

April 19, 1938.

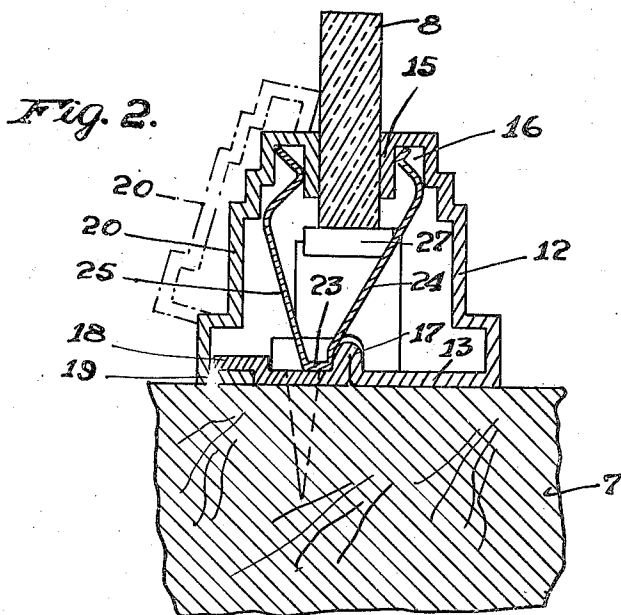
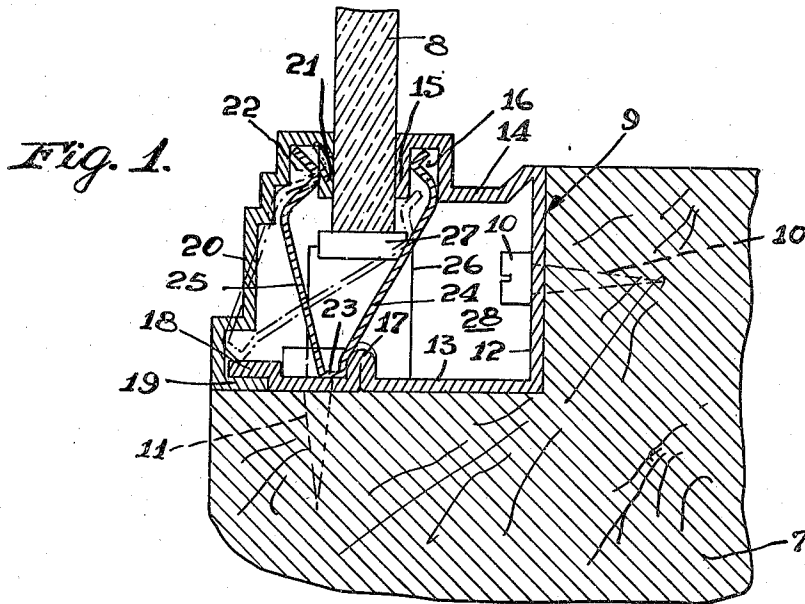
W. OWEN

2,114,722

STORE FRONT CONSTRUCTION

Filed June 24, 1937

3 Sheets-Sheet 1



INVENTOR
WILLIAM OWEN

BY *Bradley & Bee*
ATTORNEYS.

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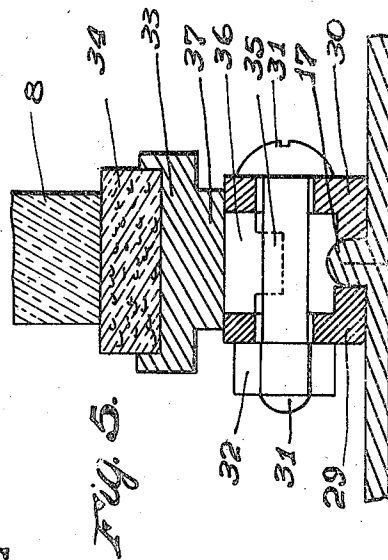
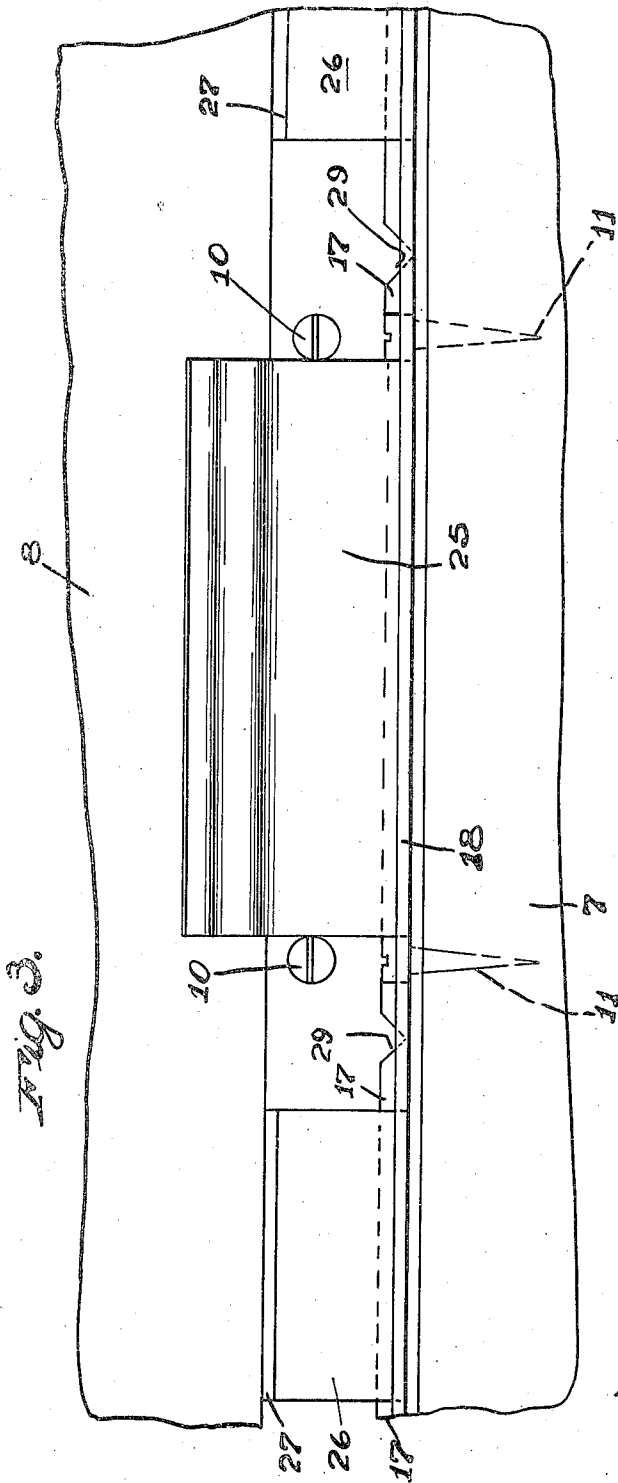
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3 Sheets-Sheet 2



INVENTOR
WILLIAM OWEN
BY *Bradley & Bell*
ATTORNEYS.

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Fig. 4.

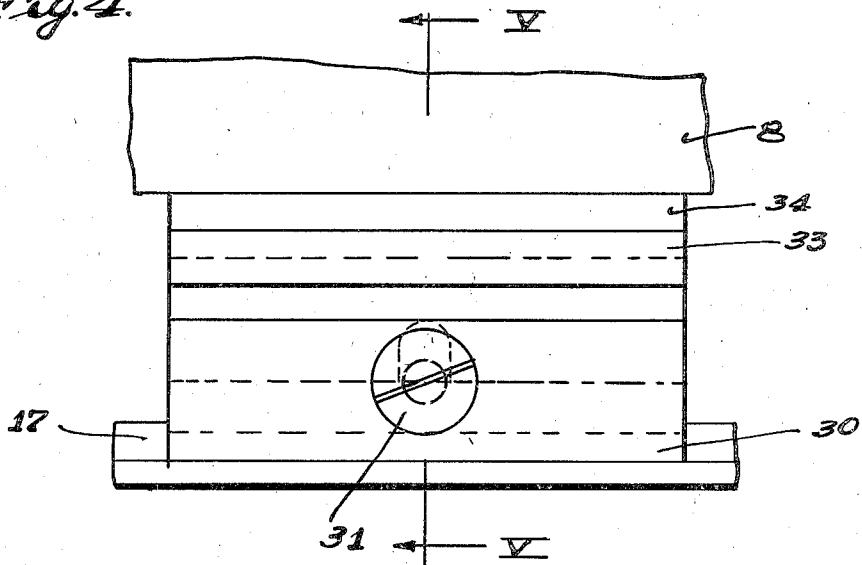
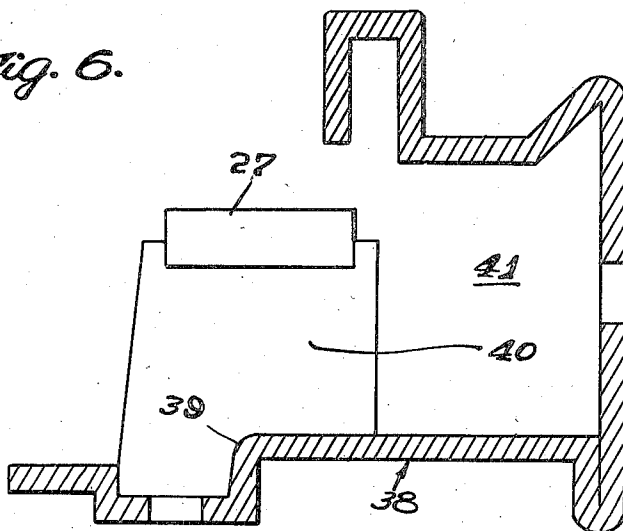


Fig. 6.



INVENTOR
WILLIAM OWEN

BY *Bradley & Bell*
ATTORNEYS.

UNITED STATES PATENT OFFICE

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STORE FRONT CONSTRUCTION

William Owen, Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

Application June 24, 1937, Serial No. 150,044

5 Claims. (Cl. 20—56.4)

The invention relates to store front constructions employing metal strips or bars for the reception of the glass. It has for its principal object the provision of an improved simplified structure wherein the setting may be accomplished from the front side of the window, and wherein any requirement for the use of screws in connection with the clamping members and cover plate therefor is avoided, thus materially reducing the time and labor incident to installation or disassembling for replacement purposes, and improving the appearance of the structure. A further object is the provision of improved means for supporting the bottom edge of the glass plate at graduated elevations and in a very secure manner, such means being particularly adapted for use in the screwless clamping and cover plate construction to which the invention is primarily directed, as above set forth. Certain embodiments of the invention are illustrated in the accompanying drawings, wherein:

Figure 1 is a section through the construction with the parts in assembled relation, wherein the dotted lines show the position of the clamping spring before it is snapped into holding position. Fig. 2 is a view similar to that of Fig. 1 of a modification, but with the dotted lines showing the position of the cover plate before it is snapped into final position. Fig. 3 is a partial front view of the construction with the cover plate removed to show the location of the clamping springs and setting blocks. Figs. 4 and 5 are detail views of a modified form of setting block which is adjustable as to height, Fig. 4 being a front elevation, and Fig. 5 a section on the line V—V of Fig. 4. And Fig. 6 is a section through a modified form of sash bar.

Referring to the drawings, 7 is the sash frame of the usual wood construction, 8 is the glass plate forming the window, and 9 is a metal sash bar secured in the sash by means of sets of screws 10 and 11. The sash bar comprises the back strip 12 and the base strip 13 lying beneath the edge of the glass sheet. The back strip has at its upper edge a gutter 14 and a flange 15 bearing against the rear face of the glass sheet. The flange is formed by bending the edge of the back strip, so as to form the recess 16 for receiving one end of the locking spring later described.

The base strip is provided with an upstanding rib 17 extending longitudinally thereof in line with the edge of the glass sheet and has its extreme outer end bent away from the sash 7, as indicated at 18, to provide between such end and the sash 7, an outwardly opening slot to receive

the flange 19 at the lower edge of the cover strip 20, such strip being of bent or extruded metal. The cover strip is recurved at its upper edge to provide the flange 21 in opposition to the flange 15 on the back strip and to provide a recess 22 for the locking spring.

The flanges 15 and 21 are pressed yieldingly toward each other to grip the glass and hold the cover strip in position, by means of a series of springs of V-cross section each comprising the base 23 seated against the rib 17 and the arms 24 and 25 which have their upper ends bent, as shown in Fig. 1, and seated in the recesses 16 and 22 respectively. These springs are preferably about four inches in length and are placed at spaced intervals along the base strip 13. They are positioned against movement longitudinally of the strip by the heads of the screws 11, the distance between a pair of screw heads equaling the length of the spring, as indicated in Fig. 3.

The springs are necessarily applied before the application of the cover strip 20. To position the spring, it is applied as indicated in the dotted lines in Fig. 1, and the base 23 is then pushed inward till it seats against the rib 17. This brings the upper end of the arm 25 against the front face of the glass sheet exerting some pressure thereon, while the upper end of the arm 24 fits into the recess 16. The cover plate 20 is now applied by positioning it as indicated in dotted lines in Fig. 2. A downward movement of the cover strip now forces its flange 21 between the end of the arm 25 and the front face of the glass plate. This brings the bottom flange 19 of the cover strip opposite the slot between the flange 18 and the sash, and the lower end of the cover strip can now be shoved to the right so that it snaps into such slot, thus completing the assembling operation. The arms 24 and 25 are now sprung apart so that their upper ends exert a substantial degree of pressure on the flanges 15 and 21, thus clamping the edge of the glass sheet and holding the cover strip yieldingly in the position shown.

The weight of the glass plate is taken by the metal setting blocks 26 provided on their upper sides with leather pads 27 and having their bases slotted so as to receive the rib 17 which thus serves to positively position the blocks in alinement with the edge of the glass plate. In order to permit of the drainage of any water which collects in the space 28 back of the rib 17, such rib is flattened out or cut away at intervals as indicated at 29, 29 in Fig. 3. The flanges 18 and 19 of the base and cover strips may also be slotted at intervals to facilitate drainage.

Figs. 4 and 5 illustrate a modified form of setting block which is adjustable as to height. The base portion of the block is formed in two similar sections 29 and 30 and secured together by the bolt 31 provided with the nut 32, a slot being provided at the line of division for the reception of the rib. The base portion is provided with a socket for receiving the lower end of the top member 33 of the block which carries a leather pad 34 for engagement with the glass plate. The lower part of the top member which fits into the socket in the base portion, is stepped, as illustrated, having three portions 35, 36 and 37 of increasing width from the bottom of the series up. This gives three adjustments as to height. By loosening the bolt 32 and separating the parts 29 and 30, the top member may be lowered so that the portion 37 engages the socket, or the top portion may be adjusted upward one step so that the portion 35 engages the socket.

Fig. 6 illustrates a modified form of sash bar 38, in which the rib 17 of the Fig. 1 construction is omitted and its place taken by the shoulder 39 which acts as the abutment for engaging the base 23 of the V-shaped spring. This shoulder also serves to position the setting blocks 40 whose bases are formed to fit the shoulder, as illustrated. In this construction, there is no obstacle preventing drainage from the space 41 to the front side of the cavity beneath the glass plate. The construction and functioning of the parts is, in other respects, the same as described in connection with Figs. 1, 2 and 3, no screws being required except those used for holding the sash bar to the sash frame.

What I claim is:

1. In combination in a store front construction having a glass plate therein, a sash frame, a metal sash bar secured in the frame and comprising a back strip lying behind the glass plate and having a flange in engagement with the rear side thereof and a base strip at right angles to the back strip beneath the glass plate with its forward edge formed so as to provide a holding slot, an abutment formed in the base strip beneath the edge of the plate and extending longitudinally thereof, a cover strip at the front of the glass plate having a flange at one edge fitting into said holding slot and a flange at its other edge engaging the front side of the glass plate in opposition to the flange on the back strip, and a V-shaped clamping spring with its base in engagement with the front side of said abutment and having the ends of its arms in engagement with the flanges on the back and cover strips which engage the glass plate and exerting yielding pressure thereon.

2. In combination in a store front construction having a glass plate therein, a sash frame, a metal sash bar secured in the frame and comprising a back strip lying behind the glass plate and having its free edge recurved forming a flange engaging the plate and providing a locking recess, and a base strip at right angles to the back strip with its forward edge formed so as to provide a holding slot, an abutment formed on the base strip beneath the edge of the plate and extending longitudinally thereof, a cover strip at the front of the glass plate having a flange at one edge fitting into said holding slot and a flange at its other edge engaging the front side of the glass plate in opposition to the flange on the back strip, and a V-shaped clamping spring

with its base in engagement with the front side of said abutment and having the end of its rear arm fitting in said locking recess on the back strip and the end of its front arm engaging the flange on the cover strip which engages the glass sheet, said spring being formed so as to exert yielding pressure on the opposing flanges which engage the glass plate.

3. In combination in a store front construction having a glass plate therein, a sash frame, a metal sash bar secured in the frame and comprising a back strip lying behind the glass plate and having a flange in engagement with the rear side thereof and a base strip at right angles to the back strip beneath the glass plate with its forward edge formed so as to provide a holding slot, an upright rib formed on the base strip in alignment with the edge of the glass plate, slotted setting blocks on the rib engaging the edge of the glass sheet, a cover strip at the front of the glass plate having a flange at one edge fitting into said holding slot and a flange at its other edge engaging the front side of the glass plate in opposition to the flange on the back strip, and a V-shaped clamping spring with its base in engagement with the front side of said rib, and having the ends of its arms in engagement with the flanges on the back and cover strips which engage the glass plate and exerting yielding pressure thereon.

4. In combination in a store front construction having a glass plate therein, a sash frame, a metal sash bar secured in the frame and comprising a back strip lying behind the glass plate and having a flange in engagement with the rear side thereof and a base strip at right angles to the back strip beneath the glass plate with its forward edge formed so as to provide a holding slot, an abutment formed on the base strip beneath the edge of the plate and extending longitudinally thereof, a cover strip at the front of the glass plate having a flange at one edge fitting into said holding slot and a flange at its other edge engaging the front side of the glass plate in opposition to the flange on the back strip, a V-shaped clamping spring with its base in engagement with the front side of said abutment and having the ends of its arms in engagement with the flanges on the back and cover strips which engage the glass plate and exerting yielding pressure thereon, and screws extending through the base strip into the sash frame having heads projecting above the level of such strip on opposite sides of the V-spring and serving as positioning means therefor.

5. In combination in a store front construction, a sash frame with a glass plate therein, and means for securing the glass plate in position in the frame, a metal base strip carried by the sash frame and provided with a rib in alignment with the edge of the glass plate, and a setting block comprising a base portion divided vertically into two parts with a slot at the bottom on the line of division fitting said rib and having a socket at the top also on the line of division, a top member provided on its lower side with a part adapted to fit into said socket, said part being formed in a series of steps increasing in width from the bottom up to provide for the vertical adjustment of the top member, and a clamping bolt extending transversely of the line of division of the bottom member.

WILLIAM OWEN.