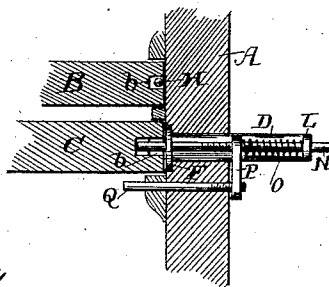
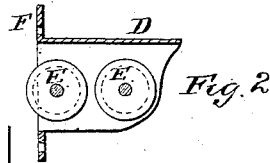
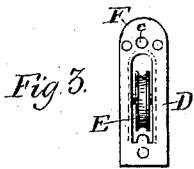
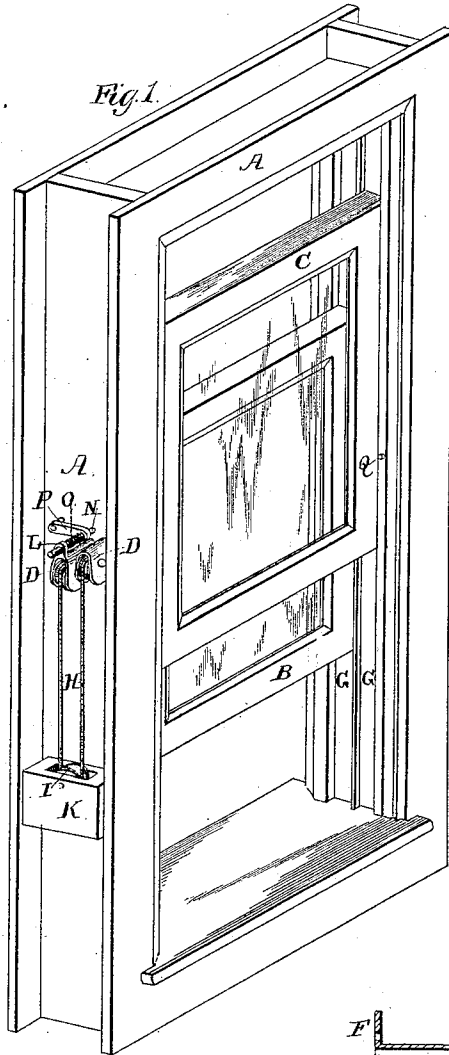


(No Model.)

L. C. MATTESON.
SASH FASTENER.

No. 359,086.

Patented Mar. 8, 1887.



WITNESSES:

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Fig. 4.

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UNITED STATES PATENT OFFICE.

LORENZO C. MATTESON, OF WATERTOWN, NEW YORK.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 359,086, dated March 8, 1887.

Application filed March 12, 1886. Serial No. 194,992. (No model.)

To all whom it may concern:

Be it known that I, LORENZO C. MATTESON, a citizen of the United States, residing at Watertown, in the county of Jefferson, State of New York, have invented certain new and useful Improvements in Sash Balances and Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a perspective view of a sash and frame to which I have applied my improvements. Fig. 2 is a detail vertical section showing one of the pulley-frames and its pulleys. Fig. 3 is a front view of one of the pulley-frames. Fig. 4 is a detail horizontal section through a side of the frame, showing the combined sash-lock and pulley-frame.

The invention relates to sash-balances and sash-fasteners for windows having double vertically-sliding sashes.

The nature of my invention consists in the following construction and arrangement of devices, which will be first fully described, and the points of novelty believed to be new therein then set forth in the claim.

The following features are shown and described. Generally stated, they are, first, window-sashes are employed with but a single weight on each side of the frame; secondly, but a single sash-cord is used on each side of a window-frame for both sashes; thirdly, double sashes are employed with pulley-connections for the sash-cords at a point opposite the meeting rails of the sashes; fourthly, the sash-connections to the sash-cords are at the lower ends of both the upper and lower sashes; fifthly, a single sash-cord is connected to the lower end of one sash and passes over pulleys in the window-frame down to a sliding weight and up over pulleys to the lower end of the other sash; sixthly, a pulley-frame and sash-lock combined is employed; seventhly, the combined sash-lock and pulley has a screw-bolt, which adjusts the throw of the locking-bolt to different thicknesses of window-frames; eighthly, the spring locking-bolt is provided with a right-angled arm rigidly fastened thereto, and which projects through the frame in front of the sash for operation by hand; ninthly, both sashes are grooved longitudinally throughout their length on either side, and when either

or both of the sashes are provided with the sash-lock in addition horizontal holes are made in the grooves at such intervals as may be deemed desirable.

Referring to the drawings, A represents the window-frame.

B is the upper sash, and C the lower one.

D D are the pulley-frames arranged midway of frame A. They resemble an inverted scoop in general outline.

E E are two pulleys journaled in frame D.

F is the face-plate of the pulley-frame, and is countersunk within the grooves G of the window-frame. This face-plate is flanged, and has holes *f* for the reception of screws to fasten in the grooves G.

H is the sash-cord, one on each side of frame A. It is fastened at one end to the lower end of sash B and at the other to the lower end of a sash, C. In its intermediate length it passes over one series of pulleys, E, in frame D down to and around a pulley, I, in weight K, thence upward to and over pulleys E, journaled in a similar frame, D, at the side of the first-mentioned frame.

Weight K is of such gravity as to counter-balance either one or both sashes, which it will do when the sash-cord is arranged as has been described.

I may combine the pulley-frame with a sash-fastener, if so desired. Figs. 1 and 4 show this construction.

L is a lug projecting up from a pulley-frame, D, and pierced with a hole for the reception of the sliding locking-bolt N. A horizontal hole is made in the side of frame A, through which bolt N passes to its engagement with the sash.

O is a spring encircling bolt N, and has a bearing against lug L and arm P, so as to normally throw bolt N inwardly. Bolt N is screw-threaded. Arm P has an internal thread where bolt N passes through it. The other end of arm P is secured to an arm, Q, which passes through a hole in the frame, and projects within it near the meeting rails of the sashes (see Figs. 1 and 4) for operation by hand.

Holes at desired intervals are provided in the sashes, within which the locking-bolt takes. Pressing on the end of arm Q withdraws the bolt, when the sashes may be slid freely up and

down. Provision may be made for keeping the bolt out of engagement, if preferred.

Single pulleys may be used in the frame D.

The groove *b* extends the entire length of sash on each side.

The combined sash fastener and pulley is adapted for use upon the other side of a sash from that shown in Fig. 1 by simply turning arm P one-half revolution, so as to bring the attached operating-arm Q on the inner side of frame A.

To adjust the sash-fastener to different thicknesses of the side frame, the threaded locking-bolt is rotated, so as to shift the relative position of arm P upon it. This has the effect of drawing the end of bolt N more or less through lug L.

It is obvious that this system of weights might be attached to the sliding blinds, screens, and the like.

The weights K act singly for either sash, or for both sashes at the same time. By this arrangement the weight, moreover, will operate with less or more than the weight of the sashes, and does not require to be the exact weight of the sash. The weights only travel the length

of one of the sashes, for the reason that as the lower sash is raised the weights lower, while upon the upper sash being lowered the weights rise.

Neither of the sash-cords are ever exposed to view, as in the system most in vogue.

The sash-fastener may be applied to either the lower or upper sash, or both.

When the sash-fastener is applied to pulley-frame D, the inner end of the locking-bolt N passes through a hole, *c*, in the face-plate F. The arm Q is threaded similar to bolt N, and is received in a threaded socket in arm P for adjustment to different thicknesses of frame A.

What I claim is—

A screw-threaded locking-bolt, an operating-spring for throwing the bolt inwardly, and a screw-threaded arm carried by the locking-bolt for actuating the bolt, all in combination, as set forth.

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

LORENZO C. MATTESON.

Witnesses:

J. O. HATHWAY,
GEO. S. CAMP.