G. C. MILLER.

WINDOW SASH LOCK.

APPLICATION FILED JULY 8, 1913.

1,077,487. Patented Nov. 4, 1913.

Fig. 2.

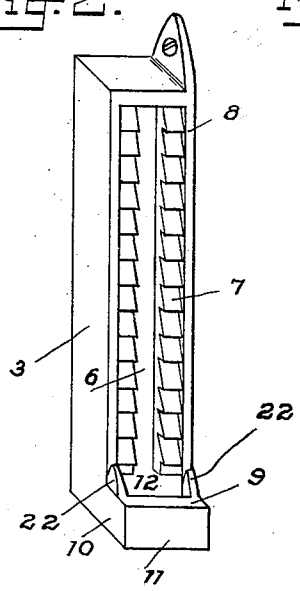


Fig. 1.

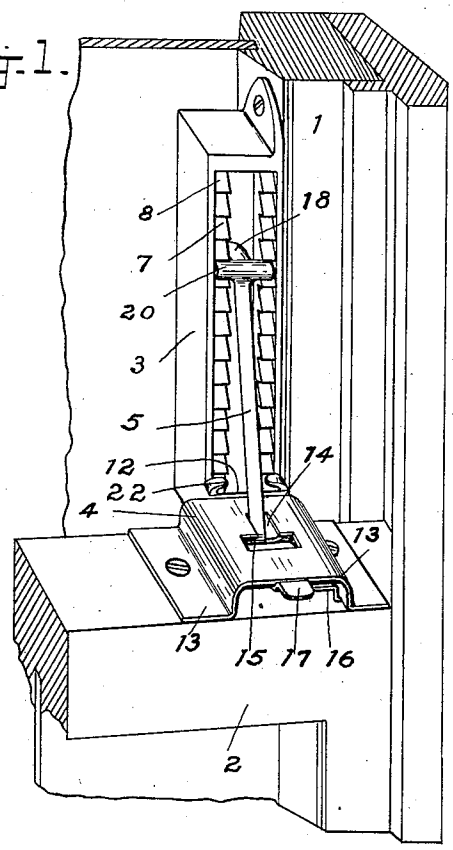


Fig. 3.

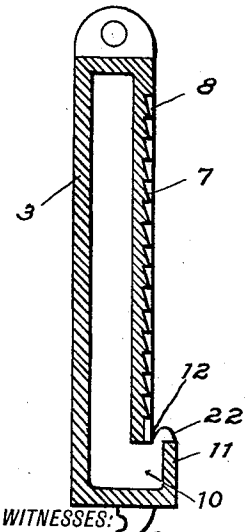


Fig. 5.

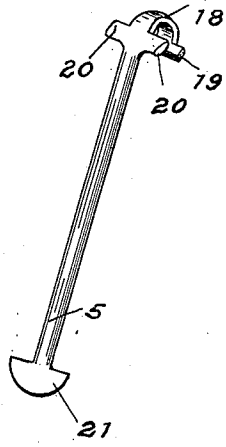
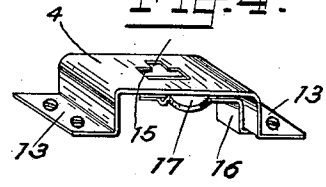


Fig. 4.



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WINDOW-SASH LOCK.

1,077,487. Specification of Letters Patent. Patented Nov. 4, 1913.

Application filed July 8, 1913. Serial No. 777,810.

To all whom it may concern:

Be it known that I, GEORGE C. MILLER, a citizen of the United States, and a resident of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Window-Sash Locks, of which the following is a specification.

My invention relates to an improved lock for windows, and the primary object thereof is to produce a device which can be utilized to hold the upper and lower sashes of a window in fixed relation to each other so as to prevent the upper sash from being pulled down and the lower sash from being raised by unauthorized persons seeking to gain entrance to a house or apartment.

A further object of my invention is to produce a lock of the kind mentioned which will enable the sashes to be adjustably secured together; which is capable of permitting the sashes to move to close the window while at the same time securing them against movement to open the same when the parts have once been adjusted to proper position; which is simple in construction; and which can be manufactured at a comparatively low cost.

A preferred embodiment of my improvement is illustrated on the accompanying drawings, the same characters of reference being used throughout the several views to indicate the same parts.

On the said drawings Figure 1 is a perspective view of part of a window showing my lock in position thereon; Fig. 2 is a perspective view of a casing forming one of the elements of my lock; Fig. 3 is vertical sectional view of the same; Fig. 4 is a perspective view of the retaining clip for my window lock; and Fig. 5 is a perspective view of the member for connecting the casing and the clip, when the sashes are to be locked together.

Referring particularly to the drawings I use the numeral 1 to indicate the upper sash of a window and the numeral 2 for the lower one. To the upper sash is fastened a casing 3 and the lower sash carries a retaining clip 4. The casing 3 and clip 4 are connected by a rod 5. This rod is removably engaged by the clip and adjustably engaged by the casing, so that the two sashes can be held in any position relatively to each other within certain limits, and at the same time can be released to open or close the window entirely.

The above parts are preferably made of metal, and I have found that malleable iron castings are well adapted to serve my purpose. The casing 3, as shown on Fig. 1, is intended to be made fast to the inside of the upper sash, and the clip 4 will be secured to the top of the lower one. As will be readily understood, the position of the casing will vary; it may be placed at a higher or lower point on the side of the upper sash, according to the height of this casing and the relative length of the connecting member 5.

The casing 3 is closed at the top, bottom, back and sides, but in the front it has a vertical slot, the edges of which are provided with teeth having sloping and abrupt faces, the latter faces engaging the rod to prevent the sashes from being moved to open the window beyond the desired degree. The slot is indicated by the numeral 6 and the teeth by the numeral 7; and it will be observed that the slot 6 extends from the top of the casing 4 over the greater part of the length thereof, but terminates short of the bottom. The main portion 8 of the front of the casing is of the same length as the slot 6 and terminates at the same distance above the bottom as the slot 6, so as to enable the casing to be provided with an enlarged portion or pocket at the lower end for a purpose which will presently appear. This pocket 9 is formed by extending the bottom of the casing and the lower portions of the sides as shown at 10. A wall 11 is also used to close the front of the pocket 9, this wall being spaced forward of the main portion 8 of the front of the casing, and having its top edges on substantially the same level as the bottom of the main portion 8 of the front and the lower end of the slot 6. As a result a horizontal opening 12 is formed which is of greater length transversely of the casing than the width of the slot 6.

The retaining clip 4 is substantially U-shaped and provided with out-turned perforated lugs 13 to receive fastening screws. Similar lugs are provided at the top and bottom of one of the sides of the casing 3, and it will be apparent that the lugs on the casing will be located on one side or the other, according to which side of the sash is to receive the lock. The clip will have an opening 14, the far end of which, with respect to the upper sash 1, will be enlarged as shown at 15; and inside of the clip will be a bent leaf spring catch 16. This spring will be fastened under one of the lugs 13 by the screw passing therethrough, and it will be wide enough to close the enlarged portion 15. It will further be provided with a lug 17 projecting beyond the edge of the clip so that the spring can be moved downward by the thumb or finger.

As stated above the casing and clip will be connected by means of the rod 5, and this rod will have one end shaped to provide a hook 18. The hook will normally be at the upper end of the rod 5, and will terminate in a cross bar 19 which has sufficient length to engage properly with the inner surface of the front 8. The base of the hook, at the point where it merges with the body of the rod 5 will have oppositely located lugs 20 projecting laterally as far as the ends of the bar 19. At its lower end the rod 5 will be enlarged to form shoulders 21.

The manner of using my lock will now be clear. I secure the casing to the inner side of the upper sash by means of screws, and it will be apparent that the depth or thickness of the casing from front to back will be less than half the thickness of the sash to which the same is applied. The clip is screwed to the top of the lower sash in the same vertical plane as the casing. Owing to the provision of the pocket 9 and opening 12, the hook-shaped upper end of the rod can be put into the casing, and this is accomplished by passing the bar 19 into the opening 12 and then up behind the edges of the slot 6. The bar will prevent the rod from being pulled away from the casing except by the same method as sufficed to insert it. Next the lower enlarged end of the rod is forced down into the enlargement 15 of the opening 14. This opening is wide enough to receive the body of the rod and when the same is moved away from the enlarged portion 15, the shoulders 21 engage the edges of the opening and the rod is held by the clip. It will now be seen that the lugs 20 will engage the teeth 7 and the upper sash prevented from being pulled down and the lower sash from being raised. At the same time the sashes are free to be moved to close the window, the teeth permitting the lugs 20 to slip down the casing for this purpose. When it is desired to disengage the rod from the clip, the lug 17 is used to press down the spring 16 far enough to let the enlarged lower end of the rod come into position to pass through the enlarged portion 15 of the opening 14.

The rod 5 will normally lean over toward the upper sash so as to be held by gravity in position to engage the teeth 7.

At the same time the distance between the bar 19 and lugs 20 will be greater than the thickness of the front of the casing, so that the rod 5 can be moved away from the upper sash 1 sufficiently to allow the sash and casing to be adjusted. Once the lugs 19 engage the teeth 7 the sashes can be moved in the direction required to close the window as far as the dimensions of the rod and casing and the relative location of these parts will permit, but cannot be moved in the opposite direction to close the window.

I may make the casing 3 and rod 5 longer or shorter, and I may place the casing higher or lower on the sash 1. I may place the casing near the bottom of the sash 1, and give the parts such dimensions that with the casing so placed the bar 19 will be near the bottom of the casing and the shoulders 21 in the clip 4 when the sashes are closed. I can in such a case open either sash a distance equal to the height of the casing 4, and close the same without manipulation of the rod by reason of the inclined faces of the teeth 7 permitting the lugs 19 to slide in a downward direction with respect to the casing. Or I may place the casing 3 higher up, so that the sashes will have to be moved some distance before the rod can connect the casing and the clip adjustably together. Whatever the relative position of the casing may be the two sashes must move downward or upward together when the parts of the lock are in engaging position, and any relative movement of the sashes permitted by the lugs 19 and teeth 7 will only be such as will tend to close the open space in the window frame containing the sashes. It will also be observed it is impossible for any one to separate the rod and the casing by inserting a stick between the sashes. This is because of the spring 16, which can only be moved by means of the lug 17.

When it is desired to put the lock out of commission, so that the sashes can be moved freely, the lug 17 is manipulated to enable the rod 5 to be disengaged from the clip. The rod is then pushed up, and the lower end, which is pointed to a certain extent, dropped into the pocket 9, and the length of the rod 5 will therefore be slightly less than that of the casing 4.

I also provide lugs 22 at the ends of the opening 12 which can be bent over after the insertion of the bar 19. By means of these lugs the rod will be kept in the casing

and its removal at all times prevented except by bending up the lugs 22 with a convenient tool.

When the lugs 22 are used, the parts can be sold separately and the bending over of the lugs 22 left to the purchaser when the lock is applied; or the rod 5 can be inserted and the lugs 22 bent over at the factory. When these lugs are provided the lock cannot be manipulated from without to separate the rod and casing by any person however clever. The lugs 22 must be pried open from within or main strength applied to the sashes from without. Hence a person trying to enter will either fail or make noise enough to alarm the inmates.

I can also dispense with the lugs 22, or at least dispense with bending them over into the opening 12. Obviously if the parts are so placed on the sashes that when the window is closed the bar 19 will be above the bottom of the slot 6 the rod cannot be worked out of the casing either from within or without the building unless it is first disengaged from the clip. But if the parts are placed so that with the sashes slightly open the bar will be as far as possible in the pocket 9; then, with the sashes open to a greater extent a would-be thief might move the sashes till the bar is in the pocket and then insert a stick and force the rod away from the upper sash. This could easily be done if the adjacent sash rails are far enough apart. By simply opening the sashes again the bar 19 would emerge from the opening 12 and the sashes would be freed. I therefore prefer that the lugs 22 be provided. I may of course use other means than the lugs, such as bolts through the sides of the pocket 9 to keep the bar out of the pocket after it has once been inserted in the casing.

From the above description it will be seen that I have produced a simple, advantageous, and cheap window lock, and I desire to claim the same as broadly as the state of the prior art will permit.

Having described my invention what I claim as new and desire to secure and protect by Letters Patent of the United States is:—

1. In a window sash lock, the combination of an intermediate member, means for adjustably engaging said member for enabling said member to be in operative relation with a sash, and means including a relatively movable catch for securing said member to another sash, whereby the two sashes can adjustably engage each other or be freed from each other.

2. In a window lock, the combination of a casing adapted to be secured to a sash and having a vertical slot in its front and teeth along said slot, a clip having an opening with an enlarged portion secured to another sash adjacent to the first sash, and a connecting rod having means at one end located within the casing and adapted to prevent separation of the rod from the casing without preventing relative movement of the rod, said rod also having means for engaging the teeth to permit adjustment of the rod and having its other end enlarged, whereby said end can be placed in position to engage the clip, and the sashes secured in desired relation.

3. In a window lock, the combination of a casing adapted to be secured to a sash and having a vertical slot in its front and teeth along said slot, a clip having an opening with an enlarged portion secured to another sash adjacent to the first sash, a connecting rod having means at one end located within the casing and adapted to prevent separation of the rod from the casing without preventing relative movement of the rod in the slot, said rod also having means for engaging the teeth to permit adjustment of the rod and having its other end enlarged, whereby the said end can be placed in position to engage the clip, and a spring associated with the clip to prevent disengagement of the rod and clip except from the inside of the window, whereby the sashes can be secured in desired relation.

4. In a window lock, the combination of a casing adapted to be secured to a sash and having a vertical slot in its front, teeth along the slot, and a pocket having an opening leading into the same from the top of the pocket at the lower end of the slot, a retaining clip having an opening with an enlarged portion secured to another sash adjacent to the first sash, and a connecting rod having means at one end located within the casing and adapted to prevent separation of the rod from the casing without preventing relative movement of the rod in the slot, said rod also having means for engagement of the teeth to permit adjustment of the rod and having its other end enlarged, whereby the said end can be caused to engage the clip to secure the sashes in desired relation, or placed in the opening leading to the pocket when the sashes are released.

5. In a window lock, a retaining clip having an opening with an enlarged portion, and a spring associated with the clip to close the enlarged portion of the opening, said spring having a lug to enable the same to be manipulated to uncover the enlarged portion of the opening.

6. In a window lock, a connecting member having one end hook-shaped, the said member having enlargements at its opposite end and at the termination of the hook-shaped portion, and having oppositely extending lugs at the base of the hook-shaped portion.

7. In a window lock, a casing having a vertical slot in its front and teeth along the slot, said slot and teeth terminating above the bottom of the casing, the bottom and

lower portions of the sides of the casing being extended forward to form a pocket at the front of the casing, said pocket having its top edges substantially on the same level as the bottom of the slot, and being provided with an opening in the upper part of the same, forward of said slot.

Signed at New York in the county of New York and State of New York this 7th day of July A. D. 1913.

GEORGE C. MILLER.

Witnesses:
WM. F. NICKEL,
GUSTAV RASMUS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."