

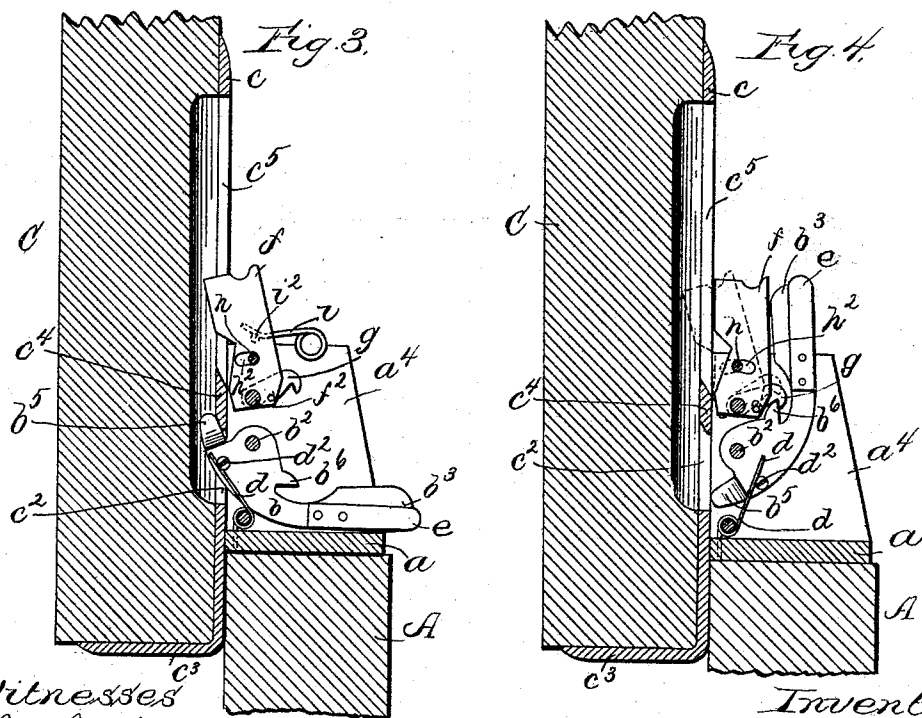
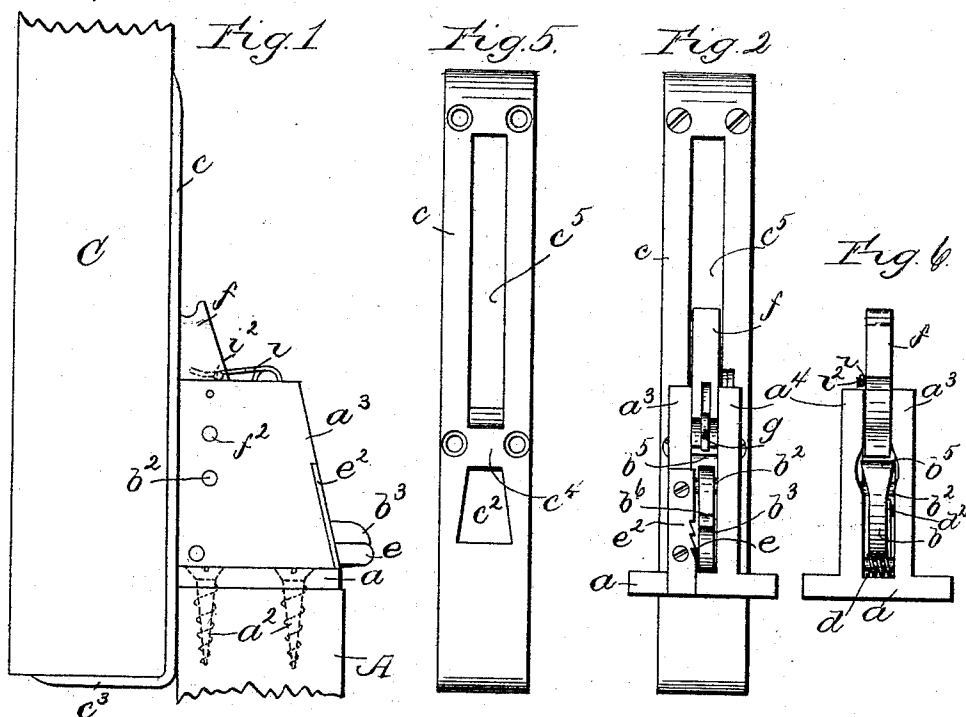
(No Model.)

J. M. PORTER.

FASTENER FOR THE MEETING RAILS OF SASHES.

No. 498,990.

Patented June 6, 1893.



Witnesses
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JOHN M. PORTER, OF BOSTON, MASSACHUSETTS.

FASTENER FOR THE MEETING-RAILS OF SASHES.

SPECIFICATION forming part of Letters Patent No. 498,990, dated June 6, 1893.

Application filed January 9, 1893. Serial No. 457,779. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. PORTER, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Sash-Fasteners, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to a sash fastener for the meeting rails of window sashes and comprises a fastening device mounted upon the rail of a lower sash co-operating with a fastening plate fastened to the stile of the upper sash. In order to give the best results two fastening devices will be used one at each side of the sash, but as the two devices are exact duplicates of one another it will be necessary only to describe one. The fastening member used upon the top rail of the lower sash has two fastening devices one of which is intended to lock the window in the closed position, and is properly constructed to draw the sashes into close engagement with one another; while the other of said fastening devices permits a limited movement of the sashes with relation to one another and then prevents further movement thereof, and may be employed when it is desired to fasten the sashes in a partly open position so as to provide for ventilation while preventing the opening of the sashes far enough to permit a person to enter through the window.

Figure 1 is a side elevation of a sash fastener and a portion of the window sashes to which it is applied the fastener being represented in proper position to lock the window; Fig. 2 a front elevation of the fastener detached, from the window sashes; Fig. 3 a longitudinal vertical section, the parts being shown in position to lock the sashes in closed position; Fig. 4 a similar view showing the parts in full lines in the position occupied when the sash is completely unlocked, and free to move in the window frame, and in dotted lines in position to permit only a slight opening of the window sufficient for ventilation. Fig. 5 is a front elevation of the fastening plate or member of the fastening that is connected with the upper sash, and Fig. 6 a rear elevation of the fastening member connected with the lower sash, showing the said fastening member as seen when looking from

the outside of the window with the upper sash removed.

The sash fastener embodying this invention consists of a fastening member comprising a frame piece having a base a , adapted to be securely fastened to the top of the meeting rail A of the lower sash by screws or equivalent fastenings indicated at a^2 Fig. 1. The said frame comprises side plates a^3 , a^4 , extending up from the base a between which side plates are supported the fastening devices proper which consist of a fastening lever b pivoted at b^2 and having a handle portion b^5 by which it is operated. The said fastening lever b is provided with a tongue or finger b^5 which enters a recess c^2 in the fastening plate or member c which is secured to the stile C of the upper sash and is preferably made in the form of a bent or angle plate having a portion c^3 that extends under and is fastened to the lower rail of the upper sash, see Fig. 1. The said recess c^2 is made wider at the lower end than at the top as shown in Fig. 5, and the end of the locking finger b^5 is wider than the narrower part of said opening, being of such width as to pass readily through the lower or wider part of the opening in moving from the position shown in Fig. 4, to that shown in Fig. 3.

When the locking lever b is turned on its pivot from the position shown in Fig. 4, to that shown in Fig. 3, to lock the window its finger b^5 moves in the arc of a circle about the pivot b^2 passing first rearward through the lower wider part of the opening c^2 and then upward so that it finally comes to the position shown in Fig. 3, with the said finger at the rear of the fastening plate c and above the cross bar or bridge c^4 of said plate at the upper end of the said opening c^2 . In this movement as the finger b^5 comes to a bearing on the plate c it tends to pry the lower sash downward and the upper sash upward, and also to draw the two sashes together and thus the movement of the lever b from the position shown in Fig. 4, to that shown in Fig. 3, draws the sashes into close proximity and into close engagement with one another and when in the position shown in Fig. 3 securely locks the said sashes from up and down movement.

A spring d bearing against a projection d^2

on the lever *b* tends to throw the said lever toward one or the other of its extreme positions like the spring acting upon an ordinary sash fastener, or upon the blade of an ordinary pocket-knife.

The lever *b* is provided with a laterally projecting spring finger *e* which engages with notches of a notched plate *c*² fastened to one of the frame plates as *a*³ as shown in Fig. 2, and thus fastens the lever in the locked position shown in Figs. 1, 2, and 3. The latch or locking spring *e* is in such position at the side of the projecting handle end *b*³ of the lever that it can be readily grasped and pressed out of engagement with the notches of the plate *c*² by the operator when taking hold of the lever to move the fastener from the locked to the unlocked position.

The fastening member on the lower sash is also provided with a second fastening device *f* also shown as a bolt or finger pivoted at *f*² between the frame plates *a*³ *a*⁴ and projecting from the upper ends thereof, the said bolt being movable on its pivot into and out from engagement with the locking plate *c* on the upper sash which is provided with a longitudinal slot or groove *c*⁵ to co-operate with the said locking device *f*. The said slot *c*⁵ is narrower than the wider portion of the recess *c*² and consequently cannot be engaged by the finger *b*⁵ of the locking lever *b* but receives the upper end of the bolt *f* when thrown forward as shown in Figs. 1 and 3. The slot *c*⁵ in the plate *c* is of such length as to permit a limited movement of the sashes when the bolt *f* is thrown forward into said slot as shown in Figs. 1 and 3 under which conditions if the lever *b* is unlocked the sashes may have a slight movement with relation to one another sufficient to open them two or three inches for the purpose of ventilation, at the end of which movement the bolt *f* will bring up in the end of the slot *c*⁵ and prevent further movement of the sashes, which may thus be securely locked in partly open position. In order to permit of such partial opening of the sashes controlled by the bolt *f* it is of course necessary to disengage the locking device *b* which fastens them in wholly closed position, which is done by moving the said locking device to the position shown in Fig. 4, and with the parts in the position shown in full and dotted lines Fig. 4, the window may be opened part way for ventilation, but is locked from opening far enough to permit a person to enter; and in order to permit the window to be opened freely it is necessary further to withdraw the bolt *f* to the position shown in full lines Fig. 4, in which position both fastening devices of the lower sash are wholly disengaged from the fastening plate of the upper sash so that the sashes may move freely in the window frame. When the window is thus wholly unlocked it is desirable to prevent the locking lever *b* from being turned toward the locking position in which it might bear against the

stile of the upper sash or come into engagement with the upper end of the plate *c* so as to cause damage or breakage, and in order to prevent such movement of the locking lever while the sashes are unlocked, the secondary locking device *f* is provided with an engaging hook or catch *g* which co-operates with a finger *b*⁶ as best shown in Fig. 4 and thus prevents movement of the lever in the direction to lock the window as long as the locking bolt *f* remains in unlocked position.

The locking lever *f* is prevented by the upper sash itself from being thrust forward far enough to disengage the locking device *b* until the said bolt *f* comes in register with the opening *c*⁵ in the plate *c* when the said locking lever *f* itself may be thrust forward to lock the sash in partially open position when it also leaves the lever free to be thrown into locking position, which can be done however, only when the sashes are closed far enough to bring the finger *b*⁵ opposite the lower portion of the opening *c*² in the locking plate *c* as the end of the finger *b*⁵ is too wide to enter except at the lower part of the recess *c*².

The pivotal movement of the bolt *f* is limited by a pin *h* passing through a slot *h*² in the said bolt, which is also acted upon by a spring *i* engaging with a pin or projection *i*² on the said bolt and tending to hold the same in one or the other of its extreme positions.

The operation will be readily understood. With both locking devices in the position shown in full lines Fig. 4, the sashes are unlocked and free to move and when opened far enough to carry the bolt *f* out of range with the slot *c*⁵ neither locking device can be moved far enough to injure the upper sash, for the bolt *f* if moved slightly inward would be arrested by the upper sash and could not engage with the same so as to impede its movement or cause any damage; while the locking lever *b* is prevented from being thrown into engagement with the upper sash by the catch *g*, *b*⁶. When the window is nearly closed the bolt *f* may be thrown forward as shown in dotted lines Fig. 4, entering the slot *c*⁵ and thus limiting the opening movement of the sashes to an amount determined by the length of the said slot. In this position of the bolt *f* the locking lever *b* is disengaged from the catch *g* and can be turned to a position to securely lock the sashes when they are nearly closed, and in thus locking the sashes it will draw them tightly together, the parts then coming to the position shown in Fig. 3, in which the sash is doubly locked, first by the lever *b* and second by the bolt *f*.

The sash may be unfastened and locked in partially open position by merely throwing up the lever *b* as shown in full and dotted lines Fig. 4, or may be wholly unfastened so as to be free to open to the full extent by then throwing back the bolt *f* and bringing the parts into the position shown in full lines Fig. 4.

By this construction a very strong and secure fastening is afforded which also draws the sashes firmly together so as to prevent rattling and to tightly close the window so as to exclude the air and weather as far as possible.

I claim—

1. A sash fastening comprising a fastening plate adapted to be secured to the upper sash and provided with a recess or opening and with a longitudinal slot, combined with a fastening member adapted to be secured to the lower sash having a locking lever provided with a finger to co-operate with the said opening and a bolt to engage with the said locking plate in the longitudinal slot thereof, substantially as described.

2. A sash fastening comprising a fastening plate adapted to be secured to the upper sash and provided with a recess or opening and with a longitudinal slot, combined with a fastening member adapted to be secured to the lower sash having a locking lever provided with a finger to co-operate with the said opening and a bolt to engage with the said locking plate in the longitudinal slot thereof, and a catch for engaging said locking lever with the said bolt, substantially as and for the purpose described.

3. The fastening member consisting of a plate *c* adapted to be fastened to the stile and having an offset *c*³ adapted to extend beneath

the meeting rail of the upper sash said plate having openings *c*², *c*⁵ combined with the fastening member adapted to be secured to the top of the meeting rail of the lower sash and provided with a locking lever pivoted in a vertical plane and having a finger adapted to enter the said opening *c*² and pass to the rear of said plate, and bolt adapted to enter said opening *c*⁵, and a catch for engaging said lever and bolt whereby the former can be operated to engage the other member of the fastening only after the said bolt has been thrown into the recess *c*⁵, substantially as described.

4. The combination of the fastening plate *c* having a slot *c*⁵, and recess *c*² a portion of which is wider than said slot with the fastening member adapted to be secured to the lower sash comprising the pivoted locking lever *b* provided with a finger *b*⁵ wider than the slot *c*⁵ to enter said recess *c*²; a latch *e* to lock said fastening lever in engagement with the said recessed plate and the bolt to engage the fastening plate *c* in the slot *c*⁵, thereof, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN M. PORTER.

Witnesses:

JOS. P. LIVERMORE,
M. E. HILL.