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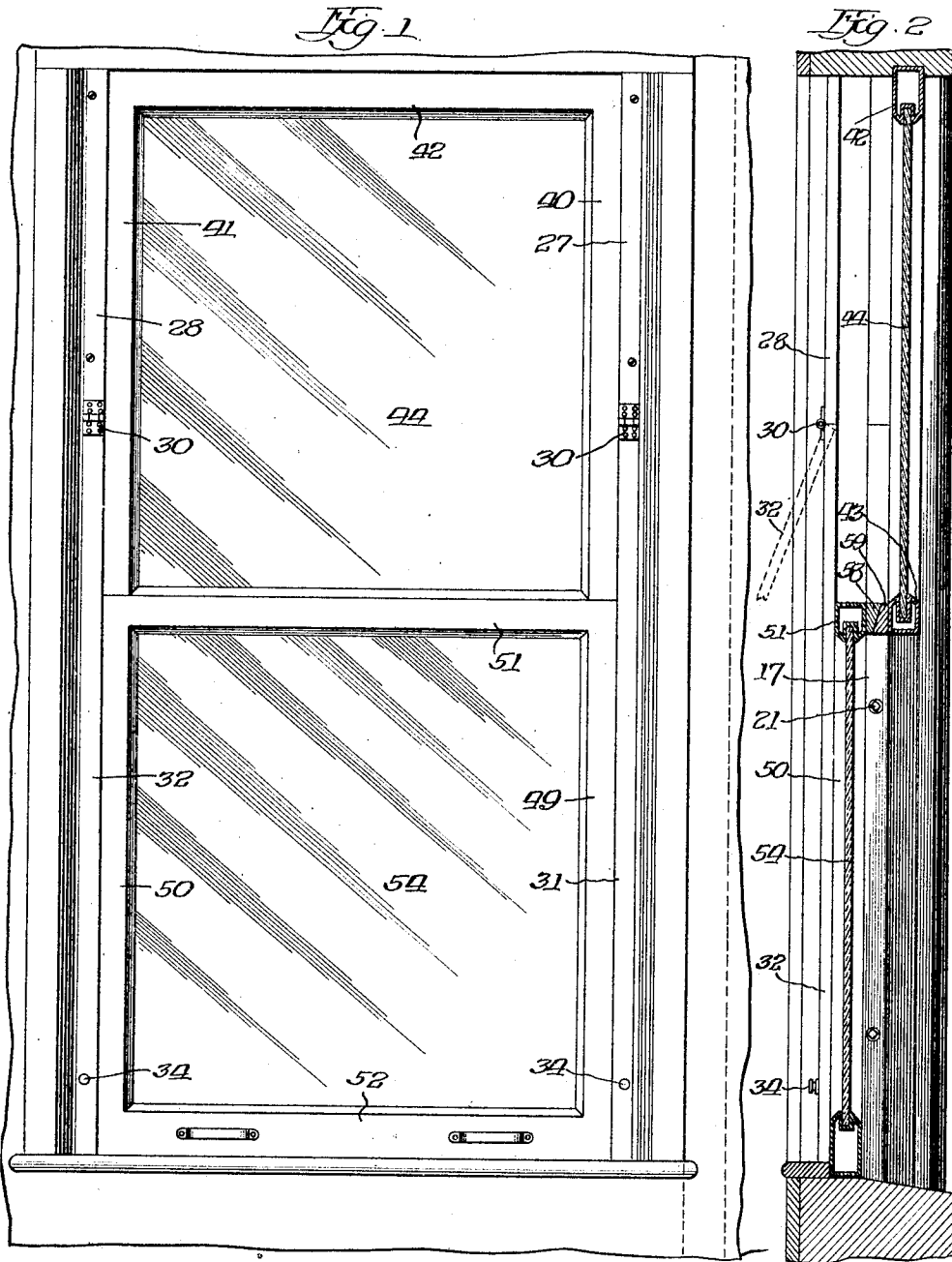
E. KLEIN

1,727,993

REMOVABLE WINDOW SASH

Filed Jan. 19, 1928

2 Sheets-Sheet 1



Witness:

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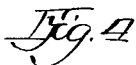
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

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REMOVABLE WINDOW SASH.

Application filed January 19, 1928. Serial No. 247,869.

My invention relates to a window casing and has particular reference to a window casing adapted to hold a window sash in position upon a building and providing means whereby the window sash may be removed from the casing for washing the glass window panes and the like without the necessity of performing this operation from the outside thereof.

Another and further object of my invention is the provision of a window casing from which the window sash can be swung out of the casing and into the room while suspended upon the usual cords or chains in the casing, so that ready access can be had to each side of the window pane from the inside of the room.

Another and further object of my invention is the provision of a window casing from which the sash can be removed at the bottom of the window casing, which is simple and efficient in operation and which is weather-tight and proof against rain or snow being driven into the room around the edges of the window sash.

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

Figure 1 is an elevational view of the inner side of a window and casing embodying my invention;

Figure 2 is a vertical sectional view of one side of the window casing shown in Figure 1;

Figure 3 is a cross sectional view through one side of the window casing showing the retaining member positioned between the window sash; and

Figure 4 is a view similar to the view of Figure 3 with the window strip in depressed position and showing one of the sash out of the window casing, as indicated in dotted lines.

Referring now specifically to the drawings, and in which like reference characters refer to like parts throughout, the building wall 10 is shown which forms a part of the building at the side of and below the window opening, against which a hollow window frame 11 is positioned, preferably of metal, and which is substantially rectangular in cross section and has an extension 12 at one side thereof which extends around the side of the wall 10. The window frame 11 on the outer side thereof has a rectangular portion 13 formed integrally therewith, which extends outward and abuts against the side of the outer window facing 14. The portion 13 extends inward beyond the edge of the window sash and has a vertically extending channel 15 formed therein, the said channel having an open side which extends toward the window sash for the purpose of receiving a portion of the sash, as will be more fully described hereinafter.

The frame 11 has an inwardly projecting portion 16 which forms a channel in the frame 11 and extends longitudinally thereof, having its open side towards the window sash, and is adapted to receive a sash strip 17 which extends vertically of the frame 11 and in normal position retains the window sash in their proper positions against lateral movement. The sash strip 17 has a pair of members 18 and 19, U-shaped in cross section, formed thereon and which form channels within which projecting ribs formed on the window sash are received.

The sash strip 17 is a U-shaped member integrally formed and shaped to conform to the channel formed at the inner side of the frame 11, and has a well 20 formed therein within which is seated the head 21 of a locking key 22 which extends into a hollow trunnion 23 formed in the wall of the frame 11. The locking key 22 has an outwardly turned end 24 which fits into a slot 25 in the trunnion 23 in the normal outward position of the sash strip 17, and is adapted to be turned around the end of the trunnion 23 to hold the sash strip 17 in its inner position free of the sash (Fig. 4). A spring 26 is mounted around the trunnion 23 and the projecting portion of the frame 11 which normally forces the sash strip 17 outward. The end 24 of the key 22 engages the trunnion 23 at the end of the slot 25 and prevents the sash strip 17 from being forced out too great a distance (Fig. 3.)

At the inner side of the window frame 11

is a pair of retaining strips, upper ends of which, 27 and 28, are permanently secured to the side of the window casing 11 by means of screws, bolts, or any other suitable fastening means. A pair of hinges 30, 30 are provided by means of which the lower ends 31 and 32 respectively, of the window strips, are hinged to the upper ends, these members being provided with fastening members 33, 33 which extend through the members 31 and 32, these members having knurled buttons 34 on the outer ends thereof and an inwardly turned end 35 which seats into openings 36 formed on the inner side of the casing 11. Elongated openings 37 are provided through which the members 33 extend, these members being permanently secured to the strips 31 and 32 and provide means whereby these hinged strips are removably attached to the window frame 11. The strip 31 is angularly formed with an inwardly extending portion 38 which is folded upon itself and is adapted to engage an outwardly extending rib 39 formed on the inner window sash so that this sash is normally held in proper position in the casing 11. The strip 32 is similarly formed with the exception, of course, that it is adapted to be placed at the opposite side of the window, these strips being formed in right and left hand strips so as to properly fit around the window sash.

An upper sash is provided which is made up of a pair of side members 40 and 41, an upper member 42 and a lower member 43. These members together with the side members 40 and 41 are preferably formed of metal and have suitable channels therein for receiving the usual glass window pane 44. The side member 40 is substantially rectangular in cross section and has an inwardly projecting portion 45 against which the window pane 44 is seated, with a triangular shaped member 46 being provided for holding the window pane in proper position in the frame. The member 40 at the outer side thereof has the metal turned upon itself and a rib portion 47 formed thereon, this portion 47 projecting into the channel 15 formed in the casing 11, thus forming a water-tight joint and providing a guideway for the member 47 and holding the sash securely in position. At the opposite side of the member 40 a projecting rib portion 48 is formed by folding the metal upon itself, and which extends into the outer U-shaped channel portion 18 of the member 17, so that the sash, when the sash strip 17 is in its outer position, is held in proper position and moves up and down in the channels 15 and 18. The lower sash is composed of a pair of side members 49 and 50 with an upper member 51 and a lower member 52, the member 49 having an outwardly projecting portion 53 thereon adapted to engage against the side of the lower window pane 54 with a triangular shaped member

55 being provided to hold the pane 54 in position. A rib portion 56 is formed on one of the outer corners of the member 49, which fits in the member 19 formed in the sash strip 17 in the normal outward position of this strip. An outwardly projecting rib portion 39 is formed on the opposite outer corner of the member 49 and around which the projecting portion 38 of the member 31 fits to normally hold this sash in position. A pair of cooperating strips 58 and 59 are placed between the members 43 and 51 which serve to close the openings between these sash and make a tight fitting joint therebetween. It will be understood that the construction heretofore described, applies equally well to the opposite side of the sash with the exception that the channels and engaging members are formed in a different direction so as to conform to the necessary requirements at the opposite side of the window casing. A pair of sash weights 60 and 61 are shown which are suspended upon ropes or chains, which pass over pulleys mounted in the window frame in the usual manner, and are secured to the upper and lower window sash frames in the usual manner.

When placing the sash in the window frames, the sash strips 17 are depressed in the channel formed in the window frame and locked in this position by the locking keys 22. The upper sash is thereupon placed in position, after having the cords or chains secured thereto, in the frame 11 so the projecting portion 47 engages in the channel 15. This sash is then lifted into position at the upper part of the frame 11. The lower sash is then placed in position, and the hinged strips 31 and 32 locked in place by the locking members 33. This sash is thereupon lifted and the locking member 22 released thereby causing the springs 26 to force the sash strip outward thereby engaging the ribs 48 and 56 in the upper and lower sash respectively, and holding them in position in the frame 11. In removing the sash for cleaning purposes the reverse operation is performed thus releasing the sash and allowing them to be swung into the room for cleaning the glass panes, or for any other purpose.

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.

I claim:

1. Window construction comprising in combination, a frame, depressible sash strips mounted on said frame between the window sash, window sash frames, and retaining members removably secured to said frame, the said sash strips being adapted to be de-

pressed out of the path of the window sash frames.

2. Window construction comprising in combination, a frame having channels formed therein, sash strips mounted in said channels and adapted to extend beyond the said frame in normal position and flush with said frame in depressed position, window sash frames, and retaining members for one of said sash frames removably secured to said frame.

3. Window construction comprising in combination, a frame having channels formed therein, sash strips depressibly mounted in said channels, window sash frames, and removable retaining members secured to the inner side of said frame, the said sash strips having means thereon to engage the window sash frames, the said sash strips being adapted to be locked out of the path of the window sash frames.

4. Window construction comprising in combination, a window frame having longitudinal channels formed therein at the inner side thereof and having projecting portions formed at the outer side thereof having channels therein, sash strips having a pair of channels formed therein depressibly mounted in the channels formed in said window frame and adapted to be locked out of the path of the window sash frames, window sash frames mounted in said window frame, and retaining members removably positioned to the inner side of said frame, one of said sash frames having ribs formed therein adapted to engage in the channels formed in the said frame at the outer side thereof, and each of said window sash having ribs formed therein adapted to engage in the channels formed in the sash strips.

5. Window construction comprising in combination, a window frame having longitudinally extending channels therein, sash strips mounted in said channels, window sash mounted in said frame having means thereon adapted to engage the sash strip, a removable retaining member secured to the inner side of said window frame, and locking means carried by said sash strip whereby the sash strip is locked in the said channel out of engagement with the sash frame.

6. Window construction comprising in combination, a rectangular frame having channels formed at the outer side thereof adapted to receive a portion of a window sash frame and longitudinal channels intermediate the sides thereof, sash strips mounted in said last named channels being adapted to be moved out of the path of the window sash frames, a pair of window sash frames mounted in said window frame, retaining members and locking means carried by said retaining members whereby the retaining members are released from the window frame, one of said sash frames having ribs formed thereon to engage the window strip and a

channel formed in the window frame at the outer side thereof, the other sash having ribs formed thereon adapted to engage in the channels formed in the said sash strip.

7. Window construction comprising in combination, a window frame having longitudinal channels formed therein intermediate its ends, sash strips mounted in said channel having a plurality of channels formed therein, locking strips secured to the inner side of said frame, means for holding said strips in engagement with the said window frame, keys mounted in said sash strips and adapted to lock the sash strips out of engagement with the window sash frames.

Signed at Chicago, Illinois, this 7th day of January, 1928.

ERICK KLEIN.