

(No Model.)

F. C. IMMEL.

FASTENER FOR THE MEETING RAILS OF SASHES.

No. 508,389.

Patented Nov. 7, 1893.

Fig. 1.

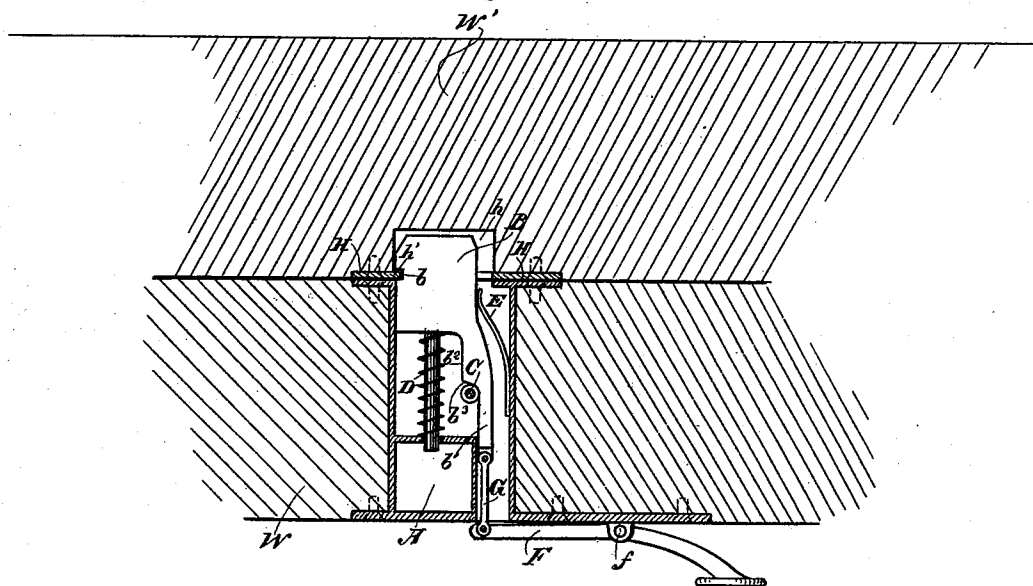


Fig. 2.

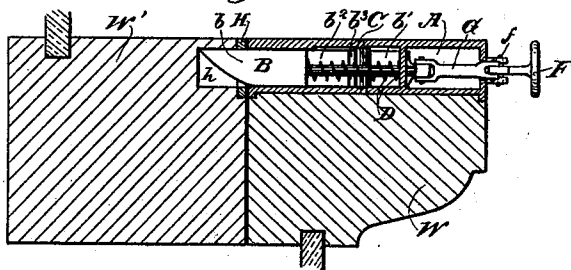
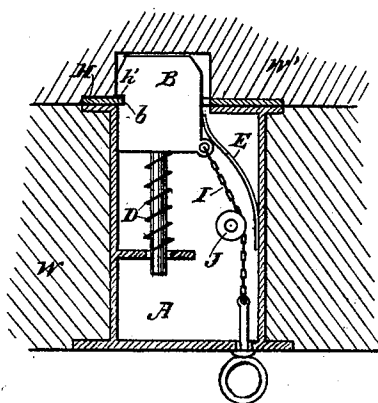


Fig. 3.



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FASTENER FOR THE MEETING-RAILS OF SASHES.

SPECIFICATION forming part of Letters Patent No. 508,389, dated November 7, 1893.

Application filed May 4, 1893. Serial No. 473,001. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK C. IMMEL, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Sash-Fasteners; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of sash locks or fasteners, and it consists in the novel construction and arrangement of the spring-controlled latch seated upon the meeting rail of the lower sash and adapted to peculiarly engage a keeper on the meeting rail of the upper sash, and the means for withdrawing said latch from its engagement, all of which I shall hereinafter fully describe and specifically claim.

The object of my invention is to provide a simple and effective sash fastener adapted to automatically lock the sash in such a manner that it cannot be released from without, but can be easily disengaged from within.

Referring to the accompanying drawings for a more complete explanation of my invention,—Figure 1 is a horizontal section through the meeting rails and the case A, showing the fastener in plan. Fig. 2 is a vertical section of same, showing the fastener in side elevation. Fig. 3 is a plan showing a modification of the means for releasing the latch.

A is a casing adapted to be properly secured to the meeting rail W of the lower sash. Within this casing is seated a latch B, the under side of the head of which is beveled after the manner of an ordinary door latch, and projects from the outer face of the meeting rail toward the keeper, hereinafter described, and which is seated on the meeting rail of the upper sash. The head of this latch has in one side a notch *b*. The stem or shank *b'* of the latch is provided on one side with a straight plane *b²* which joins a curved or beveled cam plane *b³*. These planes work against a stationary anti-friction roller or stud C. Fitting behind the head of the latch is a spring D, serving to hold the latch projected, and on one side of it is a spring E which serves to hold the whole latch over to one side.

F is a thumb lever pivoted at *f* to the inner side of the meeting rail W and having one

end connected by a link G with the inner end of the stem or shank *b'* of the latch B.

W' is the meeting rail of the upper sash. Into the inner face of this is let a keeper plate H having an engaging aperture or socket *h* to receive the latch, said plate forming on one side the flange *h'* which receives the engagement of the side notch *b* of the latch head.

The operation of the fastener is as follows: As the meeting rails come together, the head of the latch B, coming in contact with the keeper plate, is forced backwardly against the power of its spring D, until being opposite the engaging recess *h*, it will spring forwardly into said recess. Up to this time the latch is held over to the other side by the bearing of its straight plane *b²* against the fixed stud C, so that the head of the latch is held accurately in line with and is adapted to enter the engaging recess *h* squarely, but having entered, and the engaging plane *b²* having left the stud, which is now engaged by the cam plane *b³*, the power of the spring E is exerted to force the whole latch over sidewise, whereby the engagement of its side notch *b* with the flange *h'* of the keeper plate takes place, and the parts are held in this position by the two springs D and E. This completes the fastening, and it will be seen that to release it the latch must not only be forced backwardly but must be forced sidewise first, a combination of movements which is not likely to be effected from without. To release the latch, the thumb lever F is operated, whereby through the link G, a pulling tendency inwardly is exerted, the first effect of which is, through the cam plane *b³* acting on the fixed stud C, to force the entire latch over sidewise against the spring E, whereby the said notch *b* is disengaged from the flange *h'*. The straight plane *b²* having now reached the stud C, the latch, by the further movement of lever F, is withdrawn straight backwardly from its engagement with the plate, and thus the fastening is released. The provision of the planes *b²* and *b³*, and the fixed roller stud C being for the purpose of effecting the necessary side movement of the latch and its subsequent guiding, it is obvious that these parts may be modified and the same result effected. To illustrate this I have shown in Fig. 3 the latch B as having a chain I attached to the oppo-

site side of its head, said chain thence passing over and guided by a fixed pulley J to the inner side where a suitable connection is made with it. It will be seen that by pulling upon this chain so connected and directed, the first movement will be to pull the latch B over sidewise from its engagement with the flange of the keeper plate, and then to pull it bodily backward.

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

1. A sash fastener consisting of a spring-controlled bevel-headed latch seated in the meeting rail of the lower sash, and having a notch in one side of its head, a recessed keeper plate seated in the meeting rail of the upper sash and having a side flange with which the side notch of the latch head is adapted to engage, and means connected with said latch for pulling it sidewise to disengage its notch from the flange and thence backwardly to disengage the head from the recessed keeper plate, substantially as herein described.

25 2. A sash fastener consisting of a bevel-headed latch seated in the meeting rail of the lower sash and having a notch in one side of its head, a spring acting upon the other side

of the head to throw the latch over sidewise, and a spring acting behind the head to project the latch, a recessed keeper plate seated in the meeting rail of the upper sash and having a flange with which the side notch of the latch head engages, and means connected with said latch for moving it sidewise to disengage its notch from the flange of the keeper plate and then to withdraw it from said plate, substantially as herein described.

3. A sash fastener, consisting of a spring controlled beveled headed latch seated in the meeting rail of the lower sash and having a notch in one side of its head, and a shank provided with a straight and a cam portion, a recessed keeper plate seated in the meeting rail of the upper sash and having a side flange with which the side notch of the latch head is adapted to engage, a roller in the path of the shank, and a thumb lever on the inner side of the meeting rail and connected with the shank.

In witness whereof I have hereunto set my hand.

FREDERICK C. IMMEL.

Witnesses:

S. H. NOURSE,
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