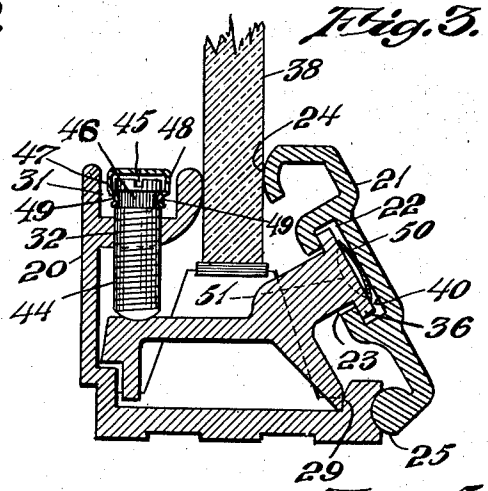


Fig. 4.

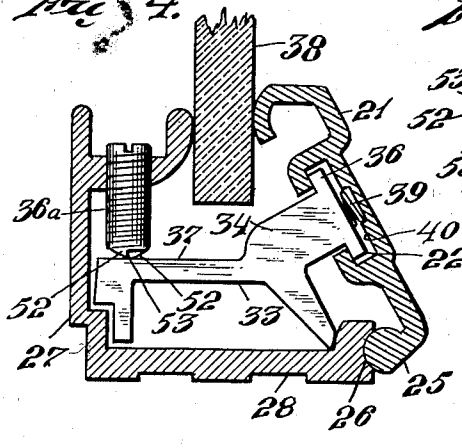


Fig. 6.

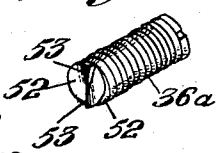
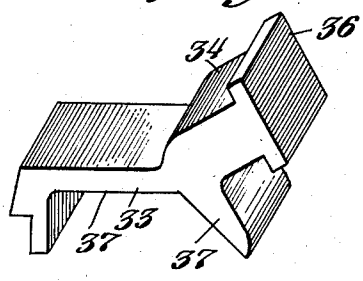


Fig. 5.



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WINDOW SASH CONSTRUCTION

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Application June 1, 1939, Serial No. 276,775

4 Claims. (Cl. 20—56.4)

This invention relates to improvements in window sash construction.

One object of the invention is to provide a safe and reliable glass supporting, adjustable locking device for window or door glass sash frames.

Another object of the invention is to provide inexpensive, efficient means to make and to assemble sash members that may be easily and quickly attachable or detachable to the edges of plate glass, thus framing said glass by said sash for installation in a building.

A further object of the invention is to provide means by which a broken plate glass may be easily and quickly removed from the sash and new glass easily and quickly installed in said sash frame without removing said sash frame from the building.

A still further object of the invention is to provide plate glass sash means which, although of rigid, strong and durable construction, will, by means of novel assembly respond in desired flexibility and sustaining strength to bending glass caused by storm wind pressure.

Fig. 1 is a front elevational view of a fragmental portion of a window sash construction made according to my invention;

Fig. 2 is a sectional view taken substantially on line 2—2 of Fig. 1;

Fig. 3 is a sectional view similar to that shown in Fig. 2 but illustrating another form of the invention;

Fig. 4 is a sectional view showing a further modification of the invention.

Fig. 5 is a perspective view of a glass clamping element; and

Fig. 6 is a perspective view of a screw bolt formed according to the invention.

My improved sash construction in the form shown in Figs. 1 and 2 comprises a rear frame section 20 and a front frame section 21 having a channel 22 provided with a restricted opening 23. The upper portion of the front frame section 21 has a glass engaging curved surface 24 and the lower portion is provided with a rounded end extremity 25 pivotally received in a groove 26 provided in the rear frame section 20. This rear frame section 20 is substantially L-shaped in form providing an upright portion 27 and a base portion 28, the extreme free end of which is enlarged providing a shoulder 29. The groove 26 is located in the end surface of the enlarged portion. The upright portion 27 has a glass engaging curved surface 30 and a drain channel 31, the bottom wall of which is provided with spaced threaded openings 32 extending therethrough.

A lever member 33 generally Y-shaped in form has an arm 34 provided with an opening 35 and an enlarged portion 36 of greater dimension than the restricted opening 23 but freely slidably received in the channel 22 and has an arm 37 fulcrumed against the shoulder 29.

Slotted screw bolt member 36 threadingly engages the openings 32 and extends therethrough into engagement with the arm 37 to apply a pressure thereon to relatively move the glass engaging surfaces 24 and 30 towards each other and clamp the glass 38 therebetween. This lever member 30 is resiliently secured in position by means of a coil compression spring 39 inserted in the opening 35 and extending into engagement with the wall 40 of the channel and urges the enlarged portion 36 against the walls of the channel 22 adjacent the restricted opening 23.

In order to retain the screw bolts 36 in adjusted position and to partially cover the drain channel 31, I provide a combined closure and locking member 41 in which one of its walls is bent inwardly as at 42 providing a portion 43 adapted to be received in the slots of the screw bolts 36 to prevent their being moved by vibration and the like.

In the form of the invention shown in Fig. 3 the screw bolt members 44 are provided with a slotted portion 45 and a square part 46 adjacent thereto. The combined drain channel closure and screw bolt locking member in the present instance has the end portion of the depending walls 47 and 48 curved inwardly as at 49. These curved portions 49 are adapted to rest against the squared portion 46 and retain the screw bolt members 44 in adjusted position. In this form of the invention I resiliently mount the lever member 33 to the front frame section by means of a flat spring member 50 interposed between the wall 40 of the channel 22 and the enlarged portion 36. The spring member 50 is retained in position on the enlarged portion 36 by bending the ends of the spring about the edges of the enlarged portion as at 51. In the present instance I omit the opening 35 in the lever 33 as shown in Fig. 5.

In the form of the invention shown in Fig. 4 the screw bolt members 36A are prevented from accidental loosening by forming the lever engaging ends thereof with oppositely positioned bevelled surfaces 52 providing chisel-like edges 53. These bevelled surfaces 52 are so disposed with respect to the threaded portion that turning the

screw bolt members in a direction to advance them towards and into engagement with the arm **37** will cause the edges **53** to slide over the contacting surface when in engagement therewith but when turning the screw bolt members in a direction to loosen them, the edges **53** will have a tendency to dig or bite into the surface of the arm **37** and lock the members in position.

The glass engaging surfaces **24** and **30** are positioned opposite to each other but so arranged that their point of engagement with the glass **38** will be out of line with each other lengthwise of the frame section as shown by dot and dash lines **55** in Fig. 2.

This arrangement will permit the glass **38** to rock about the points of engagement with the sash frame under pressure of heavy winds to a greater degree than possible in the conventional manner of positioning the glass contacting surfaces of the sash opposite to each other as is common practice in the prior art.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of my invention, or the scope of the subjoined claims.

I claim:

1. In a sash construction, a front frame section and a rear frame section pivotally related and movable towards each other and provided with opposed glass contacting surfaces, said front frame section having a groove therein provided with a restricted opening and extending lengthwise thereof, a lever member having an enlarged portion provided with an opening and slidably mounted in said groove, a spring in said opening and extending therefrom into engagement with the wall of said groove opposite to said opening and tensioned to move said enlarged portion into engagement with the walls of said groove adjacent to said restricted opening to resiliently secure said lever member to said front frame section, and means for applying a force on said lever member to relatively move said glass contacting surfaces towards each other to clamp the glass therebetween.

2. In a sash construction, a front frame section and a rear frame section pivotally related and movable towards each other and provided with opposed glass contacting surfaces, a plurality of spaced lever members secured to said front frame section, said rear frame section having a drain channel extending lengthwise thereof provided with a plurality of pressure screw members extending therethrough into engagement with said lever members and rotatable to apply a pressure thereon to relatively move said frame sections towards each other to clamp the glass therebetween, and a cover partially closing the opening of said drain channel and arranged to engage and lock said pressure screw members against rotations.

3. In a sash construction, a front frame section and a rear frame section pivotally related and movable towards each other and provided with opposed glass contacting surfaces, said front frame section having a groove therein provided with a restricted opening and extending lengthwise thereof, a lever member having an enlarged portion provided with an opening and slidably mounted in said groove, a spring in said opening and extending therefrom into engagement with the wall of said groove opposite to said opening and tensioned to move said enlarged portion into engagement with the walls of said groove adjacent to said restricted opening to resiliently secure said lever member to said front frame section, a pressure screw for applying a force on said lever member to relatively move said glass contacting surfaces towards each other to clamp the glass therebetween and means for locking said pressure screw against rotation.

4. In a sash construction, a front frame section and a rear frame section pivotally related and movable towards each other and provided with opposed glass contacting surfaces; said front frame section having a groove therein provided with a restricted opening and extending lengthwise thereof, a lever member having an enlarged portion slidably mounted in said groove, a spring engaging said enlarged portion and extending therefrom into engagement with the wall of said groove opposite to said enlarged portion and tensioned to move said enlarged portion into engagement with the walls of said groove adjacent to said restricted opening to resiliently secure said lever member to said front frame section and means for applying a force on said lever member to relatively move said glass contacting surfaces towards each other to clamp the glass therebetween.

SIGMOND ROSENBLATT.