No. 699,223. Patented May 6, 1902.

J. F. & N. N. NEHER.

SASH FASTENER.

(Application filed Mar. 15, 1901.)

(No Model.)

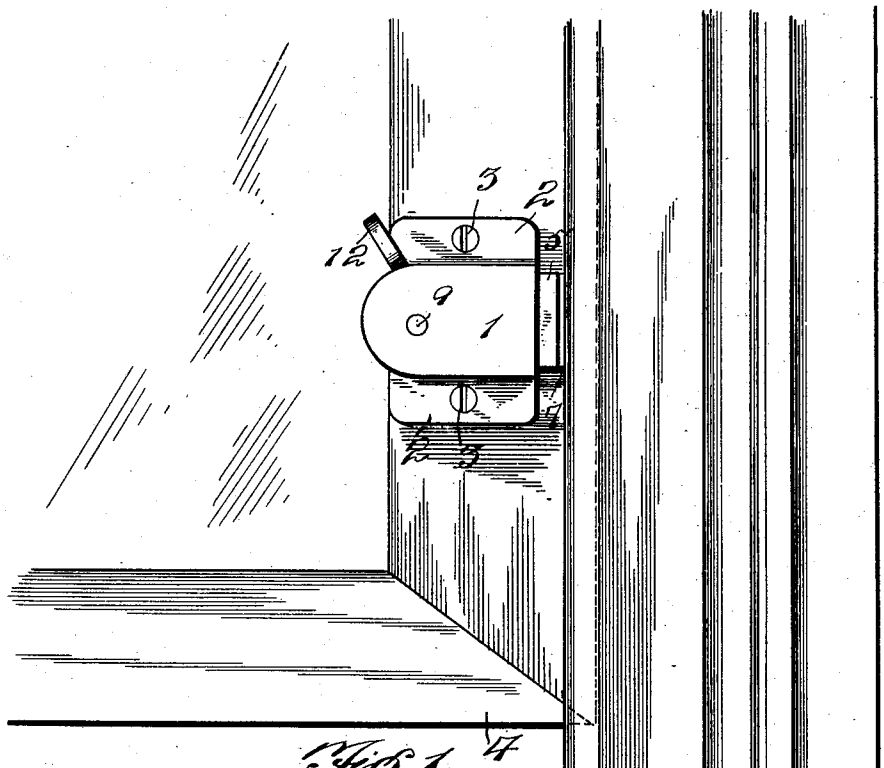


Fig. 1.

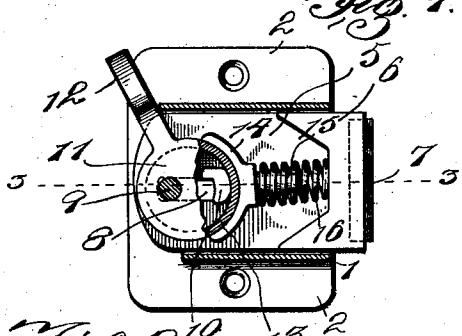


Fig. 2.

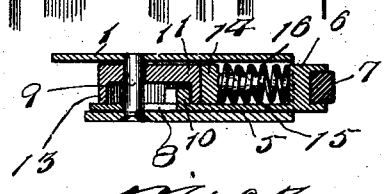


Fig. 3.

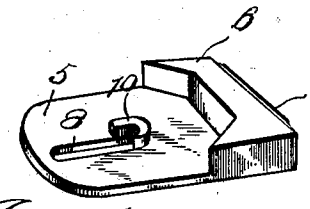


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN F. NEHER, OF SAGINAW, TEXAS, AND NOAH N. NEHER, OF STOCKTON, KANSAS.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 699,223, dated May 6, 1902.

Application filed March 15, 1901. Serial No. 51,361. (No model.)

To all whom it may concern:

Be it known that we, JOHN F. NEHER, residing at Saginaw, in the county of Tarrant and State of Texas, and NOAH N. NEHER, residing at Stockton, in the county of Rooks and State of Kansas, citizens of the United States, have invented a new and useful Sash-Fastener, of which the following is a specification.

This invention relates to sash-fasteners, and has for its object to provide an improved device of this character which is designed for mounting upon one of the side rails of a window-sash and constructed for engagement with the adjacent portion of the window-frame, so as to lock the sash when elevated as well as when closed. It is furthermore designed to have the operating parts of the device effectually housed, so as to be protected against damage and displacement, and also to provide for an elastically-yieldable movement of the window-frame-engaging member, so as to insure an effective engagement thereof with the frame and to accommodate the device to any irregularities in the frame.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is an elevation of the lower right-hand corner of a window-sash and the adjacent frame portion with the present sash-fastener applied thereto. Fig. 2 is a front elevation of the device detached from the window-sash with parts broken away to show the interior thereof. Fig. 3 is a longitudinal sectional view taken on the line 3 3 of Fig. 2. Fig. 4 is a detail perspective view of the slidable locking-bolt.

Like characters of reference designate corresponding parts in all of the figures of the drawings.

In carrying out the present invention there is provided an oblong box or casing 1 to contain the movable parts of the fastener and having its opposite ends open, as indicated in Figs. 2 and 3, there being suitable attaching flanges or ears 2 at the opposite closed edges of the box and provided with perforations for the reception of suitable fastening devices 3, whereby the casing is secured flat against one of the side rails of a window-sash 4. Within the casing there is slidably mounted a locking member 5, which is in the form of a flat plate resting against the back of the box or casing and designed to be alternately projected through the opposite open ends of the casing. As shown in Fig. 2, it will be seen that the plate is of a width to fit loosely between the opposite edges of the casing, which edges form guides for the member in its slidable movement. The outer end of the member is thickened or laterally enlarged, so as to form a head 6, that fits loosely against the front and back of the casing, and thereby prevents looseness of the locking member in the direction of the thickness thereof. In the outer extremity of the locking member there is provided a socket or recess extending for the greater part of the width thereof, and in which is fixedly seated a strip of rubber 7 to form a cushioned end for the locking member. At the rear end of the plate there is provided a longitudinal slot 8, which is designed for the reception of a stop and guide pin 9, that extends through corresponding perforations in the front and back of the casing, one of said perforations being screw-threaded for engagement with the screw-threaded portion of the pin. A lateral projection 10 is provided at the inner end of the slot and is in the form of an end marginal flange. It will be understood that the projection and the enlarged head are at the same side of the locking member.

For the manipulation of the sliding locking member there is provided a cam-shaped tumbler 11, having an eccentrically-disposed opening for the reception of the pin 9, that also forms a pivot for the cam, the latter having a handle or finger-piece 12 projected laterally therefrom in the plane thereof and extended outwardly through the rear open end of the casing, so as to be in position for convenient operation, and whereby the adjacent

ends of the opposite edges of the casing form stops to limit the opposite swings of the finger-piece. The body of the cam rests against the inner side of the front of the casing and is provided with an outer cylindrical marginal flange 13, as best shown in Figs. 2 and 3, that lies in frictional engagement with the outer side of the projection 10 upon the slidable locking member, so that when the cam is in the position shown in Fig. 2 and the locking member is at its outer or locked limit a downward movement of the finger-piece will rotate the cam upon its fixed pivot, whereby the flange 13, traveling across the outer side of the projection, will draw the locking member inwardly to its unlocked position. To force the locking member forwardly or outwardly by the reverse movement of the cam, an elastically yieldable connection is had between the cam and the member by means of an arcuate follower 14, corresponding to and frictionally fitting the outer peripheral edge of the cam and lying between the latter and the enlarged head of the locking member, said follower having a stem or pin 15 projecting toward the head 6 and terminating short thereof, there being a helical spring 16 encircling the stem or pin and having its opposite ends bearing against the adjacent side of the follower and the rear end or shoulder of the head.

From the foregoing description it will be apparent that the cam-shaped tumbler is mounted upon a fixed pivot that is carried by the casing and there is a connection between the cam and the slidable locking member for moving the latter in opposite directions by a corresponding movement of the tumbler.

In the locked position of the device, as shown in Fig. 1, the locking member is at its outer limit, with the rubber or yieldable outer end thereof in frictional engagement with the adjacent portion of the window-frame 17, thereby locking the sash against movement upwardly and downwardly and holding the same in an elevated position. It will be understood that the device will lock the sash when closed in the same manner. The purpose of the rubber strip 7 is to insure a tight frictional engagement between the locking member and the window-frame, and thereby prevent slipping of the device, and also to accommodate the member to any irregularities in the frame.

When the finger-piece is thrown upwardly to force the locking member outwardly, the follower 14 is moved laterally outward by the movement of the cam-shaped tumbler, thereby crowding the spring against the shoulder 6, thus forming an elastically yieldable connection between the tumbler and the locking member to force the latter outwardly. This elastically yieldable connection permits of the finger-piece being moved to its uppermost limit, as the spring will yield after the locking member is in engagement with the window-frame. It is essential that the tumbler be thrown to its limit in the locked position of the device, as the longest radius of the cam is then brought between the pivot thereof and the follower, whereby the slidable member is locked, or, rather, the cam is locked, against accidental movement by inward pressure upon the locking member. Moreover, the locking member being elastically yieldable automatically conforms to any irregularities in the window-frame and together with the rubber strip prevents damage to the woodwork of the frame.

Although the device has been shown as applied to the right-hand side of a window-sash, it may be inverted and applied to the opposite left-hand side thereof, and the devices may also be made in lefts and rights, as may be desired.

What is claimed is—

1. The combination with a locking member, of an eccentric adapted to withdraw the same to unlocking position, a follower in contact with said eccentric and adapted to be positively moved outwardly by said eccentric, and a spring situated between the follower and the locking member and adapted to be compressed between the two on the outward movement of said follower.

2. The combination with a locking member having a longitudinal slot, a fixed guide-pin passing through said slot, an eccentric tumbler mounted upon the guide-pin and having a finger-piece, a laterally-projecting portion formed on the locking member and adapted to be engaged by said tumbler, a follower in contact with said tumbler and adapted to be positively moved outwardly by said tumbler, and a spring situated between the follower and the locking member and adapted to be compressed between the two on the outward movement of said follower.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JOHN F. NEHER.
NOAH N. NEHER.

Witnesses as to John F. Neher:
C. T. McINTOSH,
GEO. W. BURROUGHS.
Witnesses as to Noah N. Neher:
W. E. COOLBAUGH,
M. J. COOLBAUGH, Jr.