R. IRVINE.

WINDOW LOCK.

APPLICATION FILED DEC. 16, 1918.

1,298,507.

Patented Mar. 25, 1919.

Fig. 2.

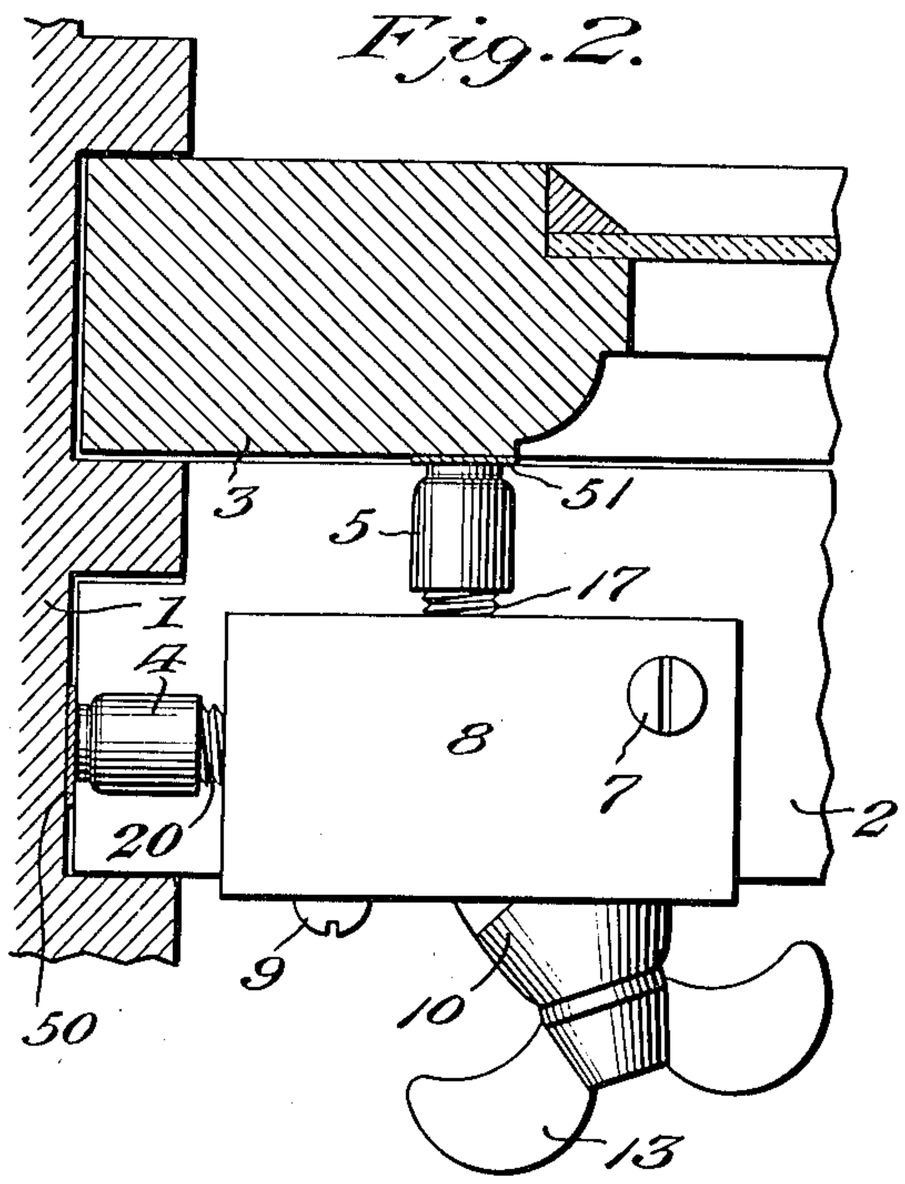


Fig. 1.

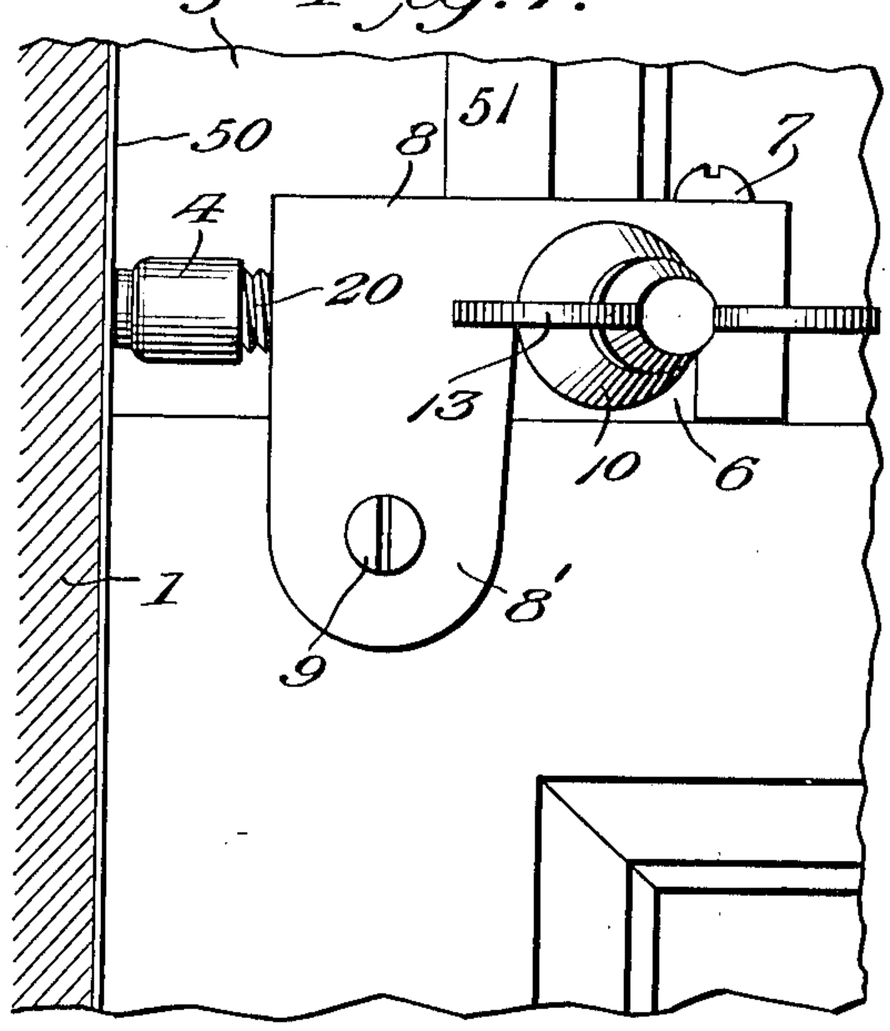


Fig. 3.

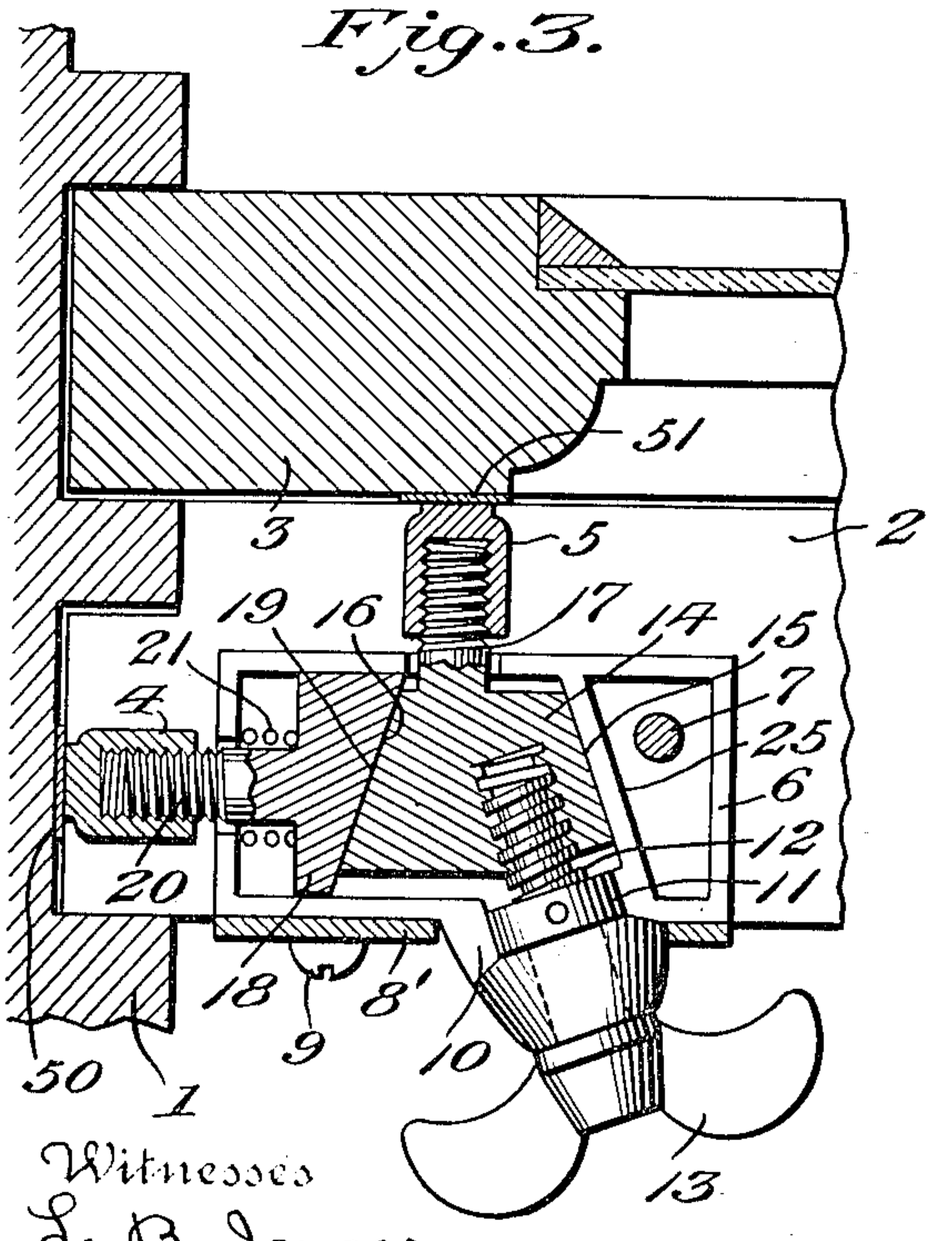


Fig. 4.

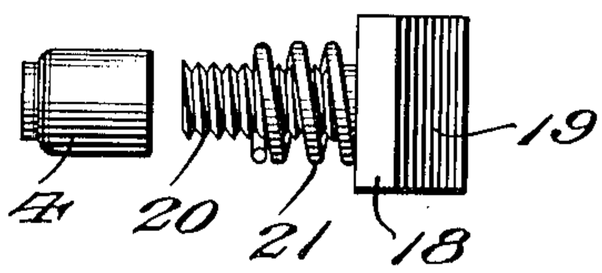
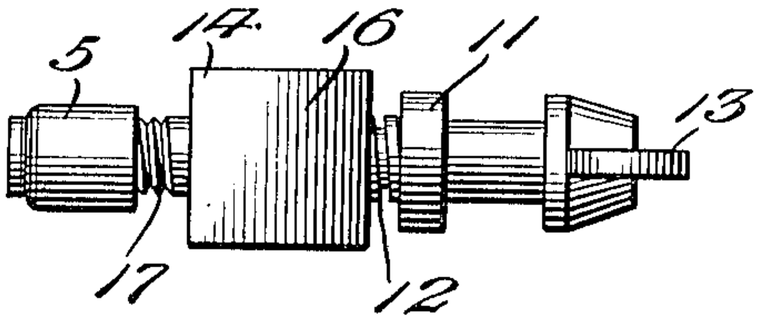


Fig. 5.



Witnesses

L. B. James

Edwin G. McKee

Inventor

Richard Irvine

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

RICHARD IRVINE, OF DETROIT, MICHIGAN.

WINDOW-LOCK.

1,298,507. Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed December 16, 1918. Serial No. 266,962.

To all whom it may concern:

Be it known that I, RICHARD IRVINE, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Window-Locks, of which the following is a specification.

My present invention pertains to window locks; and it has for its general object to provide a simple and strong window lock that is effective in locking the lower and upper sashes of a window when the sashes are entirely closed and also when the sashes are opened to various extents.

The novelty, utility and practical advantages of the improved lock will be fully understood from the following description and claims, when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is an elevation showing a portion of a window case, together with lower and upper sashes and the application of my novel lock on the lower sash in position to engage both the window casing and the upper sash.

Fig. 2 is a top plan view of the lock *per se*.

Fig. 3 is a horizontal section showing the arrangement of the working parts of the lock in the body of the casing and with the top plate of the casing removed.

Fig. 4 is a detail view showing the stud for engaging the window casing and also showing the tapered part complementary to said stud and the spring for retracting the stud.

Fig. 5 comprises disconnected views of the stud for engaging the face of the upper sash, and the means through the medium of which said stud is projected and retracted.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

The window casing 1, the lower sash 2 and the upper sash 3 may be, and preferably are, of the ordinary construction.

My novel window lock is designed to be fixedly connected to the upper end of the lower sash, preferably adjacent to the lefthand vertical edge thereof, and, among other elements, it comprises a stud 4 to engage the window casing 1 and a stud 5 to engage the face of the upper sash 3. From this it follows that when the studs 4 and 5 are properly secured against the window casing and the upper sash, respectively, the lock will cause the lower sash to bind against the casing at its upper righthand corner and its lower lefthand corner, and will cause the lower lefthand corner and the upper lefthand corner of the upper sash to likewise bind against the casing, thereby bracing the sashes at four points in addition to the bracing of the stud 4 against the window casing and the bracing of the stud 5 against the face of the upper sash and the attending pressing of the upper sash against its complementary parting bead.

The casing of my novel lock preferably comprises a body 6, designed to be fixed by screws 7 on the upper end of the lower sash, and a cap 8 which is secured by the said screws 7 on the body 6 and is provided with a depending flange 8′, designed to be connected by screws 9 to the face of the lower sash 2. It is manifest, however, that the said casing may be of any other construction compatible with the purpose of my invention, without involving departure from the scope of the invention as claimed.

In furtherance of the invention, the casing body 6 is provided with an offset portion 10, and in the said offset portion is mounted to turn a collar flange 11, fixed on the threaded shank 12 of a screw; the said threaded shank being held by the collar flange against endwise movement with respect to the casing body 6 and being provided at its outer end with a handle 13. At its inner end the said shank 12 is threaded into a movable body 14, having tapered sides 15 and 16 and also having a threaded pin 17 on which the stud 5 is adjustably mounted, in order that it may be accommodated to the sash that it is to engage.

Disposed in the casing body 6 is a movable body 18, which has an inclined side 19 opposed to the inclined side 16 of the body 14. The said body 18 is also provided with a threaded pin 20, on which is adjustably mounted the stud 4. Interposed between the body 18 and the outer end of the casing body 6 is an expansion spring 21, which surrounds the pin 20 and is designed to retract the body 18, the pin 20 and the stud 4, when the screw shank 12 is turned to retract the body 14.

In the practical use of my novel lock, it will be manifest that when the screw is turned to advance the body 14, the stud 5 complementary to said body will be set

against the face of the upper sash 3, and at the same time the engagement between the inclined side 16 of the body 14 and the inclined side 19 of the body 18 will bring about a powerful outward movement of the stud 4 and the engagement of said stud with the adjacent portion of the window casing. Consequently, the lower and upper sashes will be strongly fixed with respect to each other and the window casing, and this result may be produced when the sashes are fully closed and also when either or both is opened to a greater or less extent. The inclined side 15 of the body 14 is opposed to an inclined wall 25 that is provided in the casing body 6 with a view to resisting lateral thrust imposed on the body 14 and in that way contribute to the strength of the lock as a whole.

When deemed expedient an apertured strip 50, of thin metal, may be fixedly placed on the window casing, and a similar strip 51 may be fixed to the upper sash with the result that my novel lock will operate as a positive double lock.

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

1. The combination with a window casing and lower and upper sashes slidable therein, of a lock comprising a casing fixed upon the upper end of the lower sash, interiorly threaded studs disposed at right angles to each other to engage the window casing and the upper sash, respectively, a body movable in the casing and having an inclined side and also having a threaded pin extending outside the casing and connected to the stud complementary to the upper sash, a body movable in the casing and having an inclined side opposed to that of the first-named body and also having a pin extending outside the casing and threaded for connection to the other stud, a spring for retracting the second-named body, and means connected with the first-named body and the casing for adjusting and adjustably fixing said body.

2. A sash lock comprising a casing, interiorly threaded studs disposed at right angles to each other and arranged exteriorly of the casing, a body movable in the casing and having an inclined side and also having a threaded pin extending through a wall of the casing and connected with one stud, a second body movable in the casing and having an inclined side opposed to that of the first-named body and also having a threaded pin extending through a wall of the casing, and connected to the other stud, a spring for retracting the second-named body, and means connected with the casing and the first-named body for adjusting and adjustably fixing said body.

In testimony whereof I affix my signature.

RICHARD IRVINE.