

D. J. MURNANE.
STORE FRONT AND SHOW WINDOW.
APPLICATION FILED JAN. 24, 1911.

1,008,984.

Patented Nov. 14, 1911.

Fig. 1.

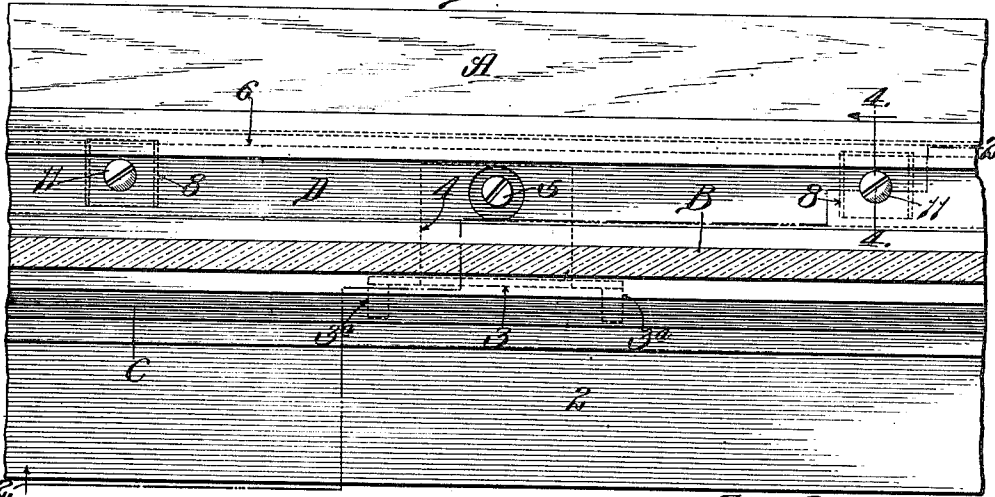


Fig. 2.

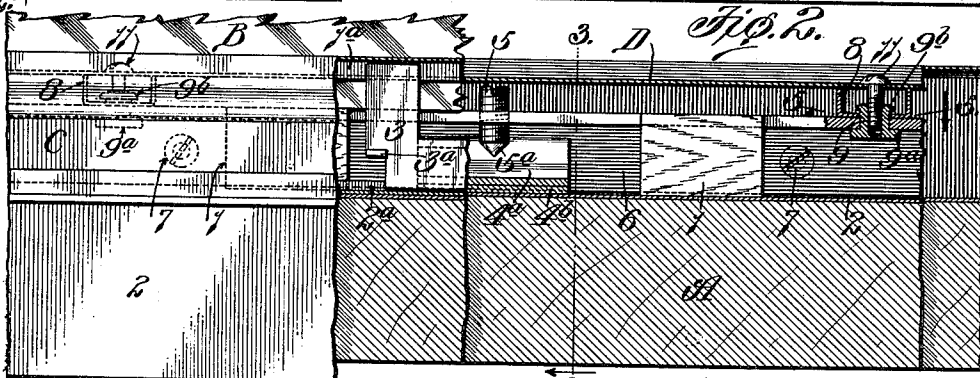


Fig. 3.

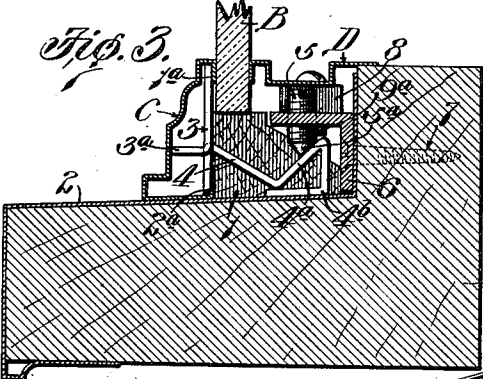


Fig. 4.

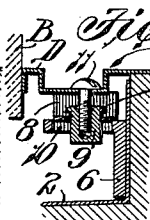


Fig. 5.

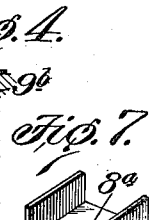


Fig. 6.



Fig. 7.

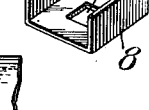
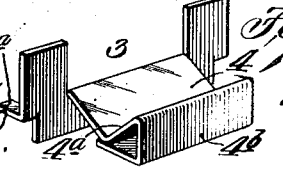


Fig. 8.



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UNITED STATES PATENT OFFICE.

DANIEL J. MURNANE, OF ST. LOUIS, MISSOURI.

STORE-FRONT AND SHOW-WINDOW.

1,008,984.

Specification of Letters Patent. Patented Nov. 14, 1911.

Application filed January 24, 1911. Serial No. 604,389.

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
5 new and useful Improvement in Store-Fronts and Show-Windows, 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
10 same.

This invention relates to store-fronts, show-windows, and similar structures which comprise outside clamping members that bear against the glass and also against the
15 stationary frame in which the glass is arranged.

One object of my present invention is to provide a structure in which the means that retains the outside clamping member in position can be manufactured cheaply and installed easily.

Another object is to provide a structure of the character described that comprises means of novel construction for retaining
25 the adjustable inside glass-clamping member in position. And another object is to provide a key of novel construction for retaining the outside clamping member in position.

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

Figure 1 of the drawings is a top plan view of a window structure embodying my invention, the glass which is arranged between the inside and outside clamping members being shown in section; Fig. 2 is a front
35 elevational view partly in vertical section on the line 2—2, of the parts shown in Fig. 1, the outside clamping member being broken away so as to more clearly illustrate the construction of the means which retains it in position; Fig. 3 is a vertical sectional
40 view taken on the line 3—3 of Fig. 2; Fig. 4 is a vertical sectional view taken on the line 4—4 of Fig. 1; Fig. 5 is a horizontal sectional view taken on the line 5—5 of Fig. 2 looking in the direction indicated by the arrow in Fig. 2; Fig. 6 is a vertical
45 sectional view similar to Fig. 3 of a slightly modified form of my invention; Fig. 7 is a

perspective view of one of the supporting devices shown in Figs. 1 to 4 on which the inside glass-clamping member rests; and Fig. 8 is a perspective view of the key shown in Fig. 3.

Referring to the drawings which illustrate the preferred form of my invention, A designates the sill or lower cross-piece of a stationary frame in which a plate of glass B is arranged, and 1 designates blocks or other suitable devices on which the lower edge of said plate rests. An outside clamping member C is arranged in engagement with the outer face of the glass and in engagement with the sheet metal covering
55 2 that extends over the lower cross-piece A of the frame, and suitable means is provided for retaining said member C in position and drawing it inwardly toward the glass and downwardly toward the frame A. The
60 outside clamping member C may be of any preferred shape or construction but I prefer to form said member from a piece of sheet metal molding provided with vertically disposed flanges 1^a and 2^a that cooperate with the means which retains said member in position. Said retaining means preferably consists of keys 3 arranged inside of the member C in engagement with the flanges 1^a and 2^a, as shown in Fig. 3, and
75 provided with arms 4 that project inwardly beyond the glass, and adjustable devices 5 arranged on the inside of the opening which the glass closes for engaging the arms 4 so as to exert inward and downward pressure on same.

In the embodiment of my invention herein shown, the arm 4 of each key is deflected downwardly and thence upwardly, as shown in Fig. 3, so as to produce an inclined surface 4^a on which the lower end of one of the devices 5 bears, and at the inner end of the arm 4 is a depending L-shaped leg 4^b which rests upon the top face of the lower cross-piece A of the glass-supporting frame
85 or rather upon the sheet metal covering 2 on said cross-piece if said cross-piece is provided with a cover as herein shown. This leg 4^b supports the inner end of the arm 4 so that when the device 5 is screwed down- 100

wardly the tapered lower end 5^a of said device will bear against the inclined surface 4^a of the arm and thus cause the key 3 to draw the outside clamping member C inwardly and downwardly, the pressure which the device 5 exerts on the arm 4 also operating to cause the leg 4^b to clamp the sheet metal covering 2 tightly against the lower cross-piece A of the glass-supporting frame.

10 If desired, the key 3 can be provided with a forwardly projecting part 3^a that bears against the inner side of the member C and thus retains said key in an upright position. By forming the key in this manner, namely,

15 providing it with a depending lug or other suitable supporting device at its inner end I overcome the necessity of forming a supporting leg on the member which carries the devices 5.

20 While I have herein shown only the outside clamping member that is arranged adjacent the lower edge of the glass and have used the terms "inwardly" and "downwardly" to indicate the direction in which

25 said clamping member is moved, it will, of course, be understood that outside clamping members are arranged at the sides and upper edge of the glass, and that said members are moved into engagement with the

30 glass and with the glass-supporting frame when the devices 5 which cooperate with said members are adjusted. Therefore, I do not wish it to be understood that my invention is limited to a structure in which

35 the outside clamping member rests upon the sill or lower cross-piece of the glass-supporting frame.

The devices 5 are mounted on a continuous member 6 that runs longitudinally of the lower edge of the glass, said member 6 preferably consisting of a piece of angle iron arranged with its vertical leg in engagement with the lower cross-piece A of the frame and its horizontal leg projecting

45 outwardly from the upper edge of the vertical leg, as shown in Fig. 3. Screws 7, or other suitable fastening devices, pass through the vertical leg of the member 6 and secure it to the frame A, and the horizontal leg of said member is provided with screw-threaded holes in which the devices 5 are adjustably mounted.

An inside clamping member D is arranged on the inner side of the glass, and a plurality of shiftable devices are mounted on the

55 member 6 for carrying said clamping member D and holding it in adjusted position, thereby enabling the member D to be adjusted relatively to the member C so as to accommodate glass of different thickness. Each of the shiftable devices herein shown for supporting the inside clamping member D and retaining it in position consists of a substantially channel-shaped spacing device

8 provided with a block 9 that is arranged 65 in an elongated slot 10 in the horizontal flange of the member 6, and a screw 11 that passes through said clamping member and projects into a screw-threaded opening in the block 9, as shown clearly in Figs. 70 2 and 4. The block 9 is provided at its lower end with a head 9^a which bears against the under side of the horizontal flange of the member 6, and the spacing device 8 is connected to said block 9 in such 75 a manner that the block can move upwardly relatively to the spacing device and thus bring the head 9^a on said block tightly against the member 6 when the screw 11 is tightened. The block 9 passes loosely 80 through a hole 8^a in the spacing device 8 and the upper end of said block is flanged or upset at 9^b so as to connect said members together. The part of the block which passes through the member 6 and through 85 the device 8, namely, the part that lies between the head 9^a and flange 9^b, is of greater length or thickness than the combined thickness of the horizontal flange of the member 6 and the cross web of the spacing device 90 8 so that the block can drop downwardly far enough to carry the head 9^a thereon out of engagement with the horizontal flange of the member 6 when the screw 11 is 95 loosened. By loosening the screws 11 the inside glass-clamping member D can be moved easily toward or away from the glass, because when said screws are loosened the blocks will drop downwardly far enough to carry the heads thereon out of 100 engagement with the member 6. After the inside clamping member has been adjusted in proper position the screws 11 are tightened so as to press the spacing devices 8 downwardly against the top face of the 105 horizontal flange of the member 6 and also draw the heads 9^a on the blocks 9 tightly against the bottom face of the horizontal flange of the member 6. A means of the construction above described for retaining 110 the inside glass-clamping member in position enables said member to be adjusted quickly and easily, it retains said member securely in position, and it can be assembled complete by the manufacturer and shipped 115 to the point where it is to be installed, thus eliminating a great deal of time and labor in the operation of setting up the device. The keys 3 which retain the outside clamping member C in position, are also an im- 120 provement on the keys which have heretofore been used in structures of this type because they are so constructed that it is not necessary to provide the member 6 with lugs or supporting devices for the inner end of 125 the arms on the keys. Consequently, I am able to use a piece of angle iron to form the member 6 instead of castings of special

construction. The keys 3 are preferably in one piece and are formed of pressed or stamped sheet metal but they could, of course, be formed in various other ways.

5 While I prefer to provide the arm 4 of each key with an inclined surface 4^a against which the pointed end of the device 5 bears so as to draw the outside clamping member downwardly and inwardly when the devices
10 5 are tightened, I do not wish it to be understood that this is the only kind of key that can be used for, if desired, the key can be provided with an inwardly projecting straight arm 40, as shown in Fig. 6, having
15 teeth or corrugations 40^a formed in the top face thereof to cooperate with the pointed end of the device 5. When keys of this construction are used, one of the workmen who is installing the device, presses the out-
20 side clamping member C inwardly and downwardly and then the workman who is on the other side of the glass, tightens the screws 5 so as to exert downward and inward pressure on the arm of the key and in-
25 thus securely lock the outside clamping member in position.

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

30 1. In a structure of the character described, a supporting element, a glass-clamping member, a spacing device interposed between said parts and comprising a movable clamp that is adapted to engage
35 said supporting element, and means for securing said glass-clamping member to said clamp and also forcing said clamp into engagement with said supporting element.

40 2. In a structure of the character described, a stationary supporting element provided with a guideway, a glass-clamping member, a spacing device interposed between said element and member, a block loosely
45 mounted on said device and arranged to move in said guideway, a head on said block, and a screw that passes through said clamping members and projects into a screw-threaded opening in said block.

50 3. In a structure of the character described, a supporting element provided with an elongated slot, a clamping member, a spacing device interposed between said parts, a block arranged in said slot and projecting
55 through an opening in said spacing device, means for preventing said block from becoming detached from said spacing device, a head on the lower end of said block that lies under said supporting element, and a fastening device that secures said clamping
60 member to said block and also draws the head on said block tightly against said supporting element.

4. A supporting means for an adjustable inside glass clamp, comprising a long sup-

porting element of substantially angle-shape 65 in cross section arranged with one of its legs in a horizontal position, shiftable devices on said leg on which the clamp rests, and means for retaining said devices in adjusted position.
70

5. In a structure of the character described, an outside clamping member, a key arranged inside of said member, an arm projecting inwardly from said key, a support-
75 ing leg on the inner end of said arm, and means that cooperates with said arm to retain said clamping member in position.

6. In a structure of the character described, an outside clamping member, an arm projecting inwardly from said member, a
80 supporting leg on the inner end of said arm arranged at an angle to the arm, and an adjustable device arranged on one side of said arm and adapted to engage same to retain said clamping member in position.
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7. In a structure of the character described, an outside clamping member, an arm projecting inwardly from said member and provided at its inner end with a support-
90 ing leg, and an adjustable device arranged on one side of said arm and adapted to engage same to retain said clamping member in position, said adjustable device and arm being so formed that said device exerts
95 pressure on said arm in two different directions.

8. In a window structure, an outside clamping member, a key arranged inside of said member and provided with an inwardly
100 projecting arm, a supporting leg on the inner end of said arm, and means cooperating with said arm for exerting pressure on said clamping member inwardly and down-
wardly.

9. In a window structure, an outside 105 clamping member, a key arranged inside of said member and provided with an inwardly projecting arm, a supporting leg on the inner end of said arm, means cooperating with said arm for exerting pressure on said
110 clamping member inwardly and downwardly, an adjustable inside clamping member, a stationary supporting element, and a plurality of shiftable devices on said supporting element which carry said inside
115 clamping member.

10. In a window structure, a stationary glass-supporting frame, a glass arranged in said frame, an outside glass-clamping mem-
120 ber, an arm projecting inwardly from said member and provided at its inner end with a supporting leg that bears against said frame, and means cooperating with said arm to retain said clamping member in position.

11. In a window structure, an outside 125 glass-clamping member provided adjacent its upper and lower edges with flanges, a key arranged inside of said member in an

approximately vertical position in engagement with said flanges, an arm projecting inwardly from said key, a depending leg on the inner end of said arm arranged at an angle thereto, and means cooperating with said arm for holding said key tightly against said glass-clamping member.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this twelfth day of January 1911.

DANIEL J. MURNANE.

Witnesses:

WELLS L. CHURCH,
GEORGE BAKEWELL.