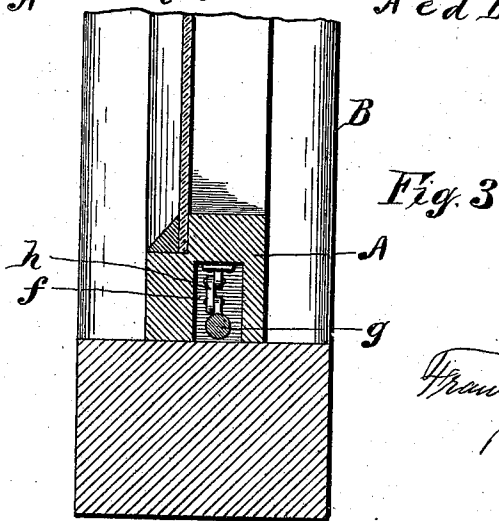
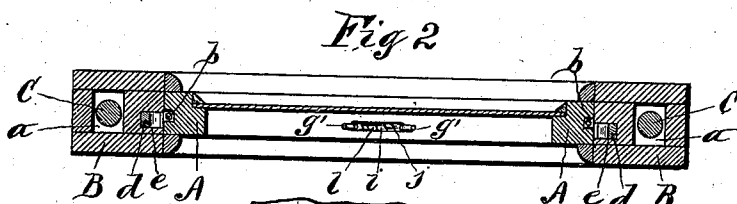
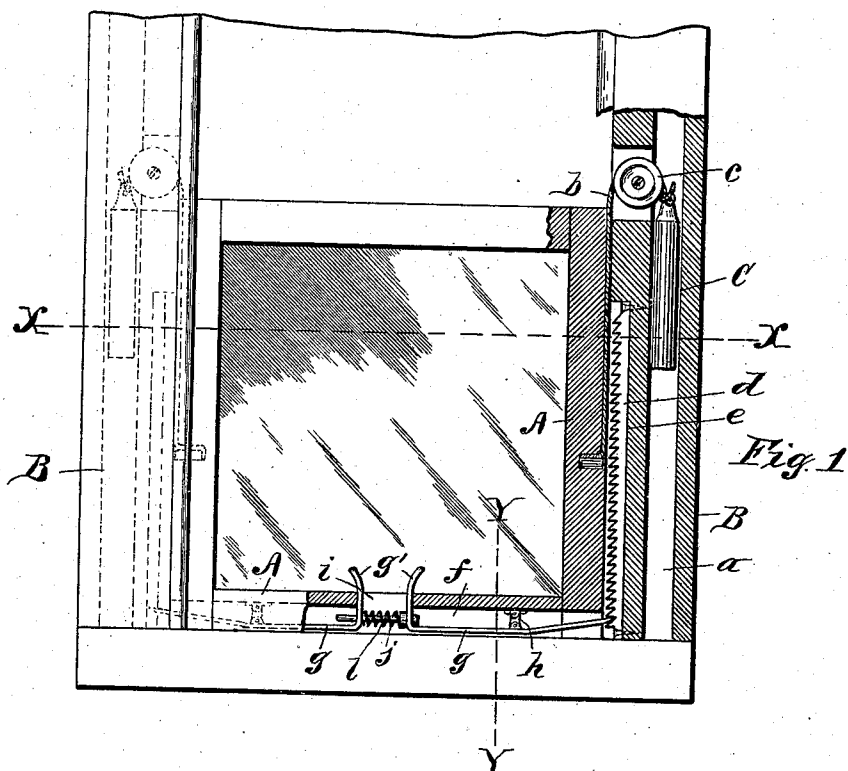


No. 873,425.

PATENTED DEC. 10, 1907.

F. E. GREIS.
SASH LOCK.

APPLICATION FILED OCT. 1, 1906.



WITNESSES:

J. J. Laass.
W. H. Meier Jr.

INVENTOR

Frank E. Greis
By E. Laass
ATTORNEY.

UNITED STATES PATENT OFFICE.

FRANK E. GREIS, OF SYRACUSE, NEW YORK.

SASH-LOCK.

No. 873,425.

Specification of Letters Patent.

Patented Dec. 10, 1907.

Application filed October 1, 1906. Serial No. 336,820.

To all whom it may concern:

Be it known that I, FRANK E. GREIS, a citizen of the United States, and resident of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Sash-Locks, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

The object of this invention is to provide a sash operating mechanism which shall be simple and inexpensive in construction and shall automatically raise the sash to its open position and securely lock the sash at any desired height and also in its closed position. And to that end the invention consists in the novel construction and combination of parts hereinafter described and as shown in the accompanying drawings, in which

Figure 1 is an elevation of a window equipped with my improved sash lock, portion of the window casing being broken away to expose some of the essential parts of the sash-operating mechanism: Fig. 2 is a transverse section on the line —X—X—: of Fig. 1, and Fig. 3 is an enlarged transverse section on the line —Y—Y—: of Fig. 1.

—A—A— represents the sash, and —B— the window-casing, which latter is formed with the vertical boxes —a—a— in which the counter weights —C—C— are guided in the usual manner. Said weights being connected to stout cords —b—b— which run on pulleys —c—c— pivoted to the casing —B— and are attached to the stiles or vertical side rails of the sash. The weights —C—C— preponderate the sash to cause the sash to be automatically raised thereby.

To control the rising of the sash and to lock it at any desired height and also in its closed position, I attach to the window-casing two ratchet racks —d—d— which extend to the bottom of the sash and are disposed with the abrupt or horizontal faces of the teeth presented downward. Said ratchet racks are seated in vertical grooves —e—e— in the casing to prevent them from coming in contact with the vertical edges of the sash.

The underside of the bottom of the sash is provided with a longitudinal groove —f— extending across the entire width of the sash. In the said groove are located two sash-locking bars —g—g— extending through

opposite ends of the groove —f— and carried at the central portions of their lengths on hangers —h—h— pivoted to the sash within the groove —f—. Said hangers allow the locking bars —g—g— to move longitudinally to and from direct engagement with the ratchet racks. The inner ends of said locking bars are deflected at right angles in the form of fingers —g¹—g¹— which protrude through a longitudinal slot —i— in the sash and are suitably shaped for manipulation. Said fingers normally rest on the ends of the slot —i— as shown in Fig. 1 to limit the downward movement of the rack-engaging ends of the bars —g—g—. A suitable spring —j— is arranged in the groove —f— and interposed between the inner ends of the bars —g—g— to force both of said bars simultaneously into engagement with the ratchet racks —d—d—.

I preferably employ a spiral spring interposed between the deflected inner ends of the bars —g—g— and supported on a horizontal rod —l— which is attached at one end to one of the bars —g— and slides freely at its opposite end in a perforation in the other of said bars.

The operation of the sash lock is as follows, to wit: The sash is closed by the person pushing the sash down in opposition to the upward draft exerted on the sash by the preponderating weights —C—C—. In the downward movement of the sash the pivotal supports of the locking-bars —g—g— allow the said bars to yield endwise and thus slide over the teeth of the ratchet racks —d—d— and as soon as the said movement of the sash ceases, the spring —j— forces both bars —g—g— simultaneously outward and into engagement with the horizontal or abrupt faces of the teeth of the two ratchet racks and thus lock the sash from upward movement. It will be observed that the sash is locked at both of its vertical edges and is thus relieved from lateral strain, and the locking is effected by the operator releasing his hold on the fingers —g¹—g¹— of the two locking-bars, the released fingers coming in contact with the ends of the slot —i— serving to sustain the locking-bars in their engagement with the ratchet racks.

What I claim as my invention is:—

In combination with the ratchet racks attached to the window-casing and disposed

with the abrupt faces of the teeth presented
downward, the counter-balanced sash pro-
vided with a groove extending across the en-
tire width of the sash, a longitudinal slot in
5 the sash intersecting the aforesaid groove,
hangers pivoted to the sash within the said
groove, longitudinally movable locking-bars
carried on said hangers and formed with
fingers protruding through the aforesaid slot

and normally resting on the ends of the slot, 10
and an expansive spring interposed between
the inner ends of said locking-bars as set
forth.

FRANK E. GREIS.

Witnesses:

J. J. LAASS,

FRED W. HAMMOND.