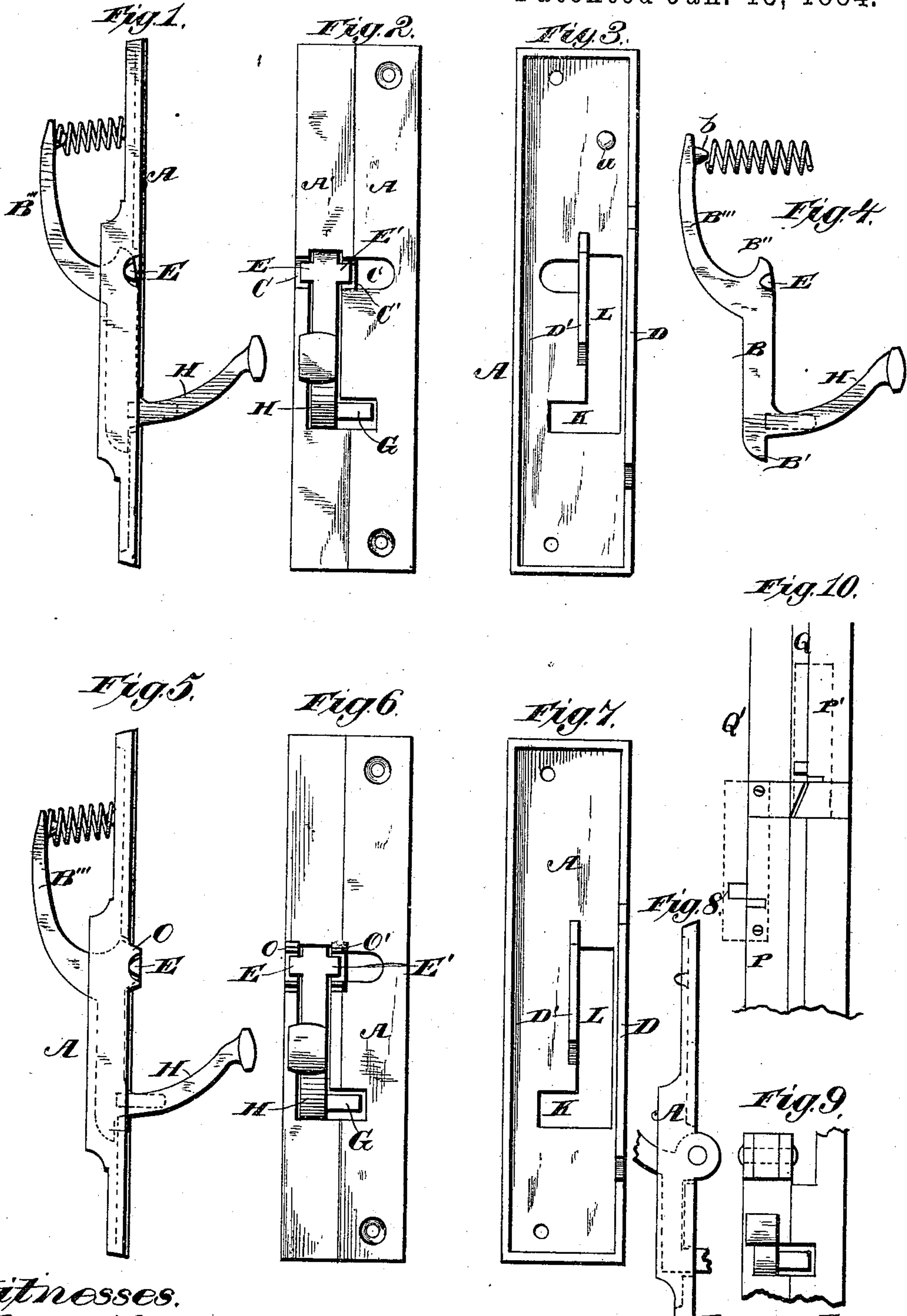


(Model.)

R. B. HUGUNIN.
SASH FASTENER.

No. 292,117.

Patented Jan. 15, 1884.



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UNITED STATES PATENT OFFICE.

ROBERT B. HUGUNIN, OF HARTFORD, CONNECTICUT.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 292,117, dated January 15, 1884.

Application filed October 8, 1883. (Model.)

To all whom it may concern:

Be it known that I, ROBERT B. HUGUNIN, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented new and useful Improvements in Sash-Fasteners, of which the following is a specification.

My invention relates to sash fasteners or locks, and has for its objects to provide a novel and efficient sash-lock that will work equally well on either the upper or lower sash without reversing the position of the mechanism, and which will permit the ready removal of the operative parts in case of accident. This I accomplish by the construction and combination of devices hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of the preferred form of the lock; Fig. 2, a face or front view thereof; Fig. 3, a bottom view thereof with locking-lever removed; Fig. 4, a side view of the locking-lever and spring detached from other parts; Fig. 5, a side view of a modification; Fig. 6, a face or front view thereof; Fig. 7, a bottom view thereof with the locking-lever removed; Fig. 8, a side view of another modification with parts broken away; Fig. 9, a face or front view thereof with certain parts broken away; and Fig. 10, a front view of a portion of the sashes of a window, showing the relation of the lock thereto when applied.

In the drawings, the letters A and A' indicate a plate, preferably made so that the face of the part A' will be slightly lower than the face of the part A. The part A' is formed intermediate of its ends with a longitudinal slot, L, with which, at one end, there intersects a transverse slot, K, which extends into the part A, while at or near the other end of the longitudinal slot there are formed two concave bearings, C and C', in the plate—one on each side of the slot; and in order to facilitate the withdrawal of the plate from the casting-mold, the slot C is extended into the part A, as shown in Figs. 2 and 3.

For the purpose of strengthening the plate along the longitudinal slot L, and also that the bearings C C' may be made deeper than the thickness of the plate, I cast two lugs or flanges, D and D', along the sides of the slot,

as shown in Fig. 3, the flange D preferably extending beyond both ends of the slot along the outer edge of the plate, and the flange D' along the opposite edge of the slot from a point beyond one end thereof to a point near where the slot K intersects such longitudinal slot; but the length of the two flanges may be varied as found desirable. The part A is also provided with holes for the passage of screws to attach the plate to the sash-frame, while the part A' is provided near one end of its rear face with a stud, a, to form a seat for one end of an elastic spring, the other end of which will bear against one end of the locking-lever. This locking-lever consists of a straight vertical body or bar, B, from the inner face of which, near one end, B'', and in the direction of the length thereof, there extends outwardly an arm, B''', which curves slightly upwardly, and is preferably widened at its extremity, where it is provided on its outer face with a stud, b, which is to form a seat for one end of the elastic spring already referred to. On the sides of the bar, near this same end, there are cast the journals E E', the outer faces of which are preferably flush with the outer face of the bar, while the inner faces thereof are preferably convex or rounded, so as to fit and turn in the concave bearings C C' in the plate. From the outer face of the bar, near the other end thereof, there extends outwardly an arm, H, which preferably has its extremity broadened, so as to form a bearing-surface for the thumb of the hand.

From the side of the arm H and bar B there extends laterally a tongue, G, to enter a recess in the side rail of the sash. The end of the bar next to the arm H projects downward beyond the same at the point of connection therewith, so as to form a lug or shoulder, B', while the other end, B'', forms a shoulder projecting upward beyond the arm B''' at the point of its connection with the bar. In the lever constructed as described the bar B from end to end is longer than the longitudinal slot L in the plate; but the construction of the arm B''' permits the end B'' to be passed beyond the end of the slot when the arm B''' is first passed through the slot, so that the opposite end of the bar may be passed down through the slot and the bar moved backward till its end above the shoul-

der B' strikes against the plate at the end of the slot, when the forward end of the bar may be dropped and the journals thereof entered into their bearings, when the top face of the bar will be flush, or substantially so, with the top or front face of the part A' of the plate. An elastic spring, which is preferably a spiral spring, F, introduced between the part A' of the plate and the end of the arm B'', with its coil encircling the studs on the two parts, which form seats to hold the spring in place, presses the arm outward from the plate, whereby the opposite end of the arm is thrown upward, and the shoulder thereof pressed against the under face of the plate, while at the same time the journals of the lever are drawn down onto their bearings, so that the lever is caused to bear against opposite faces of the plate at the same time, whereby it is held securely to its place.

The lock, constructed as described, is applied by recessing the frame, so that the plate may set therein with its top or front face flush with the face of the frame, the part A' of the plate applied to the lower sash being under the inside head, which is recessed, so that the thumb-arm H may project out beyond it, and the part A being opposite the side rail of the sash and hid from view by it, the side rail being recessed at one or more points to receive the locking-tongue of the fastening. In applying the lock to the upper sash, the part A' of the plate will fit under the parting-head and the part A opposite to the side rail of the sash, the several parts bearing the same relation to each other as do the corresponding parts of the lower sash. The relation of the several parts to one another is shown in Fig. 10, in which the letters P P' indicate the side rails of the sash, Q the parting-head, and Q' the position of the inside head.

In operating the lock the thumb-arm H of the lever is pressed on, which throws the locking-tongue out of its notch or recess in the sash and into the sash-frame, when the sash is free to be raised. As soon as pressure is taken off the thumb-arm, the spring, bearing against the arm B'', throws the locking-tongue outward, so that it will enter the notch or recess opposite to it in the sash-rail. This recess or notch may be formed by simply cutting out a part of the rail, or by securing, by means of screws or other means, a metal plate to the rail about such recess or notch, such plate being made to fit on either one or two edges of the rail, so as to protect the edges of the recess formed in the rail.

By applying the lever to the plate, as described, its pivotal bearing-point is brought next to the front face of the plate, and consequently nearer the plane of resistance than would be the case if the pivotal bearing were formed farther back from the face line, and hence an easier and more satisfactory working lock is obtained. It also enables the lock to be applied to either the upper or lower sash

without reversal and without the necessity of other attachments. Furthermore, if the parts should by any possibility become inoperative or their operativeness impaired, the lock can be very easily and readily removed for readjustment of the parts. I prefer the construction illustrated in Fig. 1, because it is free from projections except the tongue and thumb-arm on its front face, and consequently there is avoided the necessity of cutting underneath the sash-heads to accommodate projections; but, as far as the other advantages claimed for the construction are concerned, they may be obtained by the construction illustrated in Fig. 5, in which all the parts are the same as in Fig. 1, except that the bearings C C' are formed in the lugs O O' raised above the face-line of the plate. These lugs necessitate cutting away a portion of the under sides of the sash-heads; but the pivotal point is brought nearer the plane of resistance, and that advantage secured.

In Figs. 9 and 10 a construction is illustrated in which the advantage is gained of bringing the pivotal bearing-point near the plane of resistance. In this last construction the lugs O O' close over the bearings for the pivots, instead of being open, as shown in the other figures; and instead of casting the journals with the lever, as illustrated in the other figures, they are formed by a rivet, N, passed through the bearings C C' in the lugs and through the portion M of the bar B of the lever, such raised portion being at and over the pivotal point. When such means for pivoting or journaling the lever is adopted, an opening, J, is formed in the part A of the plate, so that any suitable tool may be introduced for upsetting the points or ends of the securing-rivet. Under this construction, if preferred, the shoulder B' to the lever may be omitted, and a portion of the part A' of the plate be allowed to remain between the two ends of the slot L, so that it may form a stop instead of the shoulder, the bar B striking against its under face. These are modifications in details of some of the parts of my lock; but they all embrace the elements of my invention, whereby the pivotal bearing of the locking-lever is brought near the plane of resistance, and the lock can be applied to either the upper or lower sash, as desired, without reversal of the lock or auxiliary attachments. I prefer, however, to cast the journals with the lever to forming them by the rivet, and to avoid the necessity of cutting away the heads by forming the plate as illustrated in Fig. 1 of the drawings.

The movement for opening the lower sash is in the opposite direction to that for opening the upper sash, and as such locks have been heretofore constructed the pressure against the lock of the lever is against the pivot-bearings and the tension of the spring when the sash is moved in one direction, while it is against the spring only when moved in the op-

posite direction, and when against the spring only the latter would yield, so that the lock would not hold, and hence the same lock would not hold and could not be used for both sashes, and a special lever-lock had to be provided for each sash. Under my construction, however, the same lock can be used for either sash and be placed in the same relative position, as by reason of the construction and bringing the pivotal bearing near the plane of resistance the strain or pressure is thrown upon the pivotal bearings in both upward and downward movement of the sash.

The pivots or journals cast on the lever are not liable to be broken off by any considerable strain, because the resistance of the spring to some extent prevents it, as also does the end of the lever bearing against the plate.

The device is simple in construction, cheap of manufacture, and very efficient in operation.

The invention herein claimed is shown in my application for patent for certain improvements in sash-balances filed August 20, 1883, Serial No. 104,209, but disclaimed in that application for the purpose of claiming it in this one.

Having thus described my invention, what I claim is—

1. In a sash-lock, the plate having a longitudinal slot, L, a pivot-bearing at the upper portion of the slot, and a lateral slot, K, connecting with the lower portion thereof, in combination with the bar B, having a pivot or journal at its upper end and an upwardly-extending arm, B', and at its lower end provided with the extended arm H, having a lateral locking-tongue, G, to enter a notch of the sash, said bar being arranged in the longitudinal slot, and normally held there by the action of a spring, substantially as described.

2. The plate provided with a slot for the passage of the locking-lever and bearings for the journals or pivots of the lever, and having flanges on opposite sides of the said slot, in combination with the locking-lever journaled in the bearings in the plate, and having at opposite ends arms extending laterally from the face and back of the plate, and an elastic spring interposed between the arm and back of the plate, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ROBERT B. HUGUNIN.

Witnesses:

JAMES L. NORRIS,
GEORGE W. REA.