Nov. 16, 1926. 1,606,907

E. K. STEVIE

OPEN WINDOW FASTENER

Filed Jan. 23, 1926

Fig. 1.

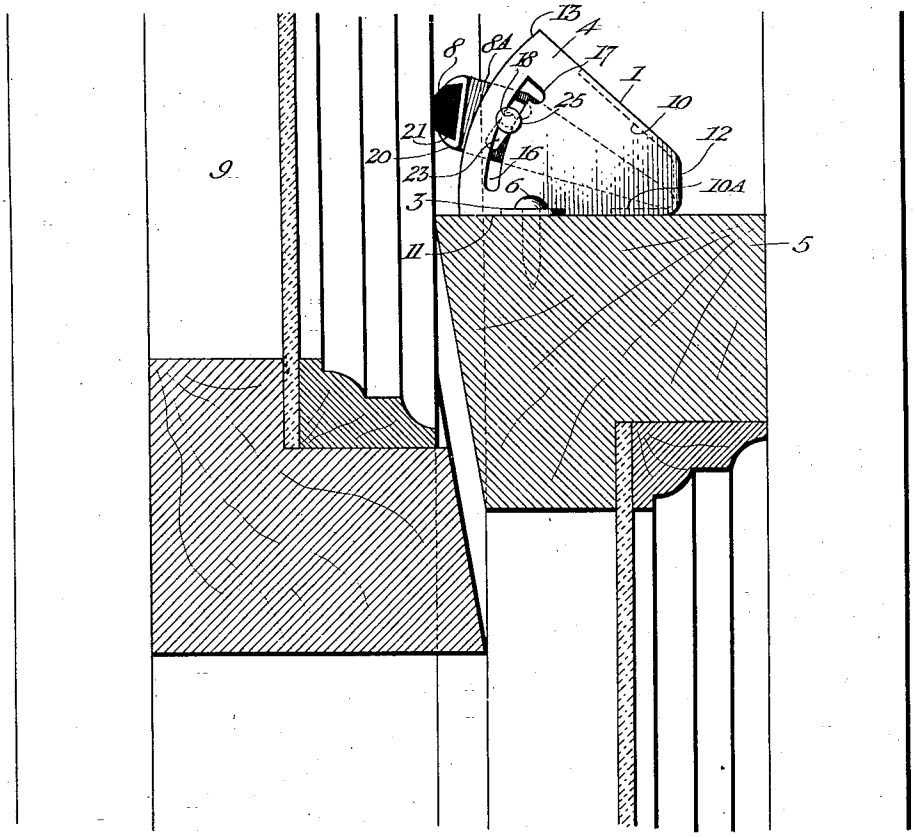


Fig. 2.

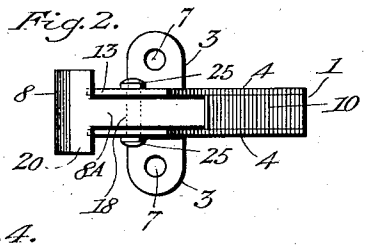


Fig. 4.

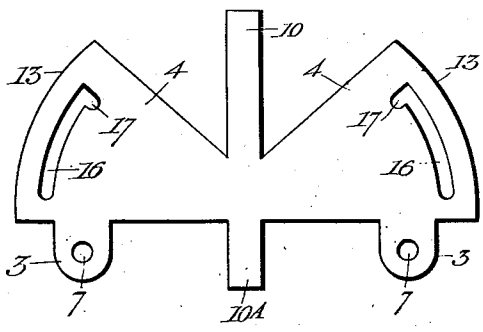
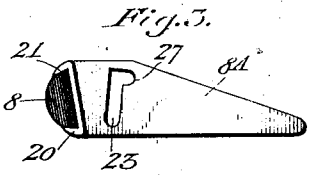


Fig. 3.



Inventor:
Emil K. Stevie.
By H. S. Bailey Attorney.

Patented Nov. 16, 1926. 1,606,907

UNITED STATES PATENT OFFICE.

EMIL K. STEVIE, OF DENVER, COLORADO.

OPEN-WINDOW FASTENER.

Application filed January 23, 1926. Serial No. 83,264.

My invention relates to a new open-window fastener, and the objects of my invention are:

First: To provide an open-window fastener that will lock both the lower and the upper parts of a window at the same time, so that the lower part or sash of a window cannot be raised from the outside of the window; and the top sash or part of a window cannot be lowered from the outside of the window, but that will permit anyone on the inside of the window to either raise the lower sash or lower the upper sash whenever it is desired to do so, and that will still leave the two sashes automatically locked together against movement from the outside of the window wherever the inside raising or lowering movement stops.

Second: To provide an open-window fastener that prevents the opening of either the lower and the upper sashes of a window from the outside, but allows the inmates of a home on the inside of the window to raise the lower sash whenever desired, if it has been locked at any part of its opening height, and at the same time if the upper sash has been locked in an open position to partially or wholly close the upper sash, the lock acting to automatically lock the two sashes together the instant the movement of either one of the sash stops.

Third: To provide an open-window fastener that is reliable in action, simple in construction, and that can be manufactured and sold for a few cents each, and can be secured to the sash rails in a few minutes without cutting or otherwise injuring the said rails, and that will allow the occupants of a home to lock their windows in such narrow open positions as will admit fresh air to the rooms without permitting them to be opened wide enough from the outside for a burglar to enter a room through them.

I attain these objects by the mechanism illustrated in the accompanying drawings in which:

Fig. 1, is a sectional view-full size-through the upper and lower rails of the lower and upper sashes, respectively of a window, showing the application of the improved fastener.

Fig. 2, is a top view of the fastener detached.

Fig. 3, is a side view of the fastener bar detached, and

Fig. 4, is a plan view of the blank from which the casing is made.

Similar letters of reference refer to similar parts throughout the several views.

Referring to the drawings the numeral 1, designates the casing member of an open-window lock embodying my invention, and it has a straight bottom edge from which project two thin flat feet lugs 3, from the opposite side plates 4, of the casing 1, and they are level with the bottom edge of the casing and consequently rest down on top of the upper surface of the upper cross rail 5, of the lower sash to which they are secured by screws 6, that are extended through holes 7, formed in the lugs and are screwed into the rail 5 of the lower sash in a position to allow the rubber clamping block 8, of a lock bar 8^A to bear against the inside surface of the adjacent stile or vertical sash rail 9, of the upper sash tight enough to hold it against any downward movement of the upper sash when it is operatively set on the lower sash to properly engage it, as will be fully explained hereinafter.

The casing member 1, consists of two independent side plates that are cut out of a sheet of iron or brass or other metal and the feet lugs 3, are preferably an integral part of each side plate of the casing 1, and the two side plates 4, of the casing are joined together into the form of a hollow casing by an integral neck portion that is also provided with narrow extensions 10 and 10^A that fit between the side plates 4, flush with their upper and lower edges for a portion of their lengths from the narrow end of the casing 1, and which define the width apart of the side plates 4 and consequently of the hollow space inside of the casing, that is, between its side plates 4. This casing is of a triangular shape, and its longest side 11 rests on the top cross rail 5 of the lower sash and its narrowest end 12 is its rear end, while its front end 13 is curved in an arc which is struck from a point near the lower rear corner of the casing. A curved slot 16 is formed through each of the side plates 4 from this same center, that are in alignment with each other and at the top of the slots there is a recess 17 extending towards the

radial center far enough to allow a lock pin 18, which extends through these slots and across the casing to rest in when it is moved to the top of the curved slots and to one side of them into these recesses 17.

It can be seen that this casing can be stamped out of thin metal and then bent up into the form of the hollow casing shown.

Within the casing and abutting at one end in the lower corner is placed the lock bar 8^A which swings freely up and down in the casing and extends beyond the curved front end 13 a short distance. This lock bar 8^A is provided with a head member 20 that extends across the bar on each side of it a short distance and it is provided with a dovetailed recess 21, in which the rubber block 8 is tightly fitted.

A vertically positioned slot 23 is formed in the lock bar and its upper end 24 is positioned to aline with the upper portion of the curved slots on the side plates of the casing, but the slot in the lock bar is disposed at such an outward angle which is tangent to the slots 16 in the side plates, so that its lower portion slightly crosses the lower portion of the curved slots 16 in the casing, and when the cross pin 18, which extends just far enough beyond the opposite sides of the casing to receive a round headed finger grasping washer 25 on each end, as it is raised in the curved slots 16, it engages the top of the slot 23 in the lock bar 8^A, and raises the bar with it, and as the upper ends of the two slots are in alignment when the pin 18 is at the top of the curved slots 16, the pin can be moved into the recess 17 of the curved slot and also into a similar recess 27 formed in the top of the slot in the lock bar made to receive the pin and when the pin is in the recess of both slots the lock bar is held against accidental displacement and its rubber block is out of the path of engagement with the vertical side rail of the upper sash 9, but when the cross pin 18 is moved out of the recesses of the curved slots the lock bar drops down into engagement with the vertical side rail 9 of the upper sash rail and the pin is pressed down to force the rubber block tightly against the vertical side rail and inasmuch as the slot in the lock bar is of a different angle being preferably at an angle of about 12 degrees to the vertical and the head end of the lock bar is at its rear side at an angle of about 10 degrees to the vertical, the pin tightly locks the lock bar and its rubber block against upward movement.

Any downward pressure on the upper sash to lower it, tightens the locking pressure of the rubber block of the lock bar against it, by jamming the rear end of the lock bar against the corner of the casing and also any lifting pressure applied to the lower sash will increase the locking pressure of the rubber block of the lock bar against the vertical rail of the upper sash, and consequently both sashes are locked against any opening movement of either one from the outside of the window, but the lower sash can be lowered as much as desired if it is found to be locked in an open position that admits too much air into the room and the upper sash can also be raised without touching the locking pin 18, but if it is desired to raise the lower sash or to lower the upper sash, the opposite ends of the locking pins will have to be engaged by the thumb and a finger of a person on the inside of the window and moved up in the curved slots 16 of the casing which movement of the pin unlocks the lock bar and allows it to be moved upward with the upward movement of the pin and away from the vertical member of the upper sash which is then released from the rubber block of the lock bar and the lower sash is also released at the same time and if the pin is moved into the recesses 17, the lock is held in an inoperative position.

The locking pin 18 serves to lock the bar against unauthorized upward movement, so that if a person on the outside of the window should attempt to raise the lock bar, by a string or hook, or any other means, in order to unlock the same in order to open either window, the pin would prevent such movement of the lock bar, which would therefore, remain in a sash locking position.

My invention provides an open-window fastener that is small in size and that does not disfigure the appearance or mar the general pleasing appearance of window sashes, and while I have illustrated and described the preferred construction and arrangement of my open window fastener I do not wish to be limited to the construction and arrangement shown as changes may be made in it without departing from the spirit of my invention.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a fastener for window sashes, a casing adapted to be secured upon the top of the upper rail of the lower sash, an inclined lock bar in said casing, one end of which bears in the lower corner of the casing, its opposite end engaging the stile of the upper sash, whereby an attempted opening movement of either sash jams said lock bar between said stile and the casing thereby locking said sashes against open movement, the sides of said casing having opposite slots in an arc of the swinging movement of the lock bar, and the lock bar having a slot which registers at its upper end with the slots in the casing but is tangent to the arc of said

slots, and a pin extending through said slots which prevents unintentional lifting movement of the lock bar.

2. In a fastener for window sashes, a narrow casing, one end of which is open and curved in an arc whose center is the opposite lower corner of the casing, a lock bar, one end of which bears in the said lower corner of the casing its opposite end extending out through the open end of said casing and provided with a resilient bearing block, the sides of the casing being provided with opposing slots concentric with the curved open end of the casing and terminating at their upper ends in offset notches, said lock bar also having a slot terminating at its upper end in an offset notch adapted to register with the corresponding notches in the casing slots when the lock bar is raised said latter slot extending down in a direction slightly tangent to the slots in the casing, and a pin which extends through said slots and is adapted to prevent unintentional upward movement of said lock bar, and to be moved to lie in said notches to hold said lock bar in an inoperative position said casing being adapted to be secured to the upper rail of a lower window sash and said lock bar being adapted to bear against the stile of the upper sash.

3. In a fastener for window sashes, an abutment on the upper rail of the lower sash, a lock bar, one end of which bears against said abutment, from which point it has an upward inclination and engages the stile of the upper sash, whereby an attempted opening movement of either sash, will jam said lock bar between the stile and the abutment thereby locking the sashes against open movement, and means for preventing an unauthorized lifting of the lock bar out of stile engaging position.

4. In a fastener for window sashes, the combination of a narrow casing open on one end, the opposite lower corner of said casing forming an abutment, a swinging lock bar in said casing one end of which bears in said corner, its opposite end extending out through the open end of said casing, the sides of said casing having opposing slots in an arc of the swinging movement of the lock bar, said lock bar having a slot which crosses the arc of the slots in the casing and a pin extending through said slots, said pin being bound between one edge of the lock bar slot and the opposite edges of the casing slots when an upward pull is exerted upon said lock bar, thereby preventing upward movement of said lock bar, said bar being free to upward movement when said pin is manually moved upward in said slots.

5. A fastener for locking both the lower and the upper sashes of windows in open positions, in such a manner that they cannot be opened from the outside, which consists of a hollow casing arranged to be secured to the top rail of the lower sash of the lower window; a lockbar bearing at one end in the lower corner of said casing and extending beyond said casing and arranged to engage the stile of the upper sash and having its outer end provided with a rubber block, slots being formed in said lockbar and said casing registering at their upper ends and crossing each other at their lower ends and a finger operated pin extending through said slots for locking said lock bar against unintentional upward movement said lock bar preventing either the upper or lower sash from being opened wider than a desired space.

6. In an open window fastener, the combination of a hollow casing adapted to be fastened to the upper sash rail of the lower sash of a window; a lock bar which abuts at one end against the lower corner of said casing, arranged to swing down into engagement with the stile of the upper sash rearwardly curved slots being formed in the opposite sides of said casing and a straight slot in said lock bar the upper end of which is adapted to register with the curved slots in said casing and partially crossing tangentially the lower end of said curved slots in said casing; a finger pin extending slidably through the slots in said casing and said lock bar; and notches in the upper ends of said slots to receive said pin thereby to lock said lockbar to said casing in a position of disengagement with the stile of the upper sash of said window.

In testimony whereof I affix my signature.

EMIL K. STEVIE.