Jan. 10, 1939. C. D. LOWRY 2,143,737

SASH AND STORE FRONT CONSTRUCTION

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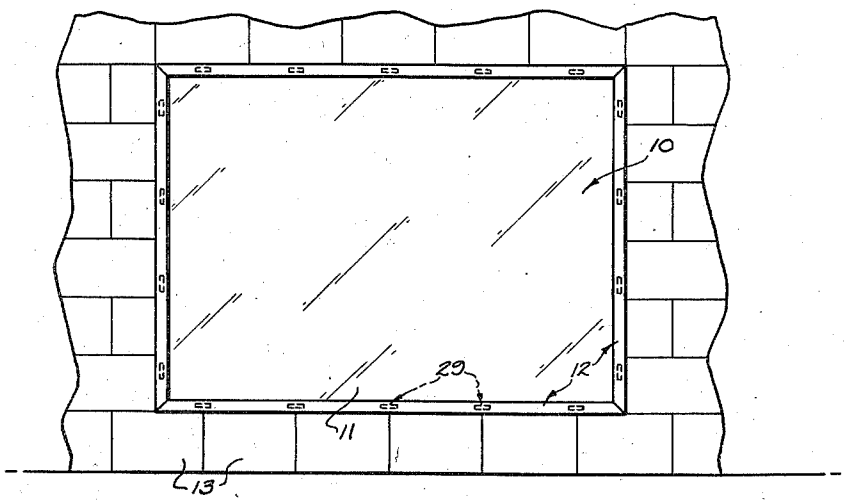


Fig. 1.

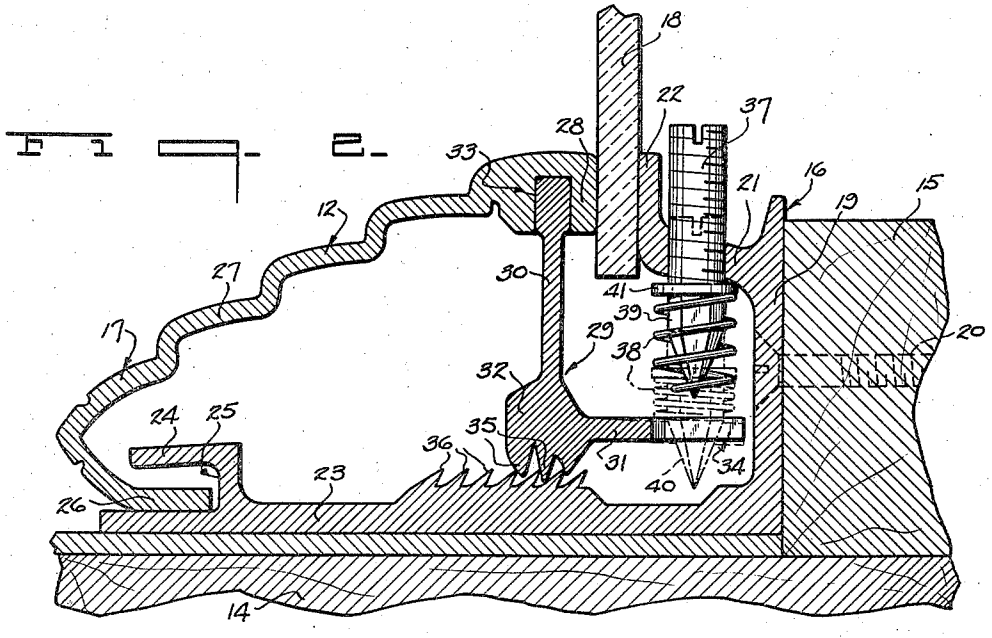


Fig. 2.

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SASH AND STORE FRONT CONSTRUCTION

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Fig. 3.

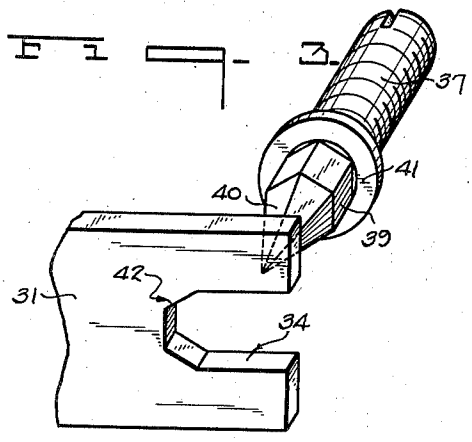


Fig. 5.

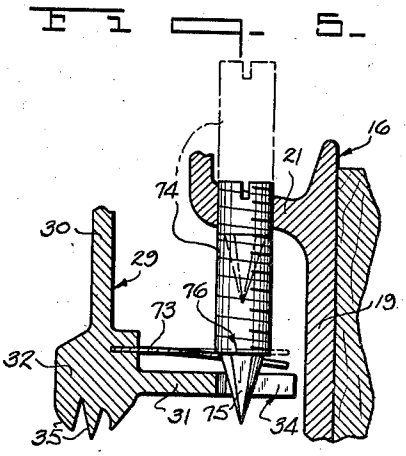


Fig. 6.

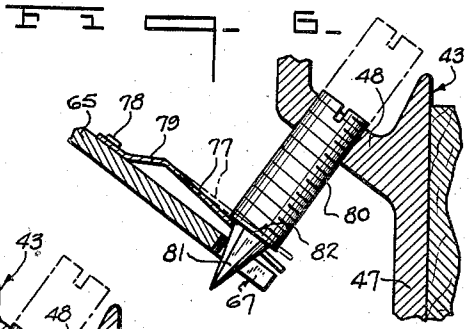
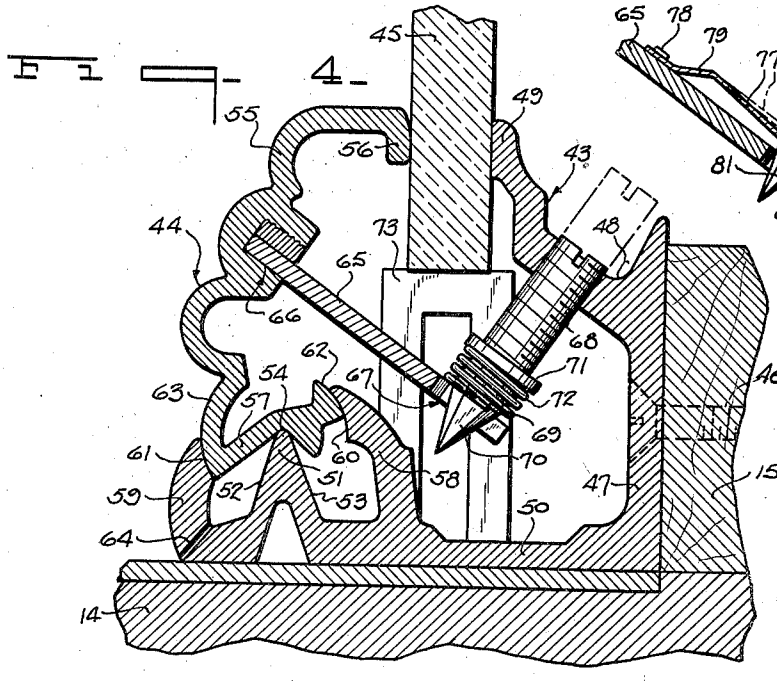


Fig. 4.



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Patented Jan. 10, 1939 2,143,737

UNITED STATES PATENT OFFICE

2,143,737

SASH AND STORE FRONT CONSTRUCTION

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Application April 22, 1938, Serial No. 203,473

14 Claims. (Cl. 20—56.4)

The present invention relates to sash and store front constructions and in general has to do with an improved type of metal construction for supporting and holding panes of glass in glazed openings such as, for example, in windows, store fronts, showcases, and the like.

Broadly speaking, the metal sash construction herein provided comprises a stationary section and a movable section adapted to receive and grip a pane of glass therebetween, together with tensioning means for connecting the said sections together and for also effecting the application of the desired pressure upon the glass to secure it in place.

An important object of this invention resides in the provision of improved tensioning means for connecting the stationary and movable sash sections together in such a manner that they will exert a resilient cushioned pressure upon the pane of glass while at the same time permitting relative movement between the said sections to take care of vibration and expansion and contraction of the glass and metal sash construction without disturbing the setting of the pane or causing injury thereto.

Another important object of the invention is the provision of novel tensioning means of the above character wherein the pane of glass, regardless of its thickness, will be subjected to a predetermined amount of clamping pressure, the pressure being so applied and controlled that it is impossible during installation to over-tighten the tensioning means in a way to place the glass under excessive strain such as would result in the breaking or chipping thereof.

Another important object of the invention is the provision of novel tensioning means of the above character embodying a plurality of cooperating adjusting members and spring members, together with positive means for preventing further tightening of said adjusting members when said spring members have caused the sash sections to exert a predetermined clamping pressure upon the glass.

Other objects and advantages of the invention will become more apparent during the course of the following description when taken in connection with the accompanying drawings.

In the drawings wherein like numerals are employed to designate like parts throughout the same:

Fig. 1 is a front elevation of a sash or store front embodying the present invention;

Fig. 2 is a transverse sectional view through one form of metal sash construction embodying the invention;

Fig. 3 is a detail perspective view of a portion of the tensioning means;

Fig. 4 is a transverse sectional view through another form of sash construction embodying the invention; and

Figs. 5 and 6 are detail sectional views showing a modified tensioning means which may be incorporated in the sash constructions of Figs. 2 and 4 respectively.

In Fig. 1, the numeral 10 designates, in its entirety, a glazed opening in which is mounted a pane of glass 11 supported in the window opening by the metal sash construction 12 arranged at the top, bottom, and sides of said window. As shown, the building may be faced with stone, Vitrolite, or other ornamental slabs or panels 13 to enhance the appearance thereof.

With reference particularly to that form of the invention illustrated in Figs. 2 and 3, the metal sash construction 12 is mounted on a wooden sill 14 and secured to a wooden back stop 15 carried upon said sill. The sash construction comprises a rear stationary section 16 and a movable front section 17 associated with one another to clamp the pane of glass 18 in position therebetween.

The rear stationary section 16 includes a vertical back wall 19 which abuts the wooden back stop 15 and is secured thereto by screws or the like 20. Formed integral with the back wall 19 adjacent its upper end is a forwardly directed gutter portion 21 terminating in a substantially vertical lip 22 engaging the inner face of the pane of glass 18, while formed integral with the back wall 19 at the lower end thereof is a forwardly directed, substantially horizontal base plate 23 supported upon the sill 14. Provided adjacent the front end of the base plate 23 is a raised, forwardly extending flange 24 which cooperates with the outer end of said base plate to form a substantially U-shaped channel 25 receiving the lower inturned end 26 of the movable front section 17.

The movable front section 17 comprises a face piece 27 provided at its upper end with a lip 28 engaging the outer face of the pane of glass 18, said pane being supported at its lower edge upon a plurality of setting blocks which, while not shown, are well known in the art.

Carried by the face piece 27 are a plurality of substantially L-shaped levers 29, each comprising a substantially vertical arm 30 and a substantially horizontal arm 31 connected together by a ful-

crum 32. The vertical arm 30 is secured at its upper end in a groove 33 formed in said face piece, while the horizontal arm 31 extends rearwardly beneath the pane of glass 18 and is formed at its outer end with an open slot 34. The fulcrum 32 is provided with a series of teeth 35 adapted for selective engagement with the teeth 36 formed on the upper surface of the base plate 23.

The means for tensioning or adjusting the movable section 17 to exert the desired clamping pressure upon the pane of glass 18 includes a plurality of cooperating adjusting screws 37 and compression coil springs 38, one adjusting screw 37 and compression spring 38 being associated with each lever 29. Each adjusting screw 37 consists of a screw-threaded outer end portion which is threaded vertically through the gutter 21, said screw being provided adjacent its lower end and beneath said gutter with a relatively short hexagonal portion 39 terminating in a pointed end 40. Carried by the adjusting screw directly above the hexagonal portion 39 is a collar 41. When the sash construction is properly installed, the compression spring 38 is adapted to encircle the hexagonal portion of the adjusting screw and to bear at its upper end against the collar 41 and at its lower end against the substantially horizontal arm 31 of the respective lever 29. The inner end 42 of the slot 34 in said arm 31 is preferably shaped to correspond to the hexagonal portion 39 of adjusting screw 37.

To install a pane of glass 18 in an opening to be glazed, the rear sash section 16 is first properly secured in place by the screws 20, after which the adjusting screws 37 are associated therewith by threading them upwardly through openings in the gutter 21. The compression springs 38 are preferably secured at their upper ends to the collars 41, such as by spot welding or the like, so that the said screws and springs can be associated with the rear section as a unit and in order to prevent the said springs from sliding downwardly off of the screws during the positioning of the front section 17.

Suitable setting blocks are then arranged upon the base plate 23 of the rear section 16 to support the lower edge of the pane of glass. The front section 17, equipped with the desired number of levers 29 (one for each adjusting screw 37) is then associated with the rear section 16, and this is accomplished by placing the lower inturned end 26 of the face piece 27 under the flange 24 and shoving the movable section inwardly toward the rear section to bring the lip 28 of said movable section into contact with the outer face of the pane of glass 18 and the inner face of said pane into contact with the lip 22 of the rear section. At this time, the adjusting screws 37 are in their uppermost position as indicated by the full lines in Fig. 2, so that the lower ends thereof are above and out of the way of the arms 31 of levers 29.

When the front section 17 has been properly positioned, the teeth 35 of levers 29 will engage the teeth 36 on base plate 23, while the slots 34 in the arms 31 of levers 29 will be positioned directly beneath the adjusting screws 37. While the front section is held in proper position, the adjusting screws are threaded downwardly, with the lower pointed ends 40 thereof passing through the slots 34. As the adjusting screws are tightened down, the springs 38 engaging the arms 31 of levers 29 will be compressed, as shown in broken lines in Fig. 2, and the pressure built up upon compression of the springs will cause the levers 29 to be rocked in a clockwise direction upon teeth 36 to force the lip 28 of the movable section inwardly into engagement with the pane of glass 18 to exert the desired clamping pressure thereagainst. The amount of pressure exerted against the glass will be dependent upon the strength of the compression springs 38 and the extent to which the adjusting screws 37 are tightened to compress said springs.

According to the invention, downward movement of the adjusting screws 37 is limited and a positive means provided for preventing overtightening of said screws. Thus, regardless of the skill of the installation man, excessive pressure cannot be applied to the glass which might result in breakage thereof. This is effected by making the hexagonal portion 39 of the adjusting screw of such diameter in relation to the width of the slot 34 in lever arm 31 that when the said screw has been threaded downwardly a predetermined distance, it will bind in said slot and thus prevented from being further rotated. Consequently, after the strength of the compression spring 38 and the distance the screw 37 is to be threaded downwardly have been once determined, a uniform pressure will always be applied to the glass and over-tightening of the screw prevented. In other words, the construction is such that the operator, when installing the glass, always moves the adjusting screw downwardly as far as he can, since when the spring 38 has been compressed to the desired extent to cause the sash sections to exert a predetermined pressure upon the glass, the screw will automatically bind in the slot and be prevented from further rotation. In this way, the glass will be held in position by a predetermined spring or resilient pressure, and this pressure will be the same whether the glass be one-eighth, one-fourth, or three-fourths of an inch in thickness. The compression springs 38 also serve in the capacity of strain or shock absorbers permitting expansion and contraction of the glass and metal, vibrations, etc. without danger of breaking the glass.

In Fig. 4 is illustrated another form of sash construction embodying the principles of the invention described above and which also includes a rear stationary section 43 and a movable front section 44 associated with one another to clamp the pane of glass 45 in position therebetween. The rear stationary section 43 is supported upon the wooden sill 14 and secured to the wooden back stop 15 by screws or the like 46 which pass through the vertical back wall 47 of said section. Formed integral with the back wall 47 adjacent its upper end is a forwardly directed gutter 48 terminating in a lip 49 engaging the inner face of the pane of glass 45. The stationary section also includes the forwardly extending horizontal base portion 50 resting upon sill 14 and provided adjacent its forward end with an upstanding fulcrum support 51 having upwardly converging side walls 52 and 53 terminating in either a rounded or pointed upper edge 54.

The movable front section 44 comprises a face piece 55 provided at its upper end with a lip 56, engaging the outer face of the pane of glass 45, and at its lower end with an inwardly directed flange 57 pivotally supported or fulcrumed upon the upper edge 54 of the fulcrum support 51.

A guard lock mechanism is provided to prevent accidental displacement of the face piece 55 from the fulcrum support 51. This guard lock is

created by the provision of the upstanding rib 58 and flange 59 formed integral with the base portion 50 at opposite sides of the fulcrum support 51, and in providing said upstanding rib and flange with the inner curved faces 60 and 61 struck on an arc from the fulcrum support 51. The inner end face 62 of the inwardly directed flange 57 of face piece 55 and the outer face 63 of said face piece are curved to correspond to the curvature of the faces 60 and 61 respectively. It will be readily seen that as the face piece 55 is rocked on the fulcrum support 51, the curved faces 60—62 and 61—63 will be in sliding contact with one another so that when the pane of glass is secured in position as hereinafter described, the said face piece cannot be removed from its intended adjustment. Drainage openings 64 may extend through the base portion 50 to prevent accumulation of water, etc. in the interior of the sash construction.

The means for connecting the front and rear sash sections 43 and 44 together and for exerting the desired clamping pressure upon the glass includes a plurality of substantially rigid lever arms 65 secured at one end within a groove 66 in the face piece 55, said arms extending rearwardly and downwardly and provided at their free inner ends with slots 67 similar to the slots 34 in lever arms 31 above described.

Threaded through the gutter 48 of the rear section 43 are a plurality of adjusting screws 68 (one for each lever arm 65), each screw being provided at its inner end with a hexagonal portion 69 terminating in a pointed end 70 which is adapted to be received through the slot 67 in the respective lever arm 65. Carried by each screw 68 above the hexagonal portion 69 is a collar 71 and encircling the said hexagonal portion is a compression spring 72 adapted to bear at one end against the collar 71 and at its opposite end against lever arm 65.

The operation of this form of sash construction is substantially the same as the operation of the sash construction illustrated in Fig. 2. Thus, the rear section 43 is first secured in position by the screws 46, after which the pane of glass 45 is arranged in place against the lip 49 of said rear section and supported at its lower edge upon a plurality of setting blocks 73. The front section 44 is then associated with the rear section 43 and the said front section rocked in a clockwise direction upon fulcrum support 51 to move the lip 56 thereof into engagement with the outer face of the pane of glass. At this time, the adjusting screws 68 are in retracted position, as indicated by the broken lines, but after the front section has been properly located, the screws 68 are threaded inwardly so that the pointed ends 70 thereof pass through the slots 67 in lever arms 65.

As the tightening of the adjusting screws is continued, the springs 72 will be compressed and the compression of these springs will cause the front section 44 to be rocked upon its fulcrum support 51 to force the lip 56 thereof against the pane of glass with the desired pressure. When the springs 72 have been compressed to the desired extent to cause the sash sections to exert a predetermined clamping pressure upon the glass, the hexagonal portions 69 of the adjusting screws will automatically bind in the slots 67 and further rotation of the said screws by the operator prevented. In this manner, any overtightening of the adjusting screws that might result in glass breakage is effectively prevented.

The compression springs 72 not only function to cause a yielding cushioned pressure to be applied to the glass, but further permit expansion and contraction of the glass and metal as well as vibrations without danger of the glass breaking. In order to obtain a predetermined uniform pressure upon the glass, it is simply necessary to first select a compression spring of the desired strength and to then determine the diameter of the hexagonal portion of the adjusting screw with respect to the width of the slot 67 so that inward movement of the adjusting screw before it binds in the slot will be just enough to compress the said spring to the required extent to give the desired pressure. Thus, a positive means is provided for preventing excessive pressure from being applied to the glass and all of the adjusting screws may be tightened to their maximum limit and without any necessity for discretion on the part of the installation man. Furthermore, it is not necessary for different arrangements to be provided for different thicknesses of sheet, since with the apparatus disclosed the glass will be held in position by a predetermined uniform spring or resilient pressure regardless of the thickness of the sheet.

In Figs. 5 and 6 is illustrated a modified form of tensioning means which may be substituted for the tensioning means in Figs. 2 and 4 respectively, but which operates on the same principle and accomplishes the same purpose. As shown in Fig. 5, the lever 29 is of the same construction as disclosed in Fig. 2, but instead of using coil springs 33, a flat leaf spring 73 is secured at one end to the fulcrum 32 of each lever and extends rearwardly in spaced, substantially parallel relation to the arm 31. The outer free end of spring 73 is provided with a slot which registers with the slot 34 in the arm 31 of lever 29. Threaded downwardly through the gutter 21 of the rear stationary section 16 is an adjusting screw 74 provided at its lower end with a pointed hexagonal portion 75 resulting in the formation of a shoulder 76 at the upper end of said pointed portion.

In operation, after the rear section 16 has been secured in place and the movable front section properly associated therewith, the adjusting screws 74 are threaded downwardly so that the pointed ends 75 thereof pass first through the slots in the springs 73 and then through the slots 34 in the lever arms 31. Upon continued tightening of the screws, the shoulders 76 thereof engaging springs 73 will bend the same downwardly, and the compression of the springs will rock the levers 29 in a clockwise direction to force the front sash section into clamping engagement with the pane of glass. Tightening of the adjusting screws will be continued until the pointed ends 75 thereof bind in the slots 34 of the levers. When this occurs, further bending of the springs 73 will be prevented. Thus, by a proper selection of springs 73 and by proper regulation of the extent to which the screws 74 can be moved downwardly before they bind in the slots 34, a desired predetermined pressure can be applied to the glass.

The construction illustrated in Fig. 6 is substantially the same as that illustrated in Fig. 5, with the exception that it is applied to the form of sash construction disclosed in Fig. 4. Consequently, a detailed description thereof is not thought to be necessary, except to point out that the principal parts also include a leaf spring 77 secured at one end as at 78 to each of the lever arms 65. The spring 77 is bent outwardly as at 79 so that the outer end portion thereof is spaced

from and normally substantially parallel with the lever arm 65. The adjusting screw 80 is provided with a pointed hexagonal end portion 81 which is adapted to pass through the slot in the spring 77 and also through the slot 67 in lever arm 65. The shoulder 82 on adjusting screw 80 engaging spring 77 will cause the flexing thereof to build up the desired clamping pressure against the pane of glass. This flexing of the spring will continue until the pointed end 81 of the adjusting screw binds in the slot 67 in lever arm 65, at which time further inward movement of the adjusting screw will be prevented.

It is to be understood that the form of the invention herewith shown and described is to be taken as the preferred embodiment 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 the invention or the scope of the subjoined claims.

I claim:

1. In a sash or store front construction, the combination of a stationary section and a movable section adapted to receive and grip a pane of glass therebetween, a lever arm carried by said movable section, an adjusting member carried by said stationary section, spring means associated with said lever arm and adjusting member and adapted to be actuated by the said adjusting member to urge the said lever arm in a predetermined direction and the said movable section into engagement with the pane of glass, and means for preventing further actuation of said spring means by said adjusting member when the said adjusting member reaches a predetermined position.

2. In a sash or store front construction, the combination of a stationary section and a movable section adapted to receive and grip a pane of glass therebetween, a lever arm carried by said movable section and having an opening therein, an adjusting member carried by said stationary section and adapted to be received within the opening in said lever arm, spring means associated with said lever arm and adjusting member and adapted to be actuated by the said adjusting member to urge the said lever arm in a predetermined direction and the said movable section into engagement with the pane of glass, and means for preventing further actuation of said spring means by said adjusting member when the said adjusting member reaches a predetermined position within the opening in said lever arm.

3. In a sash or store front construction, the combination of a stationary section and a movable section adapted to receive and grip a pane of glass therebetween, a lever arm carried by said movable section and having an opening therein, an adjusting screw carried by said stationary section and adapted to be received within the opening in said lever arm, and spring means associated with said lever arm and adjusting screw and adapted to be actuated by the said adjusting screw to urge the said lever arm in a predetermined direction and the said movable section into engagement with the pane of glass, said adjusting screw being so related to the opening in said lever arm that further tightening of said adjusting screw will be automatically prevented when the said adjusting screw has actuated the said spring means to the desired extent.

4. In a sash or store front construction, the combination of a stationary section and a movable section adapted to receive and grip a pane of glass therebetween, a lever arm carried by said movable section and having an opening therein, an adjusting screw carried by said stationary section and adapted to be received within the opening in said lever arm, and spring means associated with said lever arm and adjusting screw and adapted to be actuated by the said adjusting screw to urge the said lever arm in a predetermined direction and the said movable section into engagement with the pane of glass, the shape and size of said adjusting screw being so related to the shape and size of the opening in said lever arm that the said adjusting screw will be caused to automatically bind in said opening and thereby prevented from being further tightened when the said spring means has been actuated to the desired extent.

5. In a sash or store front construction, the combination of a stationary section and a movable section adapted to receive and grip a pane of glass therebetween, a lever carried by said movable section and having a toothed portion, toothed means associated with said stationary section and engageable by the toothed portion of said lever, an adjusting member carried by said stationary section, spring means associated with said lever and adjusting member and adapted to be actuated by the said adjusting member to urge the said lever in a predetermined direction and the said movable section into engagement with the pane of glass, and means for preventing further actuation of said spring means by said adjusting member when the said adjusting member reaches a predetermined position.

6. In a sash or store front construction, the combination of a stationary section and a movable section adapted to receive and grip a pane of glass therebetween, a lever carried by said movable section and having a toothed portion, toothed means associated with said stationary section and engageable by the toothed portion of said lever, said lever also having an opening therein, an adjusting member carried by said stationary section and adapted to be received within the opening in said lever, spring means associated with said lever and adjusting member and adapted to be actuated by the said adjusting member to urge the said lever in a predetermined direction and the said movable section into engagement with the pane of glass, and means for preventing further actuation of said spring means by said adjusting member when the said adjusting member reaches a predetermined position within the opening in said lever.

7. In a sash or store front construction, the combination of a stationary section and a movable section adapted to receive and grip a pane of glass therebetween, a substantially L-shaped lever comprising a substantially vertical arm secured to said movable section and a substantially horizontal arm extending beneath the pane of glass toward the stationary section and having an opening therein, said vertical and horizontal arms being connected together by a toothed portion, toothed means associated with said stationary section and engageable by the toothed portion of said lever, a substantially vertical adjusting screw carried by said stationary section and having its lower end adapted to pass through the opening in said horizontal lever arm, and spring means associated with said lever and adjusting screw and adapted to be actuated by the said adjusting screw to urge the said lever in a predetermined direction and the said movable sec-

tion into engagement with the pane of glass, said adjusting screw being so related to the opening in said horizontal lever arm that further tightening of said adjusting screw will be automatically prevented when the said adjusting screw has actuated the said spring means to the desired extent.

8. In a sash or store front construction, the combination of a stationary section and a movable section adapted to receive and grip a pane of glass therebetween, a substantially L-shaped lever comprising a substantially vertical arm secured to said movable section and a substantially horizontal arm extending beneath the pane of glass toward the stationary section and having an opening therein, said vertical and horizontal arms being connected together by a toothed portion, toothed means associated with said stationary section and engageable by the toothed portion of said lever, a substantially vertical adjusting screw carried by said stationary section and having its lower end adapted to pass through the opening in said horizontal lever arm, and a coil spring encircling said adjusting screw and bearing at its upper end against the said adjusting screw and at its lower end against said horizontal lever arm, said coil spring being compressed by the said adjusting screw upon tightening of the latter to urge the said lever in a predetermined direction and the said movable section into engagement with the pane of glass, the shape and size of said adjusting screw being so related to the shape and size of the opening in said horizontal lever arm that the said adjusting screw will be caused to automatically bind in said opening and thereby prevented from being further tightened when the said coil spring has been compressed to the desired extent.

9. In a sash or store front construction, the combination of a stationary section and a movable section adapted to receive and grip a pane of glass therebetwen, a substantially L-shaped lever comprising a substantialy vertical arm secured to said movable section and a substantially horizontal arm extending beneath the pane of glass toward the stationary section and having an opening therein, said vertical and horizontal arms being connected together by a toothed portion, toothed means asociated with said stationary section and engageable by the toothed portion of said lever, a substantially vertical adjusting screw carried by said stationary section and having its lower end adapted to pass through the opening in said horizontal lever arm, and a leaf spring secured at one end to said lever and having its opposite end extending rearwardly in spaced, substantially parallel relation to said horizontal lever arm and having an opening therein directly above the opening in the said lever arm, said adjusting screw being adapted upon tightening thereof to flex said spring to urge the said lever in a predetermined direction and the said movable section into engagement with the pane of glass, the shape and size of said adjusting screw being so related to the shape and size of the opening in said horizontal lever arm that the said adjusting screw will be caused to automatically bind in said opening and thereby prevented from being further tightened when the said spring has been flexed to the desired extent.

10. In a sash or store front construction, the combination with a stationary section and a movable section pivotally mounted upon said stationary section and cooperating therewith to grip a pane of glass therebetween, a lever arm fixed at one end to said movable section and having its opposite end extending beneath the pane of glass toward said stationary section, an adjusting member carried by said stationary section, spring means associated with said lever arm and adjusting member and adapted to be actuated by the said adjusting member to urge the said lever arm in a predetermined direction and the said movable section into engagement with the pane of glass, and means for preventing further actuation of said spring means by said adjusting member when the said adjusting member reaches a predetermined position.

11. In a sash or store front construction, the combination with a stationary section and a movable section pivotally mounted upon said stationary section and cooperating therewith to grip a pane of glass therebetween, a lever arm fixed at one end to said movable section and having its opposite end extending beneath the pane of glass toward said stationary section and provided with an opening, an adjusting member carried by said stationary section and adapted to be received within the opening in said lever arm, spring means associated with said lever arm and adjusting member and adapted to be actuated by the said adjusting member to urge the said lever arm in a predetermined direction and the said movable section into engagement with the pane of glass, and means for preventing further actuation of said spring means by said adjusting member when the said adjusting member reaches a predetermined position within the opening in said lever arm.

12. In a sash or store front construction, the combination with a stationary section and a movable section pivotally mounted upon said stationary section and cooperating therewith to grip a pane of glass therebetween, a lever arm fixed at one end to said movable section and having its opposite end extending beneath the pane of glass toward said stationary section and provided with an opening, an adjusting screw carried by said stationary section and having its inner end adapted to pass through the opening in said lever arm, and spring means associated with said lever arm and adjusting screw and adapted to be actuated by the said adjusting screw to urge the said lever arm in a predetermined direction and the said movable section into engagement with the pane of glass, said adjusting screw being so related to the opening in said lever arm that further tightening of said adjusting screw will be automatically prevented when the said adjusting screw has actuated the said spring means to the desired extent.

13. In a sash or store front construction, the combination with a stationary section and a movable section pivotally mounted upon said stationary section and cooperating therewith to grip a pane of glass therebetween, a lever arm fixed at one end to said movable section and having its opposite end extending beneath the pane of glass toward said stationary section and provided with an opening, an adjusting screw carried by said stationary section and having its inner end adapted to pass through the opening in said lever arm, and a coil spring encircling said adjusting screw and bearing at its upper end against the said adjusting screw and at its lower end against said lever arm, said coil spring being compressed by the said adjusting screw upon tightening of the latter to urge the said lever arm in a predetermined direction and the said movable section into engagement with the pane of

glass, the shape and size of said adjusting screw being so related to the shape and size of the opening in said lever arm that the said adjusting screw will be caused to automatically bind in said opening and thereby prevented from being further tightened when the said coil spring has been compressed to the desired extent.

14. In a sash or store front construction, the combination with a stationary section and a movable section pivotally mounted upon said stationary section and cooperating therewith to grip a pane of glass therebetween, a lever arm fixed at one end to said movable section and having its opposite end extending beneath the pane of glass toward said stationary section and provided with an opening, an adjusting screw carried by said stationary section and having its inner end adapted to pass through the opening in said lever arm, and a leaf spring secured at one end to said lever arm and having its opposite end extending rearwardly in spaced, substantially parallel relation to said lever arm, said leaf spring having an opening therein directly above the opening in the said lever arm, said adjusting screw being adapted upon tightening thereof to flex said spring to urge the said lever arm in a predetermined direction and the said movable section into engagement with the pane of glass, the shape and size of said adjusting screw being so related to the shape and size of the opening in said lever arm that the said adjusting screw will be caused to automatically bind in said opening and thereby prevented from being further tightened when the said spring has been flexed to the desired extent.

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