

(No Model.)

F. J. RABBETH.

FASTENER FOR THE MEETING RAILS OF SASHES.

No. 480,343.

Patented Aug. 9, 1892.

Fig. 1.

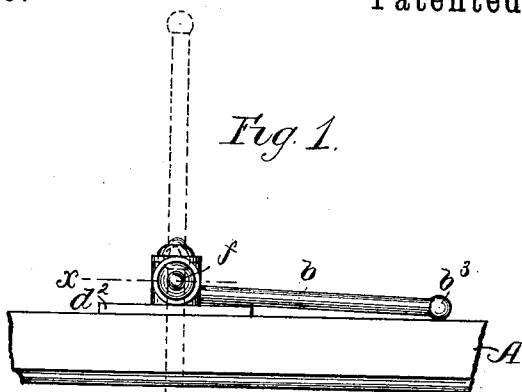


Fig. 2.

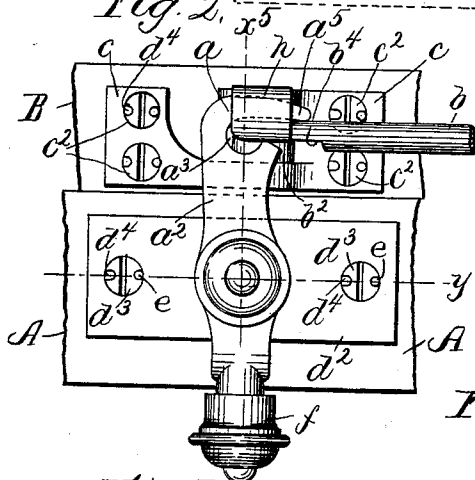


Fig. 3.

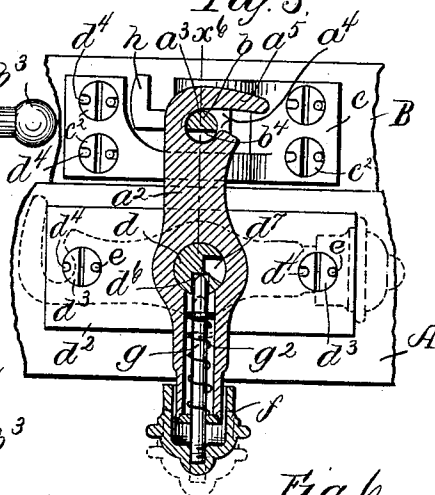


Fig. 4.



Fig. 5.

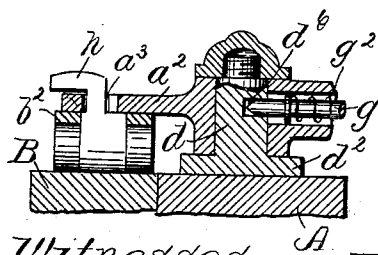
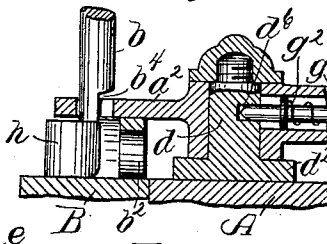


Fig. 6.



Witnesses

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FRANCIS J. RABBETH, OF BOSTON, MASSACHUSETTS.

FASTENER FOR THE MEETING RAILS OF SASHES.

SPECIFICATION forming part of Letters Patent No. 480,343, dated August 9, 1892.

Application filed October 14, 1891. Serial No. 408,657. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS J. RABBETH, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Fasteners for the Meeting-Rails of Sashes, &c., 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 fastener which may be employed on the meeting-rails of window-sashes, or may be otherwise applied to fasten two objects having similar movements with relation to one another—for example, the side of a door and the adjacent side of the door-frame.

The invention is embodied in a fastener composed of two members, one connected with each of the parts to be fastened—as for example, one to the rail of the upper sash and the other to the rail of the lower sash—the said fastener-members co-operating with one another in such manner as to permit a limited movement of one of the fastened members relative to the other, so that when used as a sash-fastener, for example, it permits the raising of the lower sash or dropping of the upper sash for a space of a few inches and then positively arrests further movement, thus providing for ventilation, while locking the sashes, so as to prevent the entrance of a burglar. The fastener is also shown as provided with means for locking the sashes in wholly-closed position, so as to operate as an ordinary window-fastener.

One of the members of the fastener consists, mainly, of a rod or bar, which is securely connected at one end with one of the parts to be fastened and when in use stands substantially parallel with the line of movement of the movable part to be fastened. The other member of the fastener is composed, mainly, of a jaw having a recess or opening of proper shape to fit around and embrace the rod or bar constituting the other member of the fastening, the said recess having a throat or passage, which may co-operate with a correspondingly-reduced portion of the bar, so that the said jaw can be moved into and out from engagement with the bar only when the latter stands with its reduced portion opposite the jaw. When, however, the bar is once in the

recess in the jaw, it can traverse longitudinally therein; one member of the fastener moving relative to the other along the line of the bar, and as soon as such movement has taken place to a sufficient extent to remove the reduced portion of the bar out of line with the passage into the recess of the jaw the said bar substantially fills the said recess and is embraced by the jaw, which cannot be disengaged from the bar until the parts are moved back to the position in which the reduced portion of the bar is adjacent to the jaw. The outer extremity of the bar—that is, the one remote from the end connected with the window-sash or other object—is provided with an enlargement or head greater than the recess in the jaw, the said head or enlargement thus arresting the traversing movement of the jaw and limiting the relative movement of the two members of the fastener to an amount substantially equal to the length of the bar. The bar is preferably pivotally connected with the part to be fastened, so that when not in use it may be folded down parallel with the sash-rail, and when in use as a sash-fastener said rod has connected with it a hook or shoulder, which when the rod is thus folded down comes into position to engage with the jaw of the other member of the fastener, so as to lock the two members together and wholly prevent movement of the parts fastened by them. The acting members of the fastener are each connected with frame-plates adapted to be secured to the woodwork of the parts to be fastened by screws in the usual manner.

Figure 1 is a front elevation of a portion of the meeting-rails of a sash provided with a fastener embodying this invention, the fastener being shown in full lines as in the position to lock the parts against all movement and in dotted lines in position to lock the parts at the end of a limited amount of movement, the upper rail being shown in dotted lines as moved below the lower sash-rail to the extent that is permitted by the fastener. Fig. 2 is a plan view of the fastener with the parts in the same position as shown in full lines, Fig. 1; Fig. 3, a sectional plan at the point indicated by the broken line *x*, Fig. 1, with the bar in position to permit the limited traversing movement of the members, the

jaw member being shown in dotted lines as wholly disengaged from the bar member, so as to wholly unlock the parts to be fastened; Fig. 4, a vertical sectional detail on line y , Fig. 2; and Figs. 5 and 6, vertical sections on lines x^5 x^6 , Figs. 2 and 3, respectively.

The fastener is shown as applied to the meeting-rails A B of a window-sash, and for convenience will be hereinafter described as so applied; but it is obvious that it may be applied to any other parts having similar relative movements—as, for example, the part A, Fig. 2, might represent a portion of the face of a door or swinging window-sash near the edge remote from the hinges and the portion B the frame in which the door or sash moves, the swinging outward movement of the door or window on its hinges producing a movement of the part A relative to the part B, which is substantially the same as the relative movements of said parts when they constitute the meeting-rails of lower and upper sashes of an ordinary window.

For convenience the member of the fastener connected with the frame-piece B will be referred to as the “standing” member and the one connected with the frame-piece A as the “moving” member, although the fastener will accommodate a downward movement of the upper sash B relative to the lower sash, as well as an upward movement of the lower sash relative to the upper sash, or both sashes may be moved in the frame, so as to provide an opening at the top and bottom of the window for ventilation. The standing member of the fastening consists, essentially, of a rod or bar b , which when in use stands substantially parallel with the line of movement of the parts to be fastened, as shown in Fig. 4, and in dotted lines, Fig. 1. The said bar is shown in this instance as a round bar or circular in cross-section and is pivotally connected at one end, as shown at b^2 , with a frame-plate c , secured to the upper sash-rail by screws c^2 in the usual manner. The pivoting of the bar b is merely to permit it to be folded down, as shown in full lines, Figs. 1 and 2, when not in use. The said bar b is provided near its end remote from the frame-plate c with a head or enlargement b^3 and at its end near the said frame-plate with a notch or recess b^4 , which reduces its sectional area at this point, the said notch and head co-operating with the other member of the fastening, which will now be described. The other or moving member of the fastener is composed of a jaw a , shown in this instance as formed at the end of an arm a^2 , having a pivotal movement upon a stud d , connected with a frame-plate d^2 , secured to the sash-rail A by screws d^3 . The said jaw a may thus be moved into and out from engagement with the other member of the fastening by a swinging movement of the arm a^2 between the positions shown by full and dotted lines, Fig. 3. The said jaw a is provided with a socket or recess a^3 of the

same shape as the sectional shape of the bar b , said recess being provided with a throat or passage a^4 , as best shown in Fig. 3, which is narrower than the width of the recess itself and is of sufficient width to just pass over the reduced part of the bar b at its notch b^4 . Thus when the bar b is in such position that its notch b^4 is on a level or in line with the jaw a the latter may be moved into and out of engagement with the said bar, as will be readily understood from Figs. 3 and 6; but if after the jaw has been moved into engagement with the bar, as shown in full lines, Fig. 3, one member of the fastening is moved relative to the other, so as to bring the unnotched part of the bar b in the recess a^3 of the jaw, the said jaw will embrace the said bar, so that they cannot be disengaged from one another until the members are moved back, so as to bring the notch of the bar in line with the jaw. Thus when the members are engaged, as shown in full lines, Fig. 3, one member may be moved with relation to the other an amount equal to the length of the bar b , which can have a longitudinal movement in the recess of the jaw up to the point at which the head b^3 of the bar engages with the jaw, when such longitudinal or traversing movement is arrested and the window cannot be opened to any further extent, the parts being shown in this position in dotted lines, Fig. 1.

Although a burglar or other person at the outside of the window or door when thus stopped or locked in partially-open position may have access to a greater or less extent to the fastening by reaching down over the top of the upper sash, or through the space between the sashes near their meeting-rails, or between the door and its frame, such person cannot disengage the fastening, as the jaw is then securely interlocked with the bar and can only be disengaged therefrom by moving the parts back until the notch of the bar is in line with the jaw, which movement can only be accomplished by closing the door or window and thus cutting off access to the fastener. In order to prevent possibility of disengaging the fastening by unscrewing the screws c^2 or d^3 that secure the frame-plates to the woodwork, the said screws are provided with one or more recesses d^4 near the periphery of the screw-head, and the frame-plate is provided with corresponding notches or recesses at the edge of the countersunk portion of the recess for the screw-head, and the said notches in the screw-head may be brought to register with said notches in the frame-plate by turning the screws to proper position, after which a wire or brad may be driven through the said recess into the woodwork, as best shown at e , Fig. 4, thus forming a key that fastens the screw against rotary movement. The key-wires e may be driven down flush, so that they cannot be extracted by any ordinary instrument and will operate with certainty to prevent the screw from being withdrawn by an ordinary screw-driver, so

that access cannot be had through the door or window without breaking some part of the structure or fastener, with the attendant noise and consumption of time. If it is desired to remove the fastener from the wood-work for any legitimate purpose, this can be done by driving the fastening-keys *e* down into the wood by a suitable follower.

For convenience in manipulating the jaw member *a* its lever *a*² is extended across the pivotal stud *d* and is provided with a knob or handle *f*, connected with a spring-pressed bolt *g*, (see Fig. 3.) working longitudinally in the lever-arm and co-operating with recesses *d*⁶ *d*⁷ in the pivot-stud *d*, so that the said bolt tends to hold the jaw in full or dotted line position, Fig. 3.

When it is desired to move the jaw from the full to the dotted line position, Fig. 3, so as to unfasten the window, the knob *f* is drawn backward from the stud, as shown in dotted lines, thus disengaging the end of the bolt *g* from the recess *d*⁶ and permitting the arm *a*² to be turned on the pivot *d*. The end of the bolt *g* is made tapering, as shown, and one wall of the recess *d*⁷ is also made tapering, so that as soon as the point of the bolt *g* passes the edge of the inclined face of the recess *d*⁷ the spring *g*², pressing the bolt inward, tends to throw the arm *a*² around to the dotted-line position. In turning the arm from the dotted toward the full line position the inclination of the end of the bolt *g* and of the side of the notch *d*⁷ is sufficient to wedge the bolt back, so that the operator need not draw out on the knob *f*, and as soon as the point of the bolt *g* passes the edge of the recess *d*⁶ the spring *g*² again tends to throw the bolt inward, completing the movement of the arm *a*² to the full-line position, and as the tapering portion of the bolt passes wholly into the recess *d*⁶ and the side walls of the latter are parallel with the sides of the untapered part of the bolt *g* the latter operates to lock the arm against being turned until the knob *f* is drawn back to release the arm.

In order to render the device more complete as a sash-fastener, the member *b* is shown as provided with a hook or shoulder *h*, which when the rod *b* is turned down, as shown in Fig. 2, and in full lines, Fig. 1, stands in position to receive the jaw *a*, which is preferably provided with a projecting finger *a*⁵, that comes beneath the shoulder *h*, as shown in Fig. 2, and also has something of a cam action in the rotary movement of the arm *a*² about its pivot *d*, which tends to draw the sash-rails closer together, the parts in this position constituting a sash-fastener which may be used to lock the window wholly closed or to wholly unlock the window-sashes.

When desired to use the traversing fastener so as to fasten the window in partly-open position, the parts, if locked, as shown in Fig.

2, will first have to be operated by drawing back the knob *f* and swinging the arm *a*², so as to disengage the finger *a*⁵ from beneath the shoulder *h*, when the bar *b* may be turned on its pivot to the position shown in Fig. 4, and in dotted lines, Fig. 1, and, if necessary, a slight movement of the sash made to bring the notch *b*⁴ in position to register with the throat *a*⁴ of the jaw-recess, so that the arm *a*² may again be turned to full-line position, Fig. 3, engaging its jaw-recess with the bar *b*, as there shown, when the two members may be traversed longitudinally of the bar up to the point at which they are arrested by engagement of the head *b*³ of the bar *b* with the jaw of the other member.

I claim—

1. A fastener one member of which comprises a bar connected at one end with one of the parts to be fastened and provided with a notch or reduced portion near said end and with a head or enlargement at its other end, combined with the other fastening member comprising a jaw having a recess to receive said bar and a throat or passage into said recess corresponding to the notched or reduced portion of the bar, whereby said bar and jaw can be engaged with and disengaged from one another only at the said reduced portion of the bar, the said members being retained in engagement while the jaw is traversing the length of the bar, substantially as and for the purpose described.

2. The combination of the pivoted bar provided with a notch or reduced portion near its pivoted end and an enlargement or head at its farther end and an engaging hook or shoulder, as *h*, connected with the said bar, with the co-operating fastening member having a movable jaw adapted to be engaged with said bar or hook, substantially as and for the purpose described.

3. A fastener comprising two members, one connected with each of the members to be fastened together, one of said members comprising a jaw and the other a bar pivotally connected at one end with the member to be fastened and having a pivotal movement from a position substantially at right angles to the line of movement of the part to be fastened, carrying the jaw member, to the position in engagement with the said jaw member and substantially in line with the path of movement thereof, said pivotal movement of the bar being in a plane at right angles to the path of movement of the jaw member, substantially as described.

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

FRANCIS J. RABBETH.

Witnesses:

JOS. P. LIVERMORE,
JAS. J. MALONEY.