(No Model.)

D. R. PROCTOR.

FASTENER FOR THE MEETING RAILS OF SASHES.

No. 419,881. Patented Jan. 21, 1890.

Fig. 1.

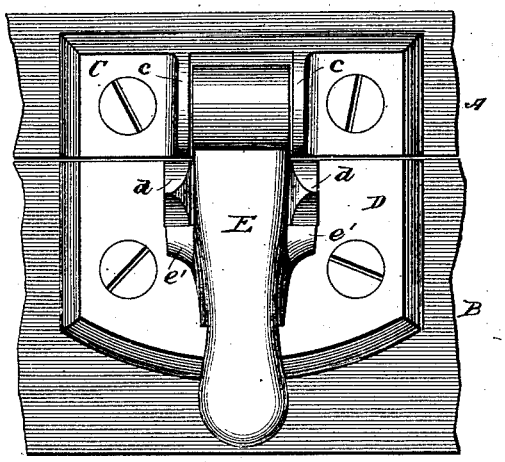


Fig. 2.

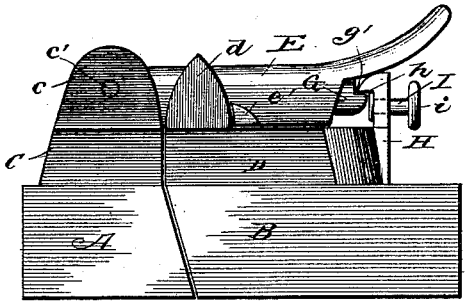


Fig. 3.

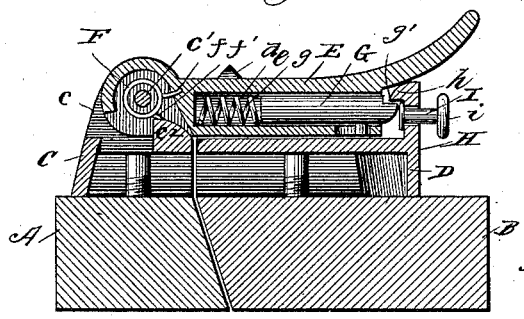
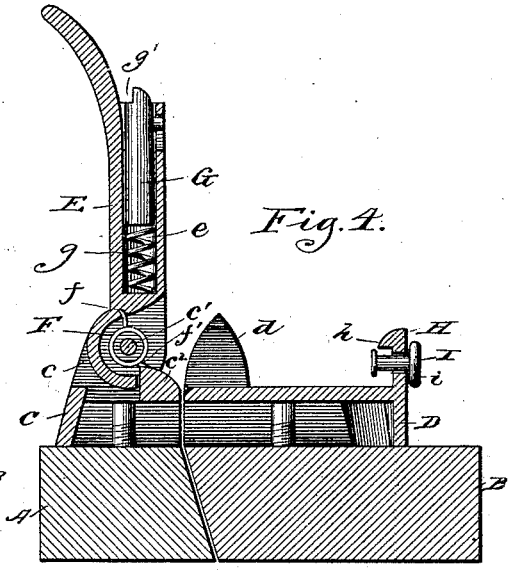


Fig. 4.



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FASTENER FOR THE MEETING-RAILS OF SASHES.

SPECIFICATION forming part of Letters Patent No. 419,881, dated January 21, 1890.

Application filed April 9, 1889. Serial No. 306,598. (No model.)

To all whom it may concern:

Be it known that I, DAVID R. PROCTOR, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Fasteners for Meeting-Rails of Sashes, of which the following is a specification.

My invention relates to that class of fasteners for the meeting-rails of sashes wherein a lever is pivoted to one of the said rails and is adapted to be swung over to engage a catch upon the adjacent rail, whereby to securely fasten the two in alignment and prevent their separation except upon detaching the locking device of the lever from the catch; and my invention consists in the novel devices and combinations of devices for the better securing these ends, as herein fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view showing a fragmentary portion of a pair of meeting-rails of the respective upper and lower sashes of a window, showing my improved fastener applied thereto. Fig. 2 is a side elevation of the same. Fig. 3 is a central longitudinal section through the fastener, the locking-bolt, with its spring and releasing-stud, being shown in side elevation and the devices in their locked position; and Fig. 4 is a similar view with the locking-lever thrown up under the influence of its spring and the meeting-rails in condition to be separated.

Referring to the drawings, A B represent the respective meeting-rails of the sashes, and C D the plates of the fastener mounted thereon. On the plate C, which may be rectangular in form and cast hollow, as shown in the sectional figures of the drawings, are inwardly-extending ear-pieces *c*, between which is pivoted upon pin c' a locking-lever E. A spiral spring F is coiled about the axis of this swinging lever, its free ends $f\,f'$ bearing, respectively, upon said lever and upon the plate C. The base of the locking-lever is preferably hollowed out, as shown in the sectional figures, and the end thereof is adapted to impinge upon the stop c^2, forming part of the plate C, to prevent the lever being thrown back so as to strike the glass. The locking-lever E has a longitudinal bore *e*, within which a locking-bolt G is adapted to move, said bolt being seated at one end against a spring *g*, and having its opposite end projected normally beyond the end of the hollow of the locking-lever to adapt it to engage a catch, as hereinafter described. Said lever has also on its respective edges curved bearing plates or arms e', which are adapted to bear upon lugs hereinafter described.

The plate D, which may be of like form to plate C, has at its inner edge the upwardly-projecting lugs *d*, the purpose of which is to guide the locking-lever to its position to engage the catch, and also to provide a cam-surface over which strain may be exerted by the curved arms or plates e' of the locking-lever to bring the meeting-rails into alignment, and also to draw them close together or in touch. In order to facilitate this operation the forward edges of said lugs are preferably curved, as shown in the drawings, and in order to compensate for a lateral displacement of the sash by sagging or otherwise, and to prevent the locking-lever from catching on the top of said lugs, I prefer to curve their upper ends outwardly, as clearly shown in Fig. 1 of the drawings, and it will be apparent that with this construction the locking-lever may be guided to its place readily even if the plates C and D should be moved sidewise out of line with each other. On the forward edge of the plate D is an upwardly-projecting stud H, having a locking hook or catch *h*, with which the locking-bolt G engages when the lever is brought to a horizontal position, as shown in Figs. 1, 2, and 3.

The under side of the locking-bolt G and the upper side of the catch H are reversely beveled to better adapt the locking-bolt to pass by the locking-shoulder of the catch, and the bolt may have its front end recessed or cut away, as shown at g'. A push-button I has the stem protruded through an aperture of the stud H and its inner end adapted to bear against the forward end of the locking-bolt G when pressure is brought to bear on the outer end *i* of the button, whereby to force the bolt back against the outward pressure of the spring and thereby cause it to clear the catch *h*.

The operation of the device will be readily understood. When the meeting-rails are brought approximately in line, the locking-lever will be brought down from the position shown in Fig. 4, being guided to place by the side lugs *d*, and in case the rails are not exactly in line they can be brought to position by the impingement of the curved plates or arms *e* on the sides of the lever upon the curved front faces of the lugs *d*. When the lever is brought down until the beveled end of the bolt G has passed the beveled surface of the catch *h*, the spring *g* will operate to throw the bolt forward and cause it to pass under the hook or shoulder of the catch, thus securely locking the parts together. When it is desired to release the fastener, a slight inward movement of the push-button I will, as before described, push bolt G back so as to clear the catch, and then the lever will be thrown up to vertical position by the action of the coiled spring F.

It will be observed that the lever will always rest either in a vertical position or in a horizontal position, or, in other words, in its locked or unlocked position, and no observation or especial care will be necessary in manipulating it, because when the locking-bolt is released the lever is thrown up to its vertical position under the influence of the spring. The movements of the lever are also the most natural, requiring no skill or care, and the arrangement of parts is such that considerable power is exerted on the sash with slight expenditure of force.

I claim—

1. In a fastener for the meeting-rails of sashes, the combination of a plate to be secured to one of the rails and having a swinging lever pivoted thereon, said lever provided with a longitudinal aperture, a locking-bolt seated within the aperture of the lever against an outwardly-forcing spring and normally projected beyond the opening thereof, a plate to be secured on the other rail and having curved guiding-lugs between which the lever is adapted to swing, a stud at the front edge of the plate, having a locking-catch for the bolt, and a push-button having a sliding bearing in said stud and adapted to engage the end of the locking-bolt, whereby to release the same from engagement, substantially as described.

2. In meeting-rails for sashes, the combination of a plate to be secured to one of the rails and having a locking-lever pivoted thereon, said lever provided with a longitudinal aperture, a spring-seated locking-bolt within the aperture of the lever and normally projected beyond the opening of the aperture, a spring coiled about the axis of the lever and normally adapted to hold the lever in a vertical position, a stop to limit the backward movement of the lever, and a second plate adapted to be secured to the other rail, and having thereon lugs provided with curved front faces and outwardly curved upper ends, a stud projected from the front face of the plate, and provided with a hook to engage the end of the bolt, whereby to release the same, substantially as described.

3. In a fastening for the meeting-rails of sashes, the combination of a plate to be secured to one of the rails, a lever pivotally connected to said plate, said lever provided with curved plates or arms on its sides and having a longitudinal aperture, a locking-bolt spring-seated within the aperture, a plate to be secured on the other rail and having curved lugs to provide a cam-surface, a stud at the front edge of the plate, having a locking-catch for the bolt, and a releasing device, substantially as described.

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