

July 29, 1924.

G. C. RUDMAN

1,503,248

BARRED WINDOW

Filed June 29, 1923

Fig. 1.

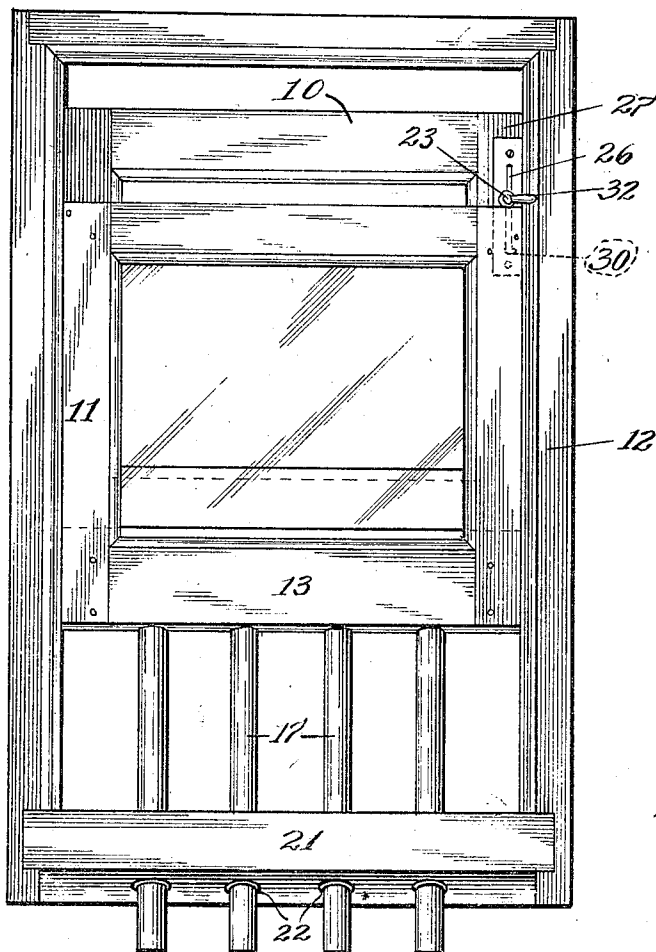


Fig. 2.

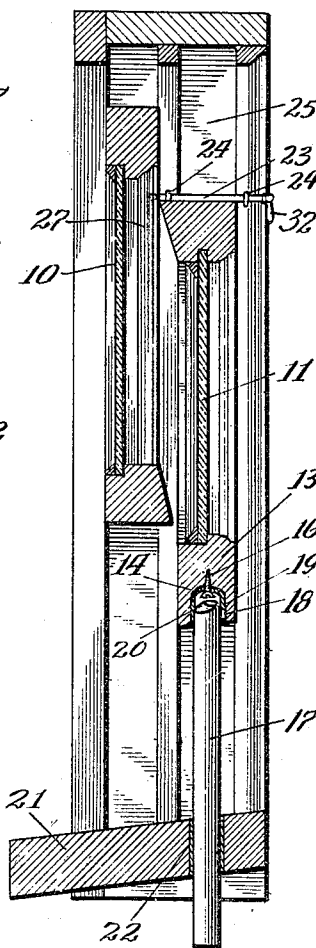


Fig. 3.

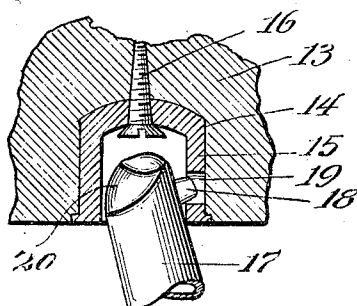


Fig. 4.

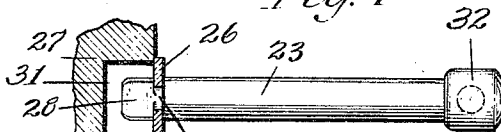
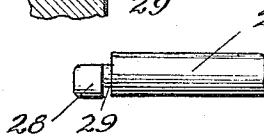


Fig. 5.



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## UNITED STATES PATENT OFFICE.

GEORGE C. RUDMAN, OF CLINTON, IOWA.

BARRED WINDOW.

Application filed June 29, 1923. Serial No. 648,451.

*To all whom it may concern:*

Be it known that I, GEORGE C. RUDMAN, a citizen of the United States, residing at Clinton, in the county of Clinton and State of Iowa, have invented certain new and useful Improvements in Barred Windows, of which the following is a specification.

This invention is directed to the provision in a sash window of a plurality of protecting bars so arranged that when the lower sash is lowered, the bars will be housed within the space below the window sill, and when the sash is raised, the bars will be carried upwardly with the window sash, thereby barring the open space without interfering in any way with the ventilation.

The invention relates particularly to the construction and arrangement of the bars and the mountings therefor which are so constructed as to permit the bars to be individually removed when the lower sash of the window has been moved to its uppermost position and also to the provision of means for restricting the upward movement of the lower sash while the bars are in service. The same means for restricting the movements of the lower sash also serves to restrict the downward movements of the upper sash so as to permit both sashes to be moved sufficiently to ensure ventilation at the top and bottom of the window.

In the drawing:

Figure 1 is an inside elevation of the two sashes in partially open position;

Fig. 2 is a sectional elevation of the same;

Fig. 3 is a detail of the thimble in the lower sash which affords a socket for the upper end of the bar; and

Figs. 4 and 5 are details of the locking device for restricting the sash movements.

The invention is applied to a window consisting of an upper sash 10 and a lower sash 11 slidably mounted in a casing 12. The lower base rail 13 of the lower sash is provided with a row of sockets 14 each of which receives a thimble 15 which is held against removal by the provision of a centrally disposed screw 16, which arrangement is such as to firmly hold the thimble in its socket but at the same time permit rotation thereof in case an unauthorized person attempts to twist the bar in an effort to remove the same. The thimbles afford sockets for the upper ends of a plurality of bars 17 each of which

is provided with a laterally extending stud 18 adapted to enter a recess 19 in the thimble. The side of the bar opposite the stud is preferably rounded off as at 20 to permit the bar, when its lower end is disengaged, to be tilted as in Fig. 3 to permit disengagement of the stud from the socket 19. The lower end of each bar passes through an aligned hole in the window sill 21, bushings 22 being provided to permit passage of the bars.

In order to restrict the upward movement of the lower sash and the lower movement of the upper sash, a locking pin 23 is provided which is rotatably mounted through a pair of eyes 24 in the lower sash guideway 25, and the end of the locking pin is entered through a slotted plate 26 set into the adjacent side rail 27 in the upper sash, which arrangement affords a limited downward movement for the upper sash and at the same time the pin affords a barrier across the lower sash guideway to limit the upward movement of the lower sash.

The locking pin 23, at its inner end, terminates in a head 28 flattened on one side which is connected to the body of the pin by a neck 29. The slot in the plate 26 terminates in a lower enlargement 30 which is flattened on its upper side to conform to the configuration of the head 28, so that when the upper sash has been moved to closed position, and the enlargement 30 brought into register with the head 28, the head of the locking pin may be drawn out through the enlargement 30 and the pin completely removed from the eyes 24, thereby permitting unrestricted movements of the upper and lower sashes.

The sash rail 27 behind the slotted plate is provided with a channel 31 to permit clearance of the head 28. The inner end of the pin terminates in a cross handle 32 to facilitate turning of the same.

In use, when it is desired to insert a set of bars into the lower sash of the window, the base rail of the sash is drilled at the desired distances apart to afford sockets for the reception of the thimbles 15, which are entered in place and secured by the screws 16. Likewise the upper sash has the slotted plate 26 secured thereto near its upper corner. The length of the bars is such that they will just clear the window sill 21 when the lower sash is completely

raised, and while in this position, the bars are inserted by tilting them as in Fig. 3 and entering the studs 18 into the thimble sockets 19 in the side walls of the thimble.

5 Thereafter, the lower sash with the bars depending therefrom is partially lowered to give the lower ends of the bars a firm engagement with the bushings in the window sill.

10 The head of the locking pin 23 is inserted through the enlarged opening 30 in the slotted plate 26. This bridges the lower sash guideway and prevents the lower sash from being elevated sufficiently to permit disengagement of the bars by unauthorized persons. If the upper sash is lowered, it is manifest that the head 28 on the locking pin will stand out of register with the enlargement 30 in the slotted plate, so that the pin cannot be withdrawn by manipulation through the space above the upper sash, such withdrawal being permitted only when the upper sash is completely closed. This prevents unlocking of the window from the exterior. If an effort be made to remove the bars by twisting the same, this will be frustrated by the rotation of the thimbles 15 around the centrally disposed screw 16.

The arrangement, as a whole, is one which may be easily applied to any sash window of the ordinary type, and when applied effectually serves to prevent ingress through the window or unauthorized manipulation of the locking device from the exterior so that full ventilation will be afforded without danger of intrusion.

Although the terms "upper," "lower," and "side" have been used in the specification and claims for purposes of convenient reference, it will be understood that no limitation in regard to the relative positions occupied by the sashes is intended.

I claim:

1. In combination with a window frame comprising a window sill and side guideways, a window sash slidably mounted in the guideways, and provided with sockets in its base rail, bars entered through the window sill and into the sockets, the bars being adapted to be removed from the sockets when the sash is lifted to a position to permit the bars to clear the window sill, and a locking pin for arresting the upward movement of the window sash before it has reached said position, substantially as described.

2. In combination with a window casing comprising a window sill and side guideways, a window sash slidably mounted within the guideways, and provided in its base rail with a plurality of thimbles each having a recess on one side thereof, a plurality of bars entered through the window sill and having their upper ends entered into the thimbles, each bar having a lug adapted to

enter the side recess in the corresponding thimble, the length of the bars being such as to permit clearance of the window sill when the window sash is raised to a predetermined point, and locking means for preventing the movement of the window sash to a point permitting disengagement of the bars, substantially as described.

3. In combination with a window casing comprising a window sill and side guideways, a window sash slidably mounted within the guideways, a bar entered through the window sill and into the base rail of the window sash, means for removably engaging the end of the bar to permit removal thereof when the window is lifted to a position to permit the lower end of the bar to clear the window sill, and locking means for preventing the lifting of the window sash to a point permitting disengagement of the bar, substantially as described.

4. In combination with a window casing comprising a window sill and side guideways, a window sash slidably mounted within the guideways, a bar entered through the window sill and into the base rail of the window sash, means for removably engaging the end of the bar to permit removal thereof when the window is lifted to a position to permit the lower end of the bar to clear the window sill, said engaging means comprising a thimble inserted in the lower sash rail and provided with a side recess and a co-acting pin near the upper end of the bar, and locking means for preventing the lifting of the window sash to a point permitting disengagement of the bar, substantially as described.

5. In combination with a window casing comprising a window sill and side guideways, upper and lower sashes slidably mounted in the guideways, a plurality of bars entered through the window sill and removably engaged by the lower rail of the lower sash, such removal being permitted when the lower sash is lifted to a point permitting the bars to clear the window sill, a slotted plate carried by the upper sash and provided at its lower end with an enlargement, and a locking pin positioned to arrest the full movement of the lower sash and provided with a head adapted to be entered through the slotted plate when the upper sash is raised, substantially as described.

6. In combination with a window casing comprising a window sill and side guideways, upper and lower sashes mounted in the guideways, a plurality of bars removably engaged by the base rail of the lower sash and adapted to be removed when the lower sash is raised to position to permit the lower ends of the bars to clear the window sill, and a locking device comprising engaging members carried by the upper sash and one of the guideways, respectively, in posi-

tion to arrest the raising movement of the lower sash and the lowering movement of the upper sash, substantially as described.

7. In combination with a window casing  
5 comprising a window sill and side guideways, upper and lower sashes mounted in the guideways, a plurality of bars removably engaged by the base rail of the lower sash and adapted to be removed when the  
10 lower sash is raised to position to permit the lower ends of the bars to clear the window sill, and a locking device comprising engag-

ing members carried by the upper sash and one of the guideways, respectively, in position to arrest the raising movement of the 15 lower sash and the lowering movement of the upper sash, said locking members adapted to be disengaged only when the upper sash is in raised position, substantially as described.

GEORGE C. RUDMAN.

Witness:

EPHRAIM BANNING.