Jan. 2, 1934. E. BRUST 1,942,200

WINDOW CONSTRUCTION

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Fig. 1.

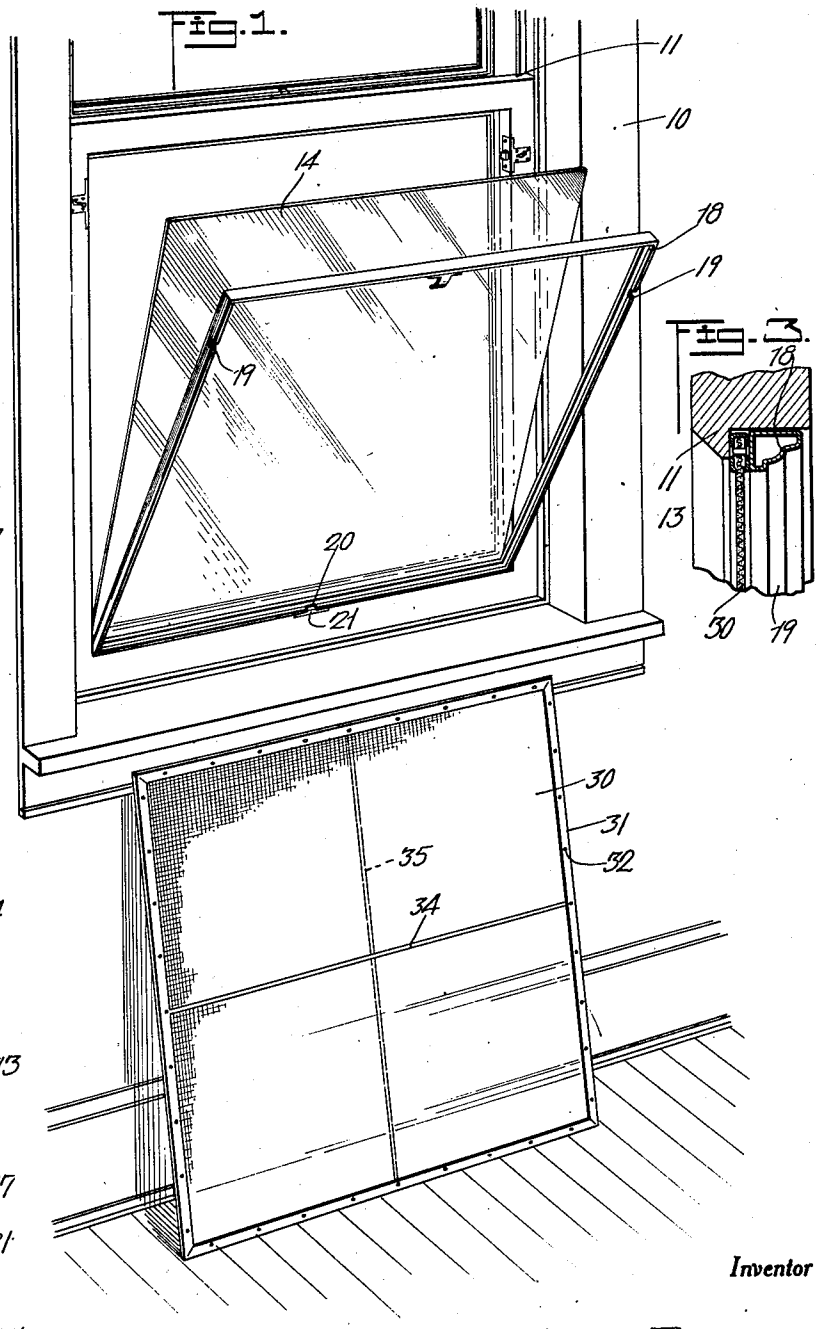


Fig. 2.

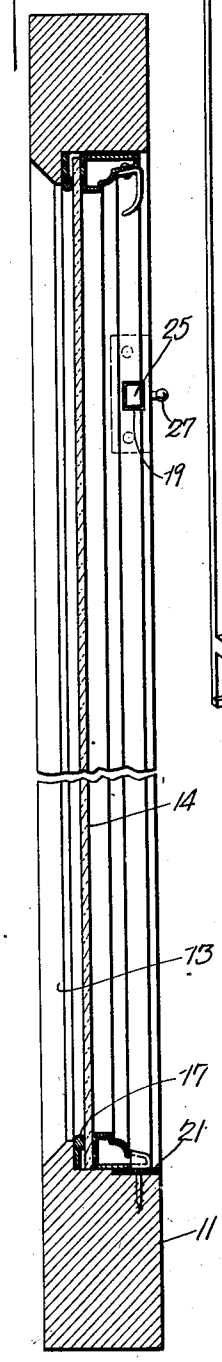


Fig. 3.

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Fig. 4.

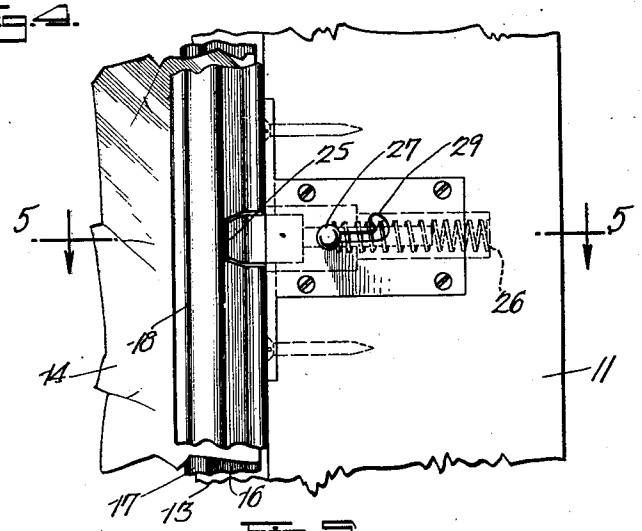


Fig. 5.

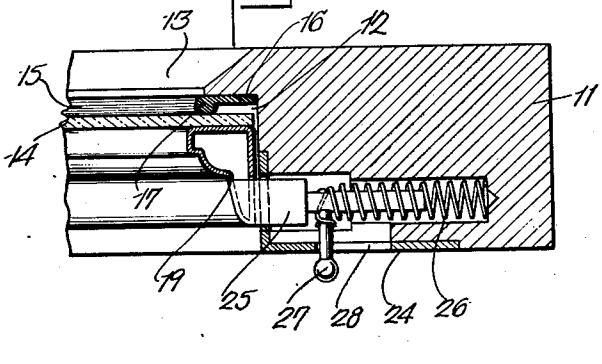


Fig. 6.

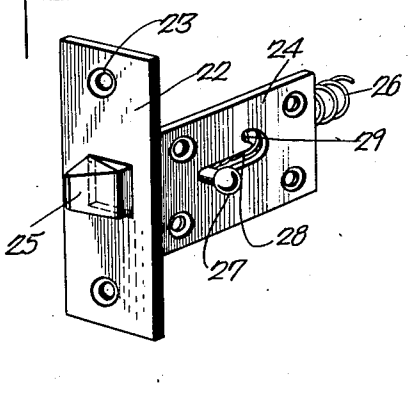
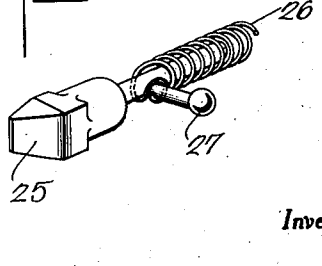


Fig. 7.



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UNITED STATES PATENT OFFICE

1,942,200

WINDOW CONSTRUCTION

Erich Brust, Brooklyn, N. Y.

Application October 28, 1931. Serial No. 571,647

1 Claim. (Cl. 20—56.4)

The present invention relates to new and useful improvements in window construction, and more particularly it pertains to a window sash construction.

It is one of the objects of the present invention to provide a new and improved form of window sash whereby either a pane of glass or a window screen may be grouped removably associated with the sash.

It is a further object of the invention so to construct the window sash and a retaining means for a window pane or a window screen that either of these elements depending upon the one used may be readily removed for the purpose of cleaning or for the purpose of substituting the other element.

It is a still further object of the invention to provide a novel form of window pane or screen retaining means which will provide a firm and rigid securement of either of these elements within the sash.

It is a still further object of the invention so to construct the retaining means that a weatherproof joint between the window pane and the sash is obtained.

A still further object of the invention resides in a novel construction whereby the window pane or window screen may be removed from the window sash without necessitating removal of the window sash from the window opening or the window frame.

With the above and other objects in view, reference is had to the accompanying drawings in which;

Figure 1 is a perspective view of a window opening showing a complete sash therein and the device of the present invention applied thereto,

Figure 2 is a longitudinal sectional view on an enlarged scale partly broken away illustrating a device constructed in accordance with the present invention,

Figure 3 is a detail fragmentary sectional view of an enlarged scale illustrating the construction of the sash detaining means,

Figure 4 is a fragmentary view illustrating the manner in which the retaining means is held in position in the sash opening,

Figure 5 is a detail sectional view taken in a horizontal plane on the line 5—5 of Figure 4,

Figure 6 is a perspective view of one of the latching mechanisms, and;

Figure 7 is a perspective view of one of the bolts of the latching mechanisms.

Referring more particularly to the drawings, the reference character 10 designates a window frame and mounted in the window frame in the ordinary manner so as to slide therein, there is a window sash 11 all of which may be of conventional form except that the window sash as best illustrated in Figure 5 of the drawings is cut out as at 12 to provide a retaining shoulder 13 which defines the entire opening of the window sash.

The reference numeral 14 designates a window pane which is preferably of glass and which is of the proper size and shape to fit within the window sash opening and substantially fill the same, occupying a position therein closely adjacent the retaining shoulder 13. Interposed between the pane 14 and the retaining shoulder 13, there is a packing 15 which in the present instance is illustrated as consisting of a relatively flat body portion 16 and a bead 17. This packing is preferably formed of rubber although felt or other suitable material for the purpose may be employed. The window pane when in position seats against the bead 17 which contacts with the outer surface of the pane and thereby forms a weather tight joint at this point and prevents the entrance of the weather around the side edges of the window pane.

Means is provided for retaining the window pane in its position against the packing and in the present illustration of the invention, this means consists of a rectangular frame 18. This rectangular frame 18 is tubular in form and may be of any desired ornamental cross sectional shape. It is provided at various points with notches such as 19 the purpose of which will be hereinafter described. In its lower wall, it is provided with a notch 20 and in securing the window in position, this notch 20 is adapted to receive a stationary lug or the like 21 which is carried by the lower rail of the window sash.

Means is provided for retaining the frame 18 in position to hold the pane in operative position in the sash, and in the present embodiment of the invention this means consists of a plurality of latch members such as shown in Figure 6. These latch members each comprise a plate 22 provided with openings 23 by means of which it may be secured in the window sash and it is to be understood that in its securement in place in the window sash, the plate 22 is preferably countersunk so that its outer surface will be flush with the outer surface of the inner side of the opening in the sash. A plate 24 projects from the plate 22, and slidably mounted upon the plate 24 and in an opening in the plate 22 there

is a bolt 25. This bolt 25 is forced forwardly by means of a coiled spring 26 which surrounds the bolt and it is normally moved to this forward position by the spring. An operating handle 27 is provided for the bolt 25 and this operating handle projects through a slot 28 having a hooked or curved portion 29 in which the operating handle may be positioned to retain the bolt 25 in a retracted position and thus permit of removal of the frame 18.

The sliding bolt 25 of the several latch members of which any desired number may be employed, are adapted to engage their respective recesses 19 in the frame 18 as best illustrated in Figure 5 of the drawings, and thus retains the frame against accidental displacement relative to the opening in the window sash.

The parts are illustrated in Figure 1, in the act of assembling within the window sash, and in this figure, the window pane 14 is positioned in the opening of the sash after which the frame 18 is likewise positioned in the opening. The window pane is then moved against the packing member 15 after which the frame 18 is moved inwardly of the sash opening until the same is pressed home. After this has been done, the bolts 25 are released by removing their handles 27 from the curved portions 29 of the slot 28 it being understood that the bolts have been placed in retracted position in order that the window pane and sash may be moved by the bolts to seated position within the window sash. When it is desired to remove the window pane, it is only necessary to move the bolts 25 to their retracted position in which they are held by engagement of the operating handles 27 thereof with the curved portions 29 of their respective slot. After this has been done, the frame 18 is rocked outwardly of the window sash and lifted so that the notch 20 in the lower side thereof will disengage the fixed lug 21 and the frame is bodily removed. After this has been done, the window pane may be likewise bodily removed merely by lifting.

In Figures 1 and 3 I have illustrated as a substitute for the window pane, a window screen, and this screen consists of a main body portion 30 the edges of which may be bound by metal strips or the like 31 secured to the body portion 30 by rivets or the like 32. Upon opposite sides of the screen there are cross wires 34 and 35 respectively and these cross wires also serve as manipulating handles or the like by means of which the screen may be placed into and removed from the sash opening. It is to be understood that this screen is capable of serving as a substitute for the window pane 14, and its manipulation to and from operative position are the same as those described for the window pane 14.

While in the present instance I have illustrated the invention in a preferred form, it is to be understood that the invention is not to be limited to the specific construction herein shown, and that it may be practiced in other forms without departing from the spirit thereof.

Having thus described the invention, what is claimed as new and what it is desired to secure by Letters Patent of the United States, is;

A window construction of the class described comprising in combination, a window sash, a retaining shoulder defining the opening in said sash, an element adapted to be secured against said shoulder to close the opening in said sash, and means for retaining said element in position in the sash, said retaining means comprising a frame having a recess in its bottom outer side edge, a recess in each of its side edges, a fixed projection extending from the bottom of said sash for engagement in the recess in the bottom outer side edge of said frame, and a retractable bolt carried by each side of the sash for engagement in the recesses at the sides of the frame, and means for holding said bolts in their retracted position while the closing element and the frame member are being placed in or removed from the sash.

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