N. M. MILLER.

FASTENERS FOR MEETING-RAILS OF SASHES.

No. 195,223. Patented Sept. 18, 1877.

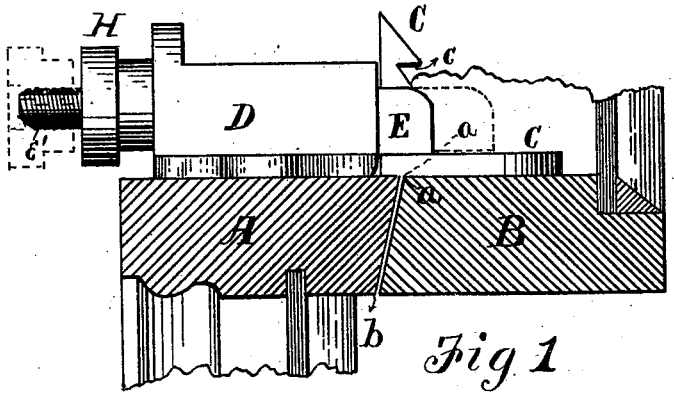


Fig 1

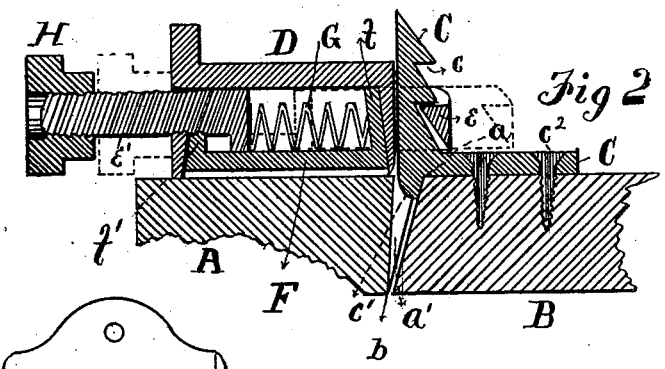


Fig 2

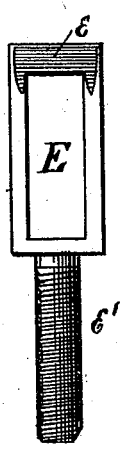


Fig 5

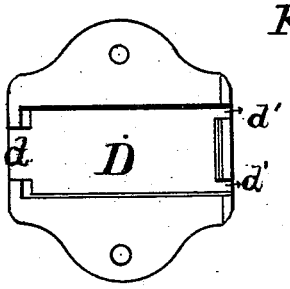


Fig 3

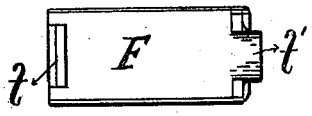


Fig 4

Attest

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NILES M. MILLER, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN FASTENERS FOR MEETING-RAILS OF SASHES.

Specification forming part of Letters Patent No. **195,223**, dated September 18, 1877; application filed January 29, 1877.

*To all whom it may concern:*

Be it known that I, NILES M. MILLER, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sash-Locks, which is fully set forth in the following specification and accompanying drawing, in which—

Figure 1 represents a transverse section of the middle rail of the window, showing the sash-lock in side elevation; Fig. 2, a similar section, taken through the sash-lock; and Figs. 3, 4, and 5, detailed views of individual parts of the lock.

The object of my invention is to provide a sash-lock for the middle rail of windows, which ordinarily will operate as a spring-fastener, released at pleasure, but which may, also, whenever desired, be securely fastened, so that it cannot be released except from within.

The invention consists in a sliding spring-bolt, provided with a loop on its outer end, which passes over an upright catch or keeper, which is notched or serrated on its beveled face to engage with a projection in the loop.

It also consists in a bolt-case of peculiar construction, in combination with the bolt and spring, as will be hereinafter more fully set forth.

In the drawings, A represents the upper rail of the lower sash of a window, and B the lower rail of the upper part of the same window—that is, the two rails which meet and form the middle rail when the window is closed. The meeting edges of these two rails are beveled, as shown in Fig. 1 of the drawings, the outer edge *a* of the rail A being inclined downward and inward, and the inner edge *b* of the rail B being inclined in the opposite direction. On the outer rail B a catch or keeper, C, is mounted. This catch is angular in form, and one of its arms stands upright, and is provided upon its outer face with notches *c*, which face is sloping while the inner face is perpendicular. The keeper is arranged upon the rail so as to project beyond its inner edge, as shown in the drawings, and is provided with a flange, $c^1$, which fits over this edge, and the device is secured to the rail by suitable screws $c^2$.

Upon the inner rail A is mounted a shell-case, D. This case is open upon its lower side, and a wide slot, *d*, is cut in its inner end, and two narrow ones, *d'*, in the outer end, the two latter being at the outer edges, respectively, of the case, as shown in Fig. 3 of the drawings. A bolt, E, is arranged to slide within the case D. This bolt is made of the form shown in Fig. 5 of the drawings, the outer end being in the form of a long rectangular loop, which is principally inclosed in the case, but the extreme outer end of which extends outside of the case, the sides of the loop being received by the slot *d'* in the end of the case. The outer end of this loop is beveled upon its inner face, so as to form an inclined stop, *e*, corresponding in form to the notches in the keeper heretofore described.

The inner end *e'* of the bolt is made round, and projects through the slot *d* in the inner end of the case, and has a screw-thread cut upon it. This bolt is placed within the case D in the position shown in Fig. 2 of the drawings, and is held in place by a removable bottom, F, which is fitted to the opening in the under side of the case. At each end of this piece are flanges, the outer one, *f*, of which passes up within the loop of the bolt, and the inner one, *f'*, has a deep circular groove cut in it, to fit the round shank *e'* of the bolt, the construction of this piece being shown in Fig. 4 of the drawings. Within the case D and within the loop of the bolt E is placed a coiled spring, G, which operates to force the bolt inward. A screw-nut, H, is fitted to the inner end or shank *e'* of the bolt E, so that it may be set back and forth upon the projecting portion of the shank.

As the keeper C is placed so as to project a little inside of the upper edge of the rail B, as described above, it is evident that it would come in contact with the outer edge of the rail A; and to obviate any interference, a notch or recess, *a'*, is cut in this edge of the rail A large enough to receive the projecting portion of the keeper. The case D is fastened to the rail A, in such a position that the outer end is just flush with the edge of the notch *a'*, as shown in Fig. 2 of the drawings.

From the construction and arrangement of the devices above described it is evident that, the lower sash being raised and the nut H

turned away from the case D, so as to permit the bolt E to slide freely, whenever the sash is drawn down to close the window, the outer end of the loop in the bolt E will pass down and over the upper end of the keeper C, and the beveled end *e* will catch in one of the notches *c* of the keeper, thus locking the sash together; but the bolt might be drawn from the outside when in this position; and therefore to make the lock secure whenever desired, the nut H should be turned up against the end of the case D when the fastening has been effected, as shown in dotted lines in Fig. 2 of the drawings, and it is evident that the bolt will then be held in place rigidly, so that the lock cannot be released from the outside. This nut H, when turned up, as described above, also draws together the two rails A and B, thereby making a close, tight joint.

As there are several notches in the keeper, if, from any obstruction, the window cannot be entirely closed, the bolt will engage with one of the upper notches, and the sash may be locked together as securely as when the lower sash is forced entirely down. It is necessary to set the keeper C over the edge of the rail B, as described, for otherwise the end of the bolt E would be required to project so far as to strike against the divisions of the sash above.

I do not limit myself to the precise form and construction of all of the devices herein shown and described, for it is evident that the bolt and case may be modified considerably in construction, and still retain the principle of operation of my invention.

The nut H may also be dispensed with, if it is desired to make a simple cheap fastening, without regard to a safety-lock, and some other device might be substituted for this nut, by means of which to lock the bolt from sliding, whenever desired. The bolt may even be dispensed with, and the loop be made to swing, a pin or some other device being employed to fasten it for the purpose of locking.

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

1. The sliding bolt E, constructed in form of a loop, in combination with the case D, spring G within the loop, and catch or keeper C, provided with a series of notches, *c*, upon the inclined face of the upright arm thereof, substantially as and for the purpose set forth.

2. The bolt-case D, with its ends slotted, as described, in combination with the loop-bolt E, spring G, and removable bottom F, substantially as and for the purpose set forth.

NILES M. MILLER.

Witnesses:
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M. M. DILLON.