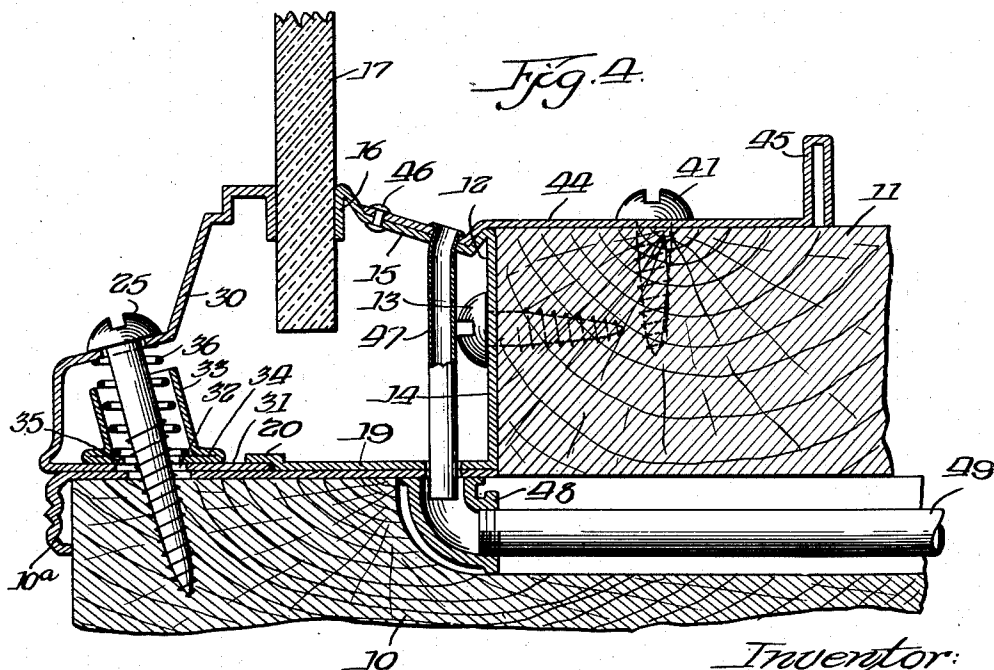


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STORE FRONT CONSTRUCTION

2 Sheets-Sheet 2



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STORE FRONT CONSTRUCTION

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My invention relates to store front construction. It has particular reference to a construction adapted for use in mounting plate glass in store fronts, with special means being provided to allow water which has condensed and collected on the inner side of the glass and has drained into a metal gutter at the rear of the glass to flow out through the sash members to either the outside or inside of the building, thereby preventing its passing into the window frame, window sills and the like and causing damage to the frame construction, resulting in its weakening and deterioration.

Another object of my invention is the provision of store front construction adapted particularly for use in climates which are extremely cold so that the problem of drainage of condensation forming on the inner side of a pane must be disposed of and the condensation prevented from flowing down over the window frame onto the products displayed in the window, thereby causing spoilage of such products, and at the same time draining the water out of the frame to the outside of the building without damage to the window frame, window sill and the like.

Another and further object of my invention is the provision of a store front construction in which water collected on the inner face of the glass is allowed to drain away without coming into contact with the wood frame members, thereby causing them to rot away, or to warp and swell to a point which results in broken glass, due to the expansion of the water-soaked frames when frozen hard in extremely cold weather, such as sub-zero, for fairly long periods of time.

Another and further object of my invention is the provision of a supplemental plate used in connection with the inner sash member adapted to catch large quantities of water caused by the thawing of water condensed on the inner face of the glass and sash members, and which prevents the water from contacting articles on display in the window, such as fruit, vegetables and the like, resulting in spoilage and damage, and permitting such water to drain through the sash members and through pipes in the frames to receptacles placed inside of the room or to the outside, as may be preferred. These plates may be secured to installations already made or included in new installations, as may be desired.

Another and further object of my invention is the provision of a store front construction in which the window frames and sills are protected against water leakage from any cause such as water flowing into the sash members because of

condensation, washing the windows, and the like.

These and other objects of my invention will be more fully and better understood by reference to the accompanying sheet of drawings, in which—

Figure 1 is a cross-sectional view of a store front construction embodying my invention;

Figure 2 is a modified form of structure illustrating my invention;

Figure 3 is a modified form of structure in which a different form of protecting ferrule and drainage arrangement is illustrated; and

Figure 4 is a cross-sectional view of a slightly modified form of drain construction.

Referring now specifically to the drawings and in which like reference characters refer to like parts throughout, a sill 10 is shown upon which is mounted the usual sill cover 10a or any other suitable covering member and also has mounted thereon the usual wood backing member 11, to the outer face of which is secured the inner sash member 12 by means of screws, such as 13. The sash member 12 comprises a vertical wall portion 14 and a transversely extending portion 15 having a downwardly turned end 16 presenting a surface in alignment with the inner surface of the glass pane 17, against which the inner sash member 12 is adapted to abut. The portion 15 has a channel in its upper side so that water condensed from the air or collecting on the inner face of the glass pane 17 from any source will drain into and collect in the channel in the portion 15 and drain to the interior of the sash members through spaced openings 18 in the portion 15 of the sash member 12. The sash member 12 has a horizontally extending base portion 19 which rests upon the sill cover 10a and has its front edge 20 bent upward and overlapped with relation to the inner edge of the outer sash member.

An outer sash member 21 is provided having a base portion 22 resting upon the sill cover 10a, a portion of which is bent upward so that it is spaced above the sill cover 10a, with the base portion 22 terminating slightly beyond the outer edge of the sill 10. Water draining from the channel in the portion 15 through the openings 18 and under the edge of the glass pane 17, passes outward through drain openings 23 in the outer sash member 21. The outer wall of the member 21 has a portion 24 slightly angular in relation, through which screws 25 extend in an angular direction into the sill 10 and provides means by which the outer sash member 21 is placed under compression to hold the pane 17 in position. A

portion 26 engages against the outer face of the pane 17 so that the pane in effect is clamped between the portion 16 on the inner sash member 12 and the portion 26 on the outer sash member 21.

The base 22 of the member 21 has an opening formed therein within which a ferrule 27 is mounted. The ferrule is formed with a collar portion 28 by folding the metal, forming the wall of the ferrule, upon itself, as shown, with the end 29 of the ferrule 27 being spun over and outward so that it engages on the under side of the portion 22, forming a water-tight joint around the opening in the base 22 through which the screws 25 pass. Water is thus prevented from flowing through the opening in the base 22 and onto the sill 10 under the cover plate 10a and around the screws 25, thereby causing rotting of the wood and breaking down of the fibres holding the screws in position and resulting in decay of the sill itself and may result in warping the sill to such an extent that the glass is broken. Hard freezing of a water soaked sill may result in such expansion of the sill that the whole store front construction is thrown out of alignment, and even glass may be also broken from this cause. In this manner the water forming on the inner side of the glass pane is drained from the channel in which it collects in the inner sash member to the outside of the building without coming into contact with any portion of the sash holding member except the metallic parts, so that the life of the store front construction is materially increased.

In Figure 2 substantially the same form of glass pane engaging members are shown. In this construction an outer sash member 30 is shown substantially of the same contour as the outer sash member 21 hereinabove described. An opening 32 in the base portion 31 is aligned with an opening in the sill cover 10a through which the screws 25 pass into the sill 10, with a ferrule 33 being provided which has a collar 34 formed at its lower end. The opening through the collar is slightly less than the diameter of the ferrule 33, so that a shoulder 35 is formed upon which the lower end of a spring 36 rests. This spring is compressed so as to hold the ferrule 33 in water-tight engagement with the base 31 of the outer plate, preventing water from flowing under the collar 34, through the opening 32 in the base portion of the sash member and the sill cover, and around the screws 25, and causing it to drain from the sash members through the opening 37 formed in the outer wall of the outer sash member 30. The spring 36 also adds to the resiliency of the outer sash member, and also acts as a locking member for the screw 25 to prevent its backing up.

A plate 33 is secured to the upper face of the window frame 11 and has a downwardly turned inner edge 39 which fits over the edge of the member 12, thus forming a wide channel with a vertical portion 40 to prevent water flowing from the plate 33. The plate 33 is held in position on the backing 11 by screws 41, this plate providing a wider trough for the purpose of catching dripping water which collects on the inner face of the glass pane 17 and instead of flowing down the pane may drip from the upper surface thereof. This wide channel also forms a receptacle for ice which may build up under certain conditions, and thereby provides additional protection over that accorded by the usual sash member.

In Figure 3 the sash members are of the same general construction as the sash members and holding devices illustrated in Figure 1. The difference is that a cylindrical or elliptical ferrule 42 is provided which extends through the base portion 22 and into the sill cover 10a to which it is secured in any approved manner. The ferrule is held in water-tight position in the sill cover 10a against the admission of water therearound which may flow into the sash members for any of the many reasons heretofore given. It is sufficient in height so that a considerable quantity of water may collect in the sash members without danger of overflow around the screws 25 and into the sill 10.

In Figure 4 is illustrated a modified form of structure comprising a wide plate 44 which extends substantially over the upper surface of the wood backing 11, with a retaining wall 45 at the rear edge thereof and a front portion which extends in substantially overlapped relation with the portion 15 of the inner sash member 14. Rivets 46 are provided to secure the plate in fixed relation with the inner sash member 14. A drain pipe 47 extends through the portion 15 of the sash member 14 into and through the plate 44 and through the base portion 19 of the inner sash member 14, to an elbow 48 mounted in the sill 10, to which a drain pipe 49 is secured in any approved manner. Means are thus provided whereby drainage is conducted from the plate 44 to any appropriate drainage pipe which may be connected to the pipe 49 or to a receptacle on the floor, as may be desired. This form may be desirable when, because of the severity of the weather, ice forms in the outer portions of the sash member 30 clogging the drainage openings therein with ice and preventing drainage from the inner side of the sash member, or when for any reason outside drainage holes are not desired so as to provide a dust and draft proof construction.

In extremely cold climates moisture from the air on the inner side of a glass pane is oftentimes condensed until it amounts to as much, perhaps, as 1/2 of an inch in thickness. Sometimes a large block of ice may be formed at the bottom of the glass, particularly in vegetable stores where water is sprayed on the vegetables displayed back of the window. When this moisture is melted, either by change in outside temperature or by the heating of the room inside, the quantity is quite considerable, and adequate means must be provided for assuring that it is drained from the inner surface of the window without damaging goods stored adjacent the window or without draining into the window frames and sills, causing their decay and the like. In this form of the device, adequate means are provided so that dripping from any portion of the surface adjacent the window is caught in the members 38 or 41 and drained into the trough in the inner sash engaging member and out through the openings 37.

The installation and operation of these structures will be easily and readily understood from the foregoing description. When a store front is mounted, the inner engaging sections are first put in place and the outer sash members are loosely placed in position, with the sash being mounted or held in position until the screws 25 can be tightened by the workmen. The outer sash member is thus put under tension sufficient to hold the glass in position in the same manner as most of these store front constructions, where

the edge of the pane is gripped between cooperating members to hold it firmly and yet allow for slight elasticity in movement of the glass to take care of wind pressures and the like without breaking the glass.

While I have described more or less precisely the details of construction, I do not wish to be understood as limiting myself thereto, as I contemplate changes in form and the proportion of parts and the substitution of equivalents as circumstances may suggest or render expedient without departing from the spirit or scope of my invention.

What is claimed is:

1. Store front construction comprising in combination, a glass pane, an outer sash member having a side wall and a base adapted to rest upon the window sill having drain openings therein and aligned holes in said side wall and the base section, a fastening member extending through the said aligned openings into the window sill, an inner sash member, and a ferrule having a collar portion formed adjacent one of its ends, the collar portion resting upon the base plate and forming a water-tight joint between the said collar portion and the base plate, and retaining means whereby the said ferrule is held in position on said plate.

2. Store front construction comprising in com-

bination, a glass pane, an outer sash member having a side wall and a base adapted to rest upon the window sill having drain openings therein and aligned holes in said side wall and the base section, a fastening member extending through the said aligned openings into the window sill, an inner sash member, and a ferrule having a collar formed adjacent one of its ends, the said collar resting upon the said base plate and forming a water-tight joint between said collar and the base plate, the said ferrule extending through the opening in the base of said outer sash member and having its lower edge turned over into engagement with the said under side of the base plate.

3. Store front construction comprising in combination, a glass pane, an outer sash member having a side wall and a base adapted to rest upon the window sill having drain openings therein and aligned holes in said side wall and the base section, a fastening member extending through the said aligned openings into the window sill, an inner sash member, and a ferrule having a collar resting upon the said base plate and a spring, one end in engagement with the said ferrule and the other with the under side of the outer wall of the outer sash member.

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