J. J. McCORMACK.

WINDOW LATCH.

APPLICATION FILED JUNE 10, 1916.

1,198,862.

Patented Sept. 19, 1916.

Fig. 1.

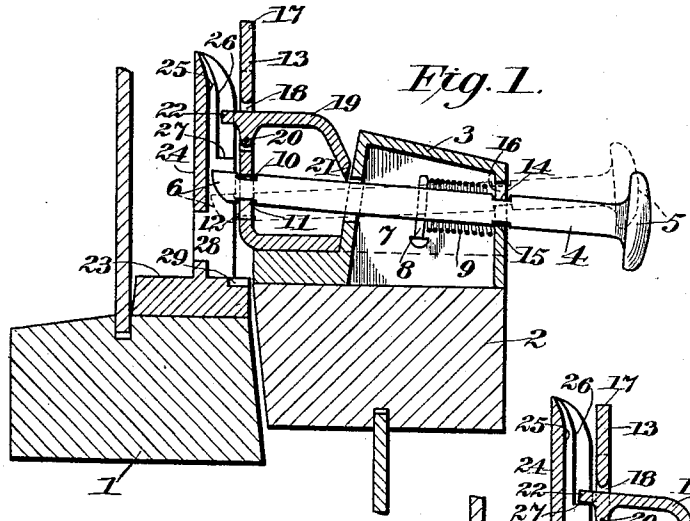


Fig. 2.

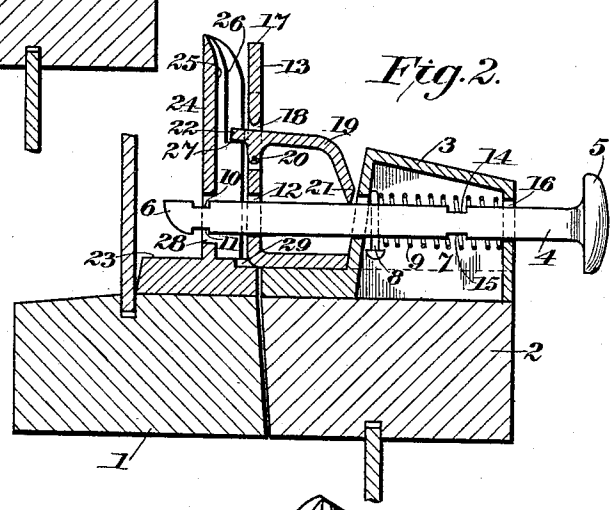


Fig. 3.

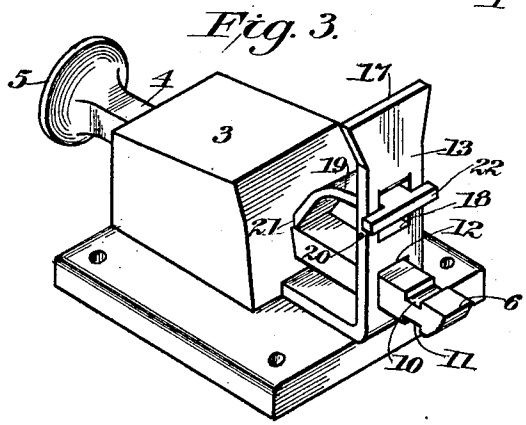
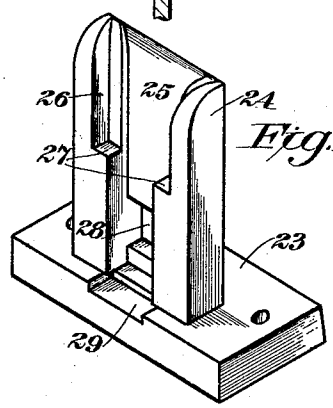


Fig. 4.



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UNITED STATES PATENT OFFICE.

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WINDOW-LATCH.

1,198,862. Specification of Letters Patent. Patented Sept. 19, 1916.

Application filed June 10, 1916. Serial No. 102,835.

To all whom it may concern:

Be it known that I, JOHN J. McCORMACK, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Window-Latches, of which the following is a full, clear, and exact specification.

This invention relates to sash locks for fastening together the meeting rails of upper and lower window sashes, and has for its object to provide an automatic lock of improved construction which may be so arranged as to automatically lock when the meeting rails are brought together, or so adjusted as to permit the meeting rails to come together without locking the sashes together.

Another object is to provide improved means for automatically locking the sashes together when brought into horizontal alinement, and especially to improve the means for releasing the locking bolt at the proper time.

Other objects will appear as the description proceeds.

The invention will be first hereinafter described in connection with the accompanying drawings, which constitute part of this specification, and then more specifically defined in the claims at the end of the description.

In the accompanying drawings, wherein similar reference characters designate corresponding parts throughout the several views: Figure 1 is a vertical section through the lock mounted on the meeting rails of window sashes, showing the bolt retracted and in position to be released when the meeting rails are brought into horizontal alinement. Fig. 2 is a similar view showing the meeting rails in horizontal alinement and the bolt in locking position. Fig. 3 is a detailed perspective view of the bolt carrying member of the lock, and Fig. 4 is a similar view of the keeper.

Referring more particularly to the drawings, 1 and 2 designate the meeting rails of the upper and lower sashes, respectively. The bolt carrying member 3 of the lock is suitably fastened to the meeting rail 2 of the lower sash, and the bolt 4 extends through a chambered portion 7 of said member and is normally arranged in a substantially horizontal position. The rear end of the bolt 4 projects from the member 3 and is formed with a handle or knob 5. The other end of the bolt is rounded or beveled, as at 6 and projects through an opening 12 in an upright bracket 13 rigidly fastened to the member 3 and arranged substantially in line with the meeting edges of the rails 1 and 2.

Within the chamber 7 of the member 3, a spring 9 is coiled about the bolt 4 and presses against a pin 8 carried by the bolt for normally holding said bolt in locking position. The inner end of the bolt has vertically alined notches 10 and 11 formed in its upper and lower faces, respectively, for engagement with the upper and lower edges of the opening 12 in the upright bracket 13 when the bolt is retracted. The other end portion of the bolt is provided with similar notches 14 and 15 for engaging the upper and lower edges of an opening 16 in the chambered portion of the member 3 when the notches 10 or 11 are engaged with the edges of the opening 12. As illustrated in Fig. 1, when the bolt is retracted, the handle 5 may be depressed for engaging the notch 10 with the upper edge of the opening 12 and the notch 15 with the lower edge of the opening 16, or the handle may be raised for engaging the notch 11 with the lower edge of the opening 12 and the notch 14 with the upper edge of the opening 16. In either of these positions, the bolt will be held retracted, but when the inner end of the bolt is raised and the outer or handle carrying end thereof is lowered, as shown in solid lines in Fig. 1, said bolt is in position to be automatically released when the meeting rails of the two sashes are brought into horizontal alinement, while the bolt when arranged as shown in dotted lines in Fig. 1 will remain in retracted position when the meeting rails are brought together. It will be found very convenient to arrange the bolt in the latter position when the sashes are to be frequently raised or lowered.

The upper end of the bracket 13 is made flat, as at 17, or otherwise formed as a stop for engaging the top of the window frame when the lower sash is fully raised. Said bracket 13 is provided with an opening 18 above the opening 12 therein, and in said opening 18 a bolt releasing lever 19 is pivoted at 20. The outer end of said lever is bent downward, as at 21 to engage the upper face of the bolt, while the inner end of said lever is provided with a T-shaped head

22 projecting beyond the bracket and into the path of oppositely arranged grooves or ways 26 in the upright portion 24 of the keeper 23 which is secured to the meeting rail 1 of the upper sash. The grooves or ways 26 terminate at the bottom in shoulders 27, while the upper ends of said grooves are open to receive the T-shaped head 22 of the lever 19 when the meeting rails are brought together, as illustrated in Fig. 1. When the meeting rails are moved fully into horizontal alinement, the extremities of the oppositely extending portions of the T-shaped head 22 of the lever 19 will engage the shoulders 27 at the bases of the grooves 26 and cause the downwardly turned end 21 of said lever to press against the upper face of the bolt 4 and release the notch 10 from the upper edge of the opening 12 and the notch 15 from the lower edge of the opening 16 thus permitting the spring 9 to shoot the bolt into an opening 28 in the keeper, as shown in Fig. 2. The central portion of the upper end of the keeper is preferably rounded or beveled, as at 25, to permit the beveled end 6 of the bolt to more easily ride down to the locking opening 28. As illustrated, the upright portion of the bracket 13 may project slightly beyond the meeting rail 2 of the lower sash, and the base portion of the keeper 23 be provided with a notch 29 to provide clearance for the bottom of this projecting upright portion of the bracket.

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

1. In a sash lock, the combination with a spring pressed bolt having a notch adapted to engage a fixture when the bolt is retracted for retaining the same in that position, of a keeper having a shoulder, and a lever having a projection to engage said shoulder when the meeting rails are brought together for automatically releasing the bolt.

2. In a sash lock, the combination with a spring pressed bolt having notches in its upper and lower faces adapted to engage a fixture for retaining the bolt in retracted position, of a keeper having a shoulder, and a lever adapted to engage said shoulder and release the bolt when one of its notches is engaged with the fixture, the lever being out of range of the bolt when its other notch is engaged with the fixture.

3. In a sash lock, the combination with a spring pressed bolt having notches in its upper and lower faces adapted to engage different parts of a fixture for retaining the bolt in retracted position, of a keeper having a shoulder, and a lever intermediately pivoted and having one end extending into the path of the shoulder on the keeper and its other end adapted to engage the upper face of the bolt for automatically releasing said bolt when its upper notch is engaged with the fixture and the meeting rails are brought together, the lever being out of range of the bolt when its lower notch is engaged with the fixture.

4. In a sash lock, the combination with a spring pressed bolt having a notch to engage a fixture for holding said bolt in retracted position, of a keeper having oppositely arranged shoulders, and a lever having a T-shaped head to engage said shoulders for releasing the bolt when the meeting rails are brought together.

In testimony whereof I have signed my name to this specification.

JOHN J. McCORMACK.

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