No. 821,956. PATENTED MAY 29, 1906.

R. NEAL.

SASH LOCK.

APPLICATION FILED AUG. 3, 1905.

FIG. 1.

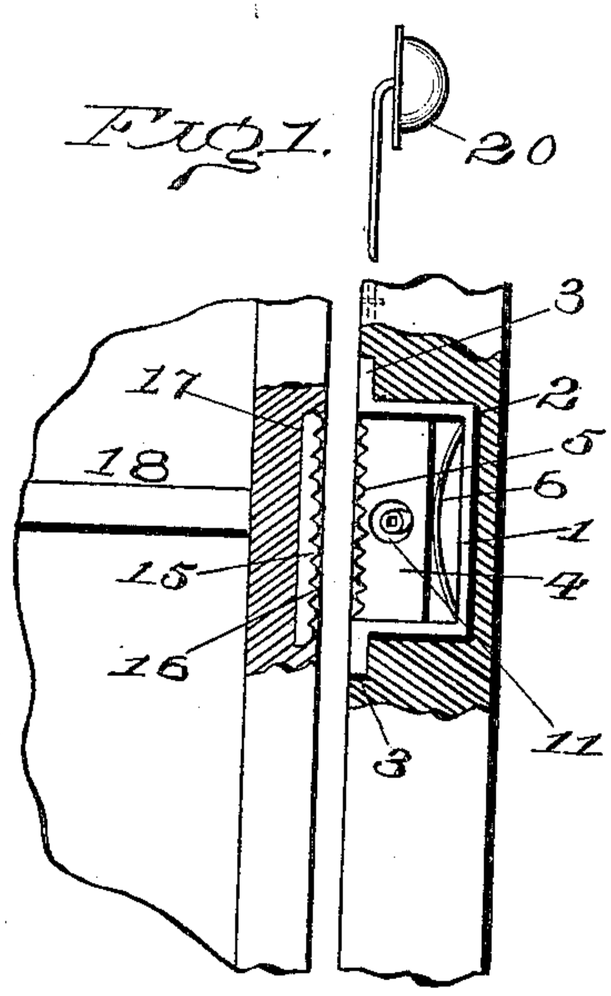


FIG. 2.

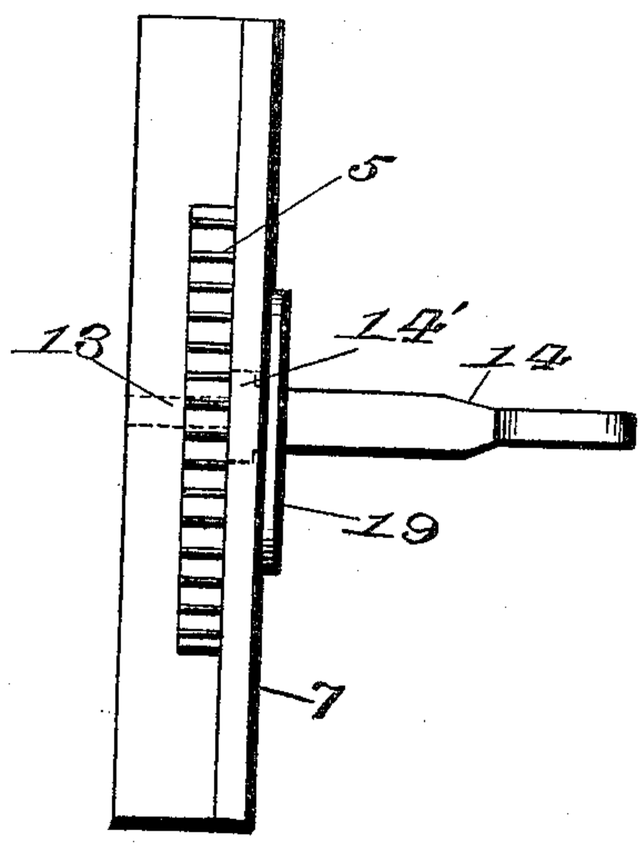


FIG. 6.

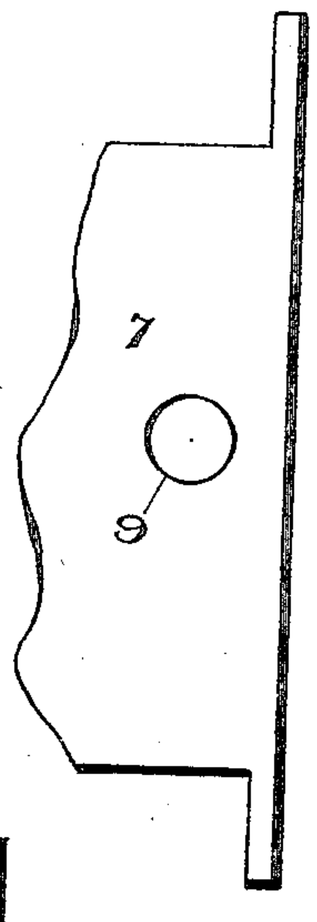


FIG. 4.

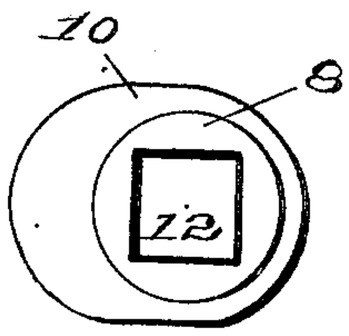


FIG. 5.

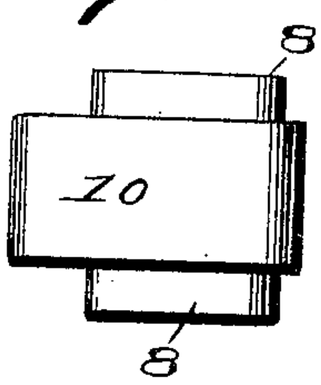
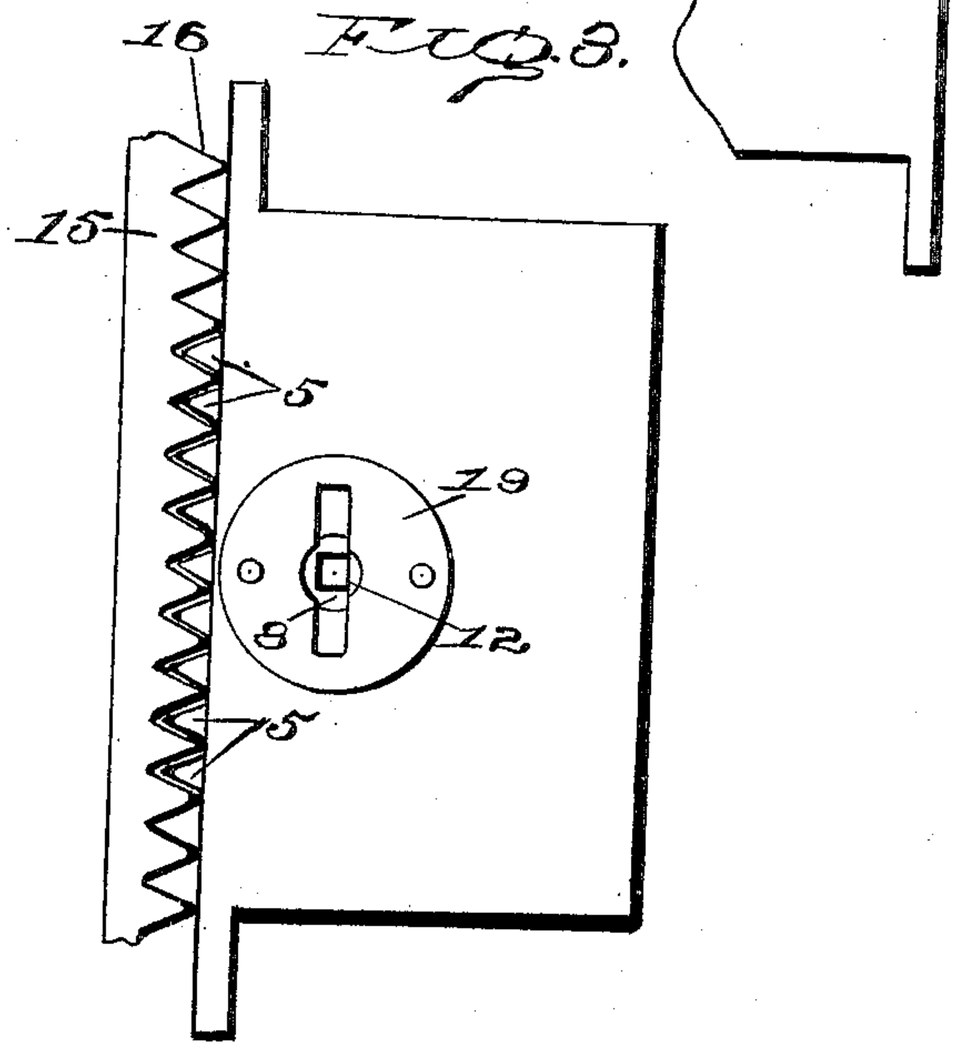


FIG. 3.



WITNESSES

H. L. Gould.

Homer Rand.

INVENTOR

Rufus Neal.

by David W. Gould,

Attorney

UNITED STATES PATENT OFFICE.

RUFUS NEAL, OF INDIANAPOLIS, INDIANA.

SASH-LOCK.

No. 821,956. Specification of Letters Patent. Patented May 29, 1906.

Application filed August 3, 1905. Serial No. 272,575.

To all whom it may concern:

Be it known that I, RUFUS NEAL, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Sash-Locks, of which the following is a specification.

The invention relates to an improvement in sash-locks, and particularly to a sash-lock adapted to support the sash at varying heights.

The main object of the present invention is the production of means adapted to be concealed within the window-casing and operated by a suitable key to lock the sash with relation to the casing, the construction being such that the sash may be locked at varying heights, the locking means being readily disengaged when desired to free the sash.

The invention will be described in detail in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation, partly broken out, of a portion of a window casing and sash, illustrating the application of my improved fastener. Fig. 2 is an enlarged edge elevation of the lock member of my fastener. Fig. 3 is an enlarged side elevation illustrating the locking-bar of the fastener in operative relation to the rack-bar fixed in the sash. Fig. 4 is a plan of the operating-cam. Fig. 5 is a side elevation of the same. Fig. 6 is a broken elevation showing the back plate of the lock member.

Referring to the drawings, in which like letters of reference indicate like parts throughout the several views, my improved fastener comprises two parts, one a locking member containing the operative parts of the device and the other a rack-bar arranged to be supported in the side rail of the sash.

The locking member of my improved fastener comprises a casing 1, arranged to be mortised, as at 2, into the side bar of the window-casing and secured in place through suitable screws passing through the projections 3 of the casing. The casing is hollow to receive what I term a "locking-bar" 4, practically fitting the opening within the casing and formed on its forward edge, or the edge next the window-sash, with a series of teeth 5. The locking-bar is mounted for sliding movement within the casing and is normally held in its forward or projected position by a leaf-spring 6, the terminals of which bear against the rear wall of the casing, while the forward bend of said spring bears centrally against the rear edge of the locking-bar. The cover-plate 7 is designed to be secured to the casing by any suitable means, being of similar shape and dimensions as the casing, though of less thickness. The relative size of the casing-opening and locking-bar is such that when the locking-bar is in place, with the cover-plate secured to the casing, said cover-plate operates to guide the locking-bar in movement and prevent binding. An operating-cam is mounted for revoluble movement between the upper and lower plates of the casing, being provided with circular projections 8 to movably fit within openings 9, formed in the rear plate of the casing and in the cover-plate, that portion of the cam intermediate the projections 8 being of greater diametrical extent than the projections and arranged eccentric thereto, as at 10. The eccentric portion 10 is of a height equal to the thickness of the locking-bar 4 and is movably mounted within an opening 11, formed in said bar, whereby in the revolution of the cam in the fixed concentric bearings 9 the eccentric portion 10 will operate to reciprocate the locking-bar into and out of the casing, as will be obvious. The cam is formed with a centrally-arranged squared socket 12, designed to receive a squared projection 13 on the end of a suitable key 14 to provide for the necessary operation of the cam. The key is formed with a shoulder 14′. (Shown in dotted lines.) The other member of the fastener comprises a rack-bar 15, formed on its face with a series of teeth 16, designed for coöperation with the teeth on the locking-bar. The rack-bar is secured within a suitable recess 17, formed in the side rail of the sash 18, the rack-bar being practically coextensive with the length of the sash-rail and being arranged with the teeth next the casing and flush with the face of the rail to avoid projection and permit uninterrupted movement of the sash when the lock is inoperative. The locking member of the fastener is designed to be secured within a mortise formed in the casing, so as to entirely conceal said lock, a suitable aperture being formed in the face of the casing in alinement with the socket 12 in the cam to permit operative introduction of the key. An escutcheon-plate 19 is preferably arranged to cover the keyhole-opening in the casing and prevent withdrawal of the key, the opening in the escutcheon-plate being of a size to permit revolution

of the key-stem, but prevent movement of said key transverse to the escutcheon-plate, owing to the shoulder 14′ on said key contacting with the rear face of the plate.

The opening in the locking-bar to receive the eccentric 10 is so arranged relative to the size of said eccentric that the engagement of the parts is under more or less friction, whereby in operation the eccentric will serve to hold the locking-bar in retracted or projected position, so that the spring may be dispensed with and the cam utilized to operate the bar in both directions.

In operation the window-sash carrying the rack-bar being raised to the desired height is locked in position by operation of the key to turn the eccentric and force the teeth 5 into engagement with the teeth of the rack-bar. A reverse movement of the key withdraws the locking-bar, whereupon the sash is free to be moved in either direction at will.

In connection with my improved fastener I contemplate the use of the ordinary lifting-spring 20 for the sash, whereby the sash when locked in the lowered position may be elevated by simple withdrawal of the locking-bar through suitable operation of the key, permitting the sash to move upward automatically until the desired height is reached, when a reverse movement of the key will operate the locking-bar and secure the sash.

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

A sash-fastener comprising a casing to be secured in the window-frame, a locking-bar approximately equal in length and thickness to the interior dimensions of the casing and slidably secured therein, the forward edge of said bar being formed with teeth, a spring bearing between the rear edge of said bar and the rear wall of the casing, a cam seated in a circular opening formed in the bar, said cam being of a thickness equal to the thickness of the bar, and concentric portions projecting from opposite sides of the cam and seating in openings formed in the side plates of the casing, said concentric portions of the cam being equal in thickness to the thickness of the casing side plates, means for operating the cam, and a rack-bar fixed in the sash-rail adjacent the casing and formed with teeth to coöperate with the teeth on the locking-bar.

In testimony whereof I affix my signature in presence of two witnesses.

RUFUS NEAL.

Witnesses:
J. O. SWIGERT,
EDWIN F. GOULD.