SAFETY DEVICE FOR WINDOWS

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Drawings:
- Fig. 1: Detailed view of a window with safety device
- Fig. 2: Side view of the window
- Fig. 3: Cross-sectional view of the window
- Fig. 4: Close-up of a component

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My invention relates to improvements in safety devices for windows, and more particularly to that type of window which is provided with an operable or slideable sash.

An object of my invention is to provide means for blocking or obstructing the opening in a window frame, when the sash member, which is installed in the frame, is operated to produce such an opening, for ventilation or other purposes, thus preventing the entrance of any intruder from the outside when the sash is opened or raised, either a partial or full opening.

A further object of my invention is to provide such an obstructing or blocking means, which is attached to and follows the sash in its movements, thus automatically adjusting itself to any opening caused by operation of the sash.

Broadly, my invention comprises, in combination with a window frame and window sash slideably installed therein, a supplemental frame construction secured to the window frame, supporting members slideably secured in the supplemental frame, a lazy-lever or tong construction pivotally secured to the supplemental frame and to the supporting slideable means, and means for securing one of the slideable members to a rail of one of the window sashes.

For purposes of illustration, I have shown in the accompanying drawing a preferred embodiment of my invention installed in a double hung window, but my invention is equally efficient and adaptable to any opening where protection of this nature is considered necessary or advisable, and may be installed to operate either vertically or horizontally.

In the accompanying drawing:

Fig. 1 is an elevational view showing my closure device secured in a double hung window, with the bottom sash partially raised.

Fig. 2 is a vertical cross sectional view on an enlarged scale on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged sectional view showing my device in nested position with the lower sash closed, and

Fig. 4 is a horizontal cross sectional view on an enlarged scale on the line 4—4 of Fig. 1.

Referring to the drawing in detail, in which like numerals refer to like parts throughout.

The double hung window frame 1, comprising the side jambs 2, head jamb 3, stool 4, and sill 5, has installed therein, in the usual manner, the upper sash 6 and lower sash 7. Secured in the lower part of the window opening, on the inside, adjacent to the lower sash 7, is the metal-channel-shaped supplemental frame 8, having the side members 9, bottom member 10, and top member 11. The top member 11 is approximately level with the meeting rail 12 and 13 of the sashes 6 and 7, respectively. The side members 9 are secured to the side jambs 2, by means of screws 14. Hinges 15, secured to the bottom member 10 by spot welding or to other suitable means, are secured in rabbets 16 formed in the stool 4 by screws 17. Supporting members 18 and 19 are slideably secured in the channels of the side members 9, and the lazy-lever construction comprising the links 20, 21, 22, 23, 24, and 25 are pivotally secured to the supplemental frame and to the supporting slideable members, and means for securing one of the slideable members to a rail of one of the window sashes.

The full width of the frame 8, and the supporting member 18 is formed with a corresponding slot 18' in its bottom portion. The supporting member 19 is formed with a similar slot in both of its top and bottom portions, as shown, thus permitting free movement of the links 20, 21, 22, 23, 24, and 25 into and out of these slotted members during the upward and downward movements of the links. Outwardly extending pins 29, secured to the member 18 in any suitable manner, such as welding or riveting, are located in the sockets 30 let into the bottom rail 31 of the lower sash 7. By this engagement of the pins 29 with rail 31, any upward movement of the sash 7 will carry with it the supporting member 18 and, through action of the connected links, the middle supporting member 19. The frame 8, in combination with the members 18 and 19 and links 20 to
25 inclusive, forms an effectual barrier against housebreakers, without in any way impairing the ventilating efficiency of the opening, thus protected. Handles 32, secured to the upper movable member 18, provide suitable means for raising the lower sash 7. However, any suitable means for raising the sash 7, such as a window pole and socket, will serve to operate the safety device as well.

In Fig. 3, the sash 7 is illustrated in its closed position, in which position the intermediate movable member 19 rests on the fixed bottom member 10 and the upper movable member 18 rests on the member 19, thus completely enclosing the links 20 to 25 inclusive, as shown, and presenting a neat and smooth appearance. The screw means 14 and 17, for securing the rectangular frame 8 to the window frame, are inaccessible from the outside. The screws 17 are covered by hinges 15 and bottom member 10, and the screws 14 cannot be reached from the outside unless the sash 7 is fully opened, at which time the screws 14 are covered by the supporting member 18. The free ends of the links 20 to 25 inclusive have secured therein pins 23 which are guided and slide in the bottom member 10 and the supporting members 18 and 19.

What I claim is:

1. In combination, a window frame, a sash movably mounted in said window frame, a one-piece metal frame having channel-shaped side members secured to said window frame and a bottom tubular member having the shape of a hollow square in cross section and formed with a longitudinal slot in its top portion, a plurality of square tubular members slidable secured in the metal frame, a plurality of links forming a lazy-lever construction pivotally secured to the bottom member and said slotted members with their free ends slidably secured within the bottom member and said slotted members, and means for securing one of said slotted members to the bottom rail of said sash.

2. In combination, a window frame, a sash movably mounted in said window frame, a one-piece metal frame having channel-shaped side members secured to said window frame, a plurality of tubular slotted members slidably secured in the metal frame, a square tubular slotted bottom member hingedly secured to the sill of said frame, with the hinges completely covered by said bottom member, a plurality of links forming a lazy-lever construction pivotally secured to the bottom member and said slotted members, with their free ends slidably secured within the bottom member and said slotted members, and means for securing one of said slotted members to the bottom rail of said sash, said means comprising a plurality of studs secured to said slotted member and engaging in sockets formed in the bottom rail of the sash.

3. In combination with a window frame and slidable sash therein, a supplemental one-piece frame provided with channel members, means for securing the supplemental frame to the window frame, slotted bar members slidable in the channel members, means for attaching one of the slotted bar members to the slidable sash, and lazy link members interposed between the sash and the stool of the window frame, and nested in the slotted bars when the lower sash is closed.

4. In a window protecting device comprising in combination, a window frame, a slidable sash therein, a one-piece supplemental frame, means for securing the same to the window frame, the supplemental frame having channel-shaped upper, lower and side portions, slotted bars slidable in the side portions, links connecting the bars and the lower portion of the supplemental frame, the construction and arrangement being such that when the sash is raised the links and bars will fill the space below the sash, and when the sash is lowered the links will be nested in the slotted bars.

5. In a double hung window construction, means for obstructing the opening caused by raising the lower sash comprising a tubular member square in section and formed with a longitudinal slot in its bottom portion secured to the bottom rail of the sash, a second similarly shaped member secured to the stool of said window and formed with a longitudinal slot in its top portion, a third similarly shaped member slidable between the first and second square tubular members and formed with longitudinal slots in both top and bottom portions, and a plurality of cross links pivotally and slidably secured within said square tubular members, whereby when the sash is raised, the links will assume a position which fills the opening below the lower sash when it is raised or open position, as described.

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