

S. C. SLADDEN.
WINDOW SASH LOCK.
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1,022,889.

Patented Apr. 9, 1912.

Fig. 1.

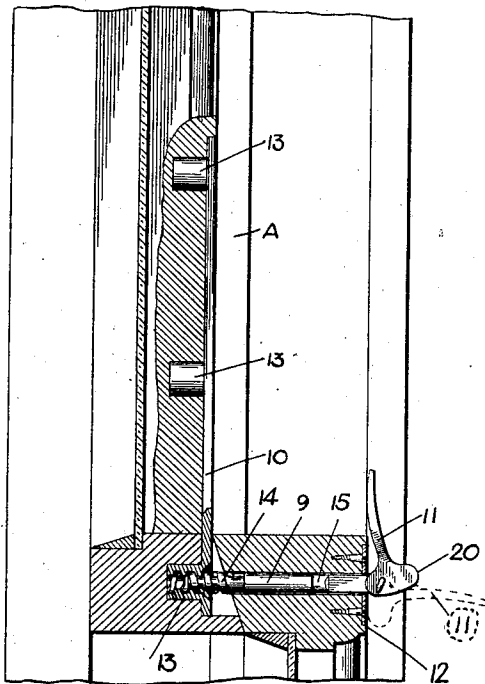


Fig. 2.

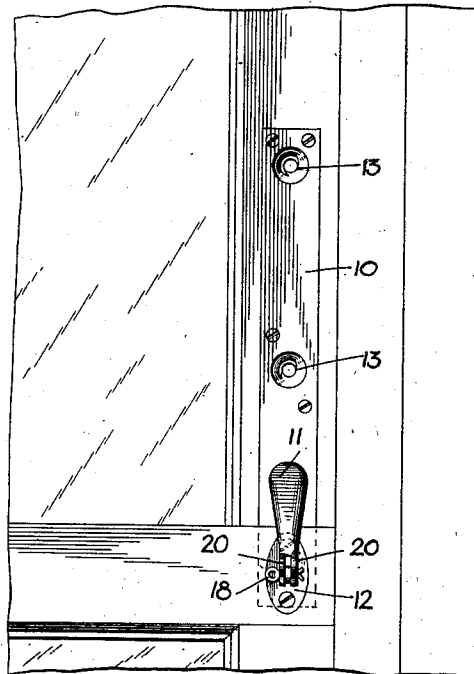


Fig. 3.

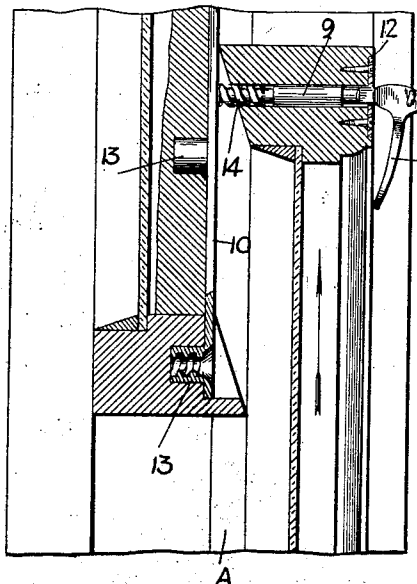
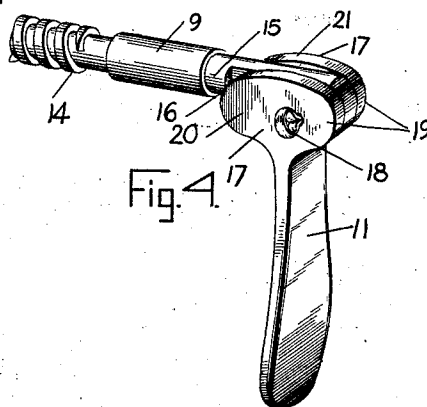


Fig. 4.



WITNESSES

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WINDOW-SASH LOCK.

1,022,889.

Specification of Letters Patent.

Patented Apr. 9, 1912.

Application filed November 24, 1911. Serial No. 662,129.

To all whom it may concern:

Be it known that I, SIDNEY C. SLADDEN, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Window-Sash Lock, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide a lock having a plurality of service positions; to provide a lock, simple, economical and durable; to provide a lock, positive and rapid in operation; to provide a lock to draw the sashes toward each other, to prevent the admission of cold air or dust, and to overcome any tendency to rattle, present in the sashes and frames thereof; to provide a lock, inconspicuous; and to provide a lock of the character mentioned, the master member whereof is removable, to prevent the accidental release or disadjustment thereof.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a vertical section of fragments of window sashes, showing the meeting rails of said sashes, provided with a lock constructed and arranged in accordance with the present invention; the lock being shown in operative position; Fig. 2 is a front view of the parts shown in Fig. 1; Fig. 3 is a vertical section of window sashes, showing fragments thereof, the meeting rails being separated, and the bolt member of the lock being held in inoperative position; and Fig. 4 is a perspective view of the locking bolt and operating lever therefor, constructed and arranged in accordance with the present invention.

As shown in the accompanying drawings, the lock consists essentially in the bolt 9, the socket plate 10, the operating lever 11, and the bearing plate 12. The plate 10 as shown in the drawings, is preferably provided with three socket bosses 13, 13. It will be understood that the number of bosses may be increased or diminished, without departing from the spirit of the invention. The distance apart at which the bosses 13 are placed varies, to meet the demand or desire of the owner or designer. The ob-

ject of the construction is principally to provide positions for locking the sashes of the window when closed; to permit and provide ventilating spaces above or below, when open, or both above and below, the sashes being locked together and also to the frame of the window.

Preferably, the plates 10 are disposed on one or both of the side rails of the upper sash of the window. It will be understood, however, that a plate provided with a single boss may be disposed in any position upon the meeting rail of the sashes. It has been deemed unnecessary to illustrate these obvious variations of the construction.

The bosses 13 are internally threaded, the said threads registering with a thread 14 on the bolt 9. The thread 14 is preferably given a high pitch, and a flat crown, to form what is known as a flat thread. The height of the pitch provides rapidity of action in drawing the bolt into the sockets 13, while the thickness of the threads furnishes the necessary strength to resist the pull of the lever 11.

Preferably the crown of the thread 14 coincides with the diameter of the shank of the bolt 9. The threaded portion and the shank portion of the said bolt unite in forming a guide within a bore provided in the lower sash of the window. The bore referred to may be a hole driven through the meeting rail, or, on the side rail of the lower sash. The outer end 15 of the bolt 9 is reduced, as seen best in Fig. 4 of drawings, to form on the bolt 9 an abutment shoulder 16. The shoulder 16, by striking on the inner side of the plate 12, prevents the withdrawal of the bolt 9 from the bore formed in the lower sash. The outer end 15 is flattened at the sides, to extend between the sides of the cam-shaped head 17 formed at the pivot end of the lever 11. Through perforations formed in the head 17, is extended the pivot for the lever, which, as shown best in Fig. 4 of drawings, in the preferred form, is a cotter pin 18. The cotter pin 18 is passed through a suitable perforation in the outer end 15 of the bolt 9. The head 17 is cam-shaped, having three edge surfaces, which, for convenience of description, we will style the heels 19, the toes 20, and the flats 21. The flats rotate about the pivot 18. The radius of the path of the heels 19 is slightly in ex-

cess of the radius of the path of the flats 21, while the radius of the path of the toes 20 greatly exceeds the radius of the path of the flats 21. This construction permits of three
5 adjustments of the lever 11 when resting against the plate 12.

The plate 12 covers the bore in the window sash, and is secured in position thereon by any suitable fastenings. The plate forms
10 a bearing for the heel and toe of the lever 11, when the same are forced against the said plate to draw the bolt 9 inward to either of the positions shown in Figs. 1 and 3. Prior to disposing the lever 11 in the
15 position shown in Fig. 1, where the heel 19 is forced against the plate 12, the bolt 9 is turned, to cause the thread 14 to engage the threads of the bosses 13 opposite which the bore in the lower sash is disposed. When
20 the bolt 9 is thus thoroughly engaged with the threads of the bosses 13, the flats 21 of the head 17 resting against the plate 12, the lever 11 is upturned, forcing the heel 19 between the pivot of the said lever and plate,
25 drawing the thread 14 and the socket plate engaged thereby toward the lower sash, in which the bolt 9 is mounted. The discrepancy in length of the handle portion of the lever 11, and the radius of the heel 19, is
30 such as to multiply the power of the application of the lever and heel in their pull upon the bolt 9. In this position, it is evident, the window sashes are securely locked. It will be understood that when the window
35 sashes are provided with the long socket plate, the lower sash may be raised to register the bore therein with one or other of the socket bosses 13, to lock the window in partially-open position. It will also be under-
40 stood that if the sashes are properly adjusted, the pull of the bolt 9 upon the two sashes will force the same against the parting bead A of the window frame, thus clamping the window sashes rigidly in the
45 adjusted position, to permit an opening at both the top and bottom of the window frame, thereby securing a more perfect ventilation of the room, the windows whereof are provided with the herein-described lock,
50 without danger of intrusion of any person from the outside.

When desired to release the sashes from the lock, the lever 11 is dropped to the horizontal position shown by dotted lines in
55 Fig. 1, when the bolt may be reversely rotated to free the thread 14 from the threads of the socket bosses 13. When the bolts have been completely released, it will be found that by dropping the lever to the position shown in Fig. 3, the toe 20 of the
60 head 17 bears against the plate 12, and removes the end of the bolt, and maintains the same out of the path of the opposite or outer window sash.

While I have herein shown the bolt as 65 provided with a screw-thread 14, it will be understood that, in lieu of the threaded socket in the bosses 13, any known form of locking device may be employed, and that, instead of the thread 14 on the bolt 9, an
70 engaging device of known character may be employed, to engage in holding relation said locking device. In other words, the function performed by the thread 14 and socket of the bosses 13 is to engage the end
75 of the bolt 9, to anchor the same for the pull of the bolt 9 when the lever 11 is thrown to either of the positions shown in Figs. 1 and 3.

By using the cotter pin 18 as a pivot for 80 the lever 11, said lever may be removed from the bolt 9 by withdrawing the pin 18. This removal of the levers from the bolts 9 serves to prevent the accidental release of the window, by meddling with the bolt 9, 85 and further, removes from sight, the lever 11, the most conspicuous structural element of the lock. When desired, the lever is readily and quickly replaced in operative position upon the bolt 9 by the use of cotter
90 pin 18.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. A lock for sliding sashes, separated by 95 a guide member, said lock comprising a plurality of sockets mounted within one of said sashes and removed from the parting edge thereof; a bolt rotatably mounted in the other of said sashes to extend there-
100 through at a point removed from the parting edge thereof, said bolt being provided with means for engaging said sockets in the other sash; and a lever pivotally connected with said bolt and having a head extended per-
105 pendicular to the handle of said lever and at both sides of the pivot, the extension at one side being relatively short and cam-shaped, to wedge against the sash in which said bolt is mounted, to draw the sashes to-
110 gether, and the other extension being relatively long, to interpose between the pivot and sash, to withhold the bolt from contact with the other sash and sockets.

2. A lock for sliding sashes, separated by 115 a guide member, said lock comprising a plurality of screw-threaded sockets mounted in one of said sashes, removed from the parting edge thereof; a bolt rotatably mounted in the other of said sashes, removed from the
120 parting edge thereof, said bolt being provided with a screw-threaded end to engage the threads of said sockets; a lever pivotally mounted on said bolt, to swing across the end thereof and in line therewith, said lever
125 having a head provided with a laterally-extended cam, to wedge between said pivot and said sash, to draw said sashes together and

to prevent the rotation of said bolt, said lever being further provided with a lateral extension opposite said cam, to interpose between said pivot and said sash, to withhold
5 the bolt from engagement with the other sash and sockets carried thereby.

name to this specification in the presence of two subscribing witnesses.

SIDNEY C. SLADDEN.

Witnesses:

E. F. MURDOCK,
PHILIP D. ROLLHAUS.

In testimony whereof I have signed my

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