(No Model.)

D. B. WESSON.

SASH FASTENER.

No. 526,278. Patented Sept. 18, 1894.

Fig. 1.

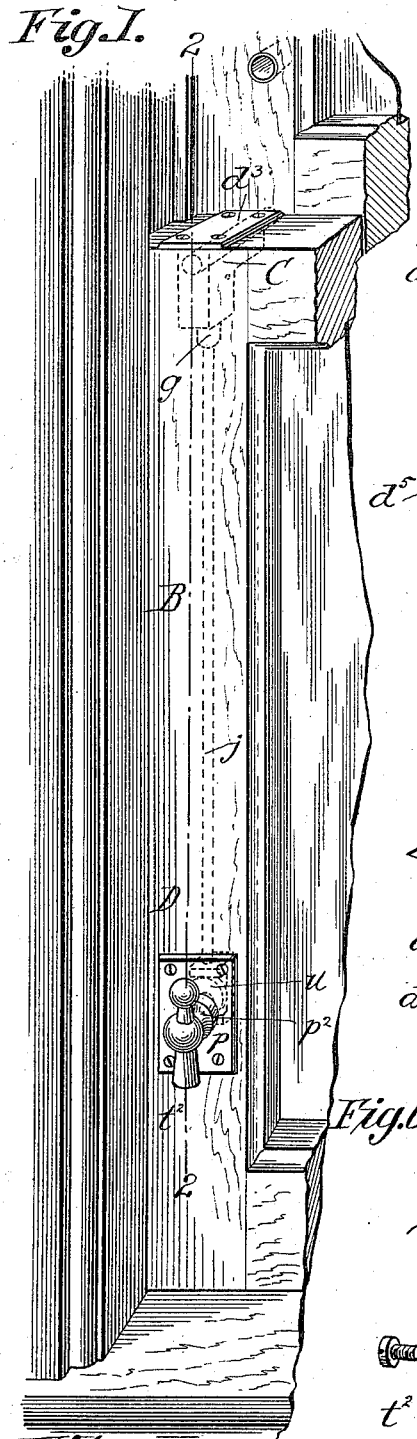


Fig. 3.

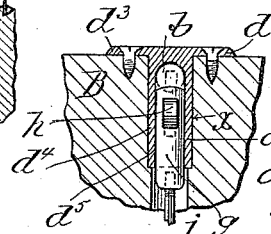


Fig. 2.

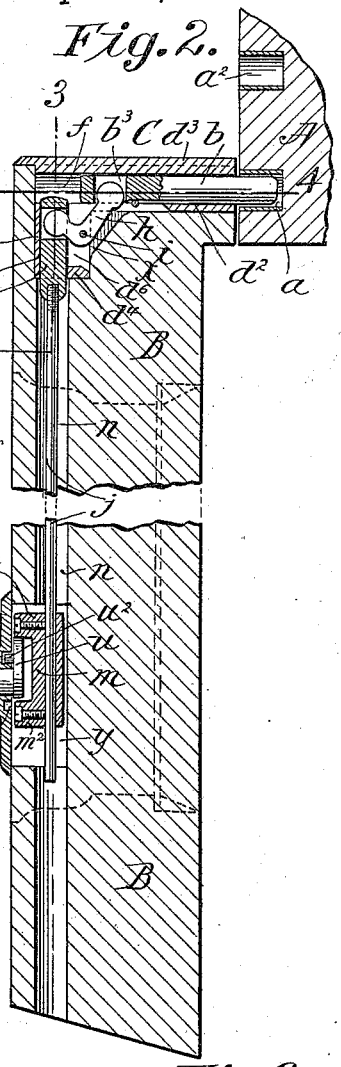


Fig. 4.

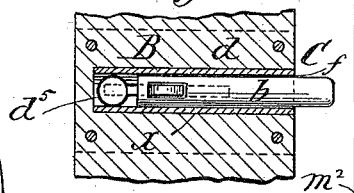


Fig. 5.

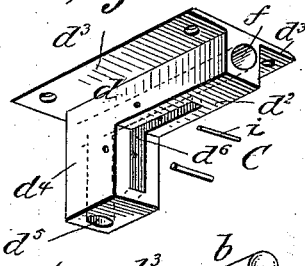


Fig. 6.

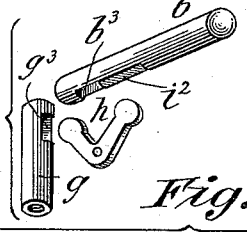


Fig. 8.

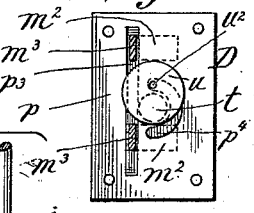
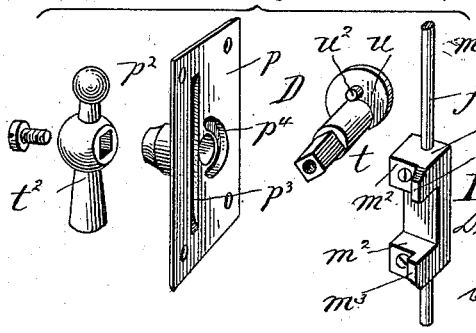


Fig. 7.



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UNITED STATES PATENT OFFICE.

DANIEL B. WESSON, OF SPRINGFIELD, MASSACHUSETTS.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 526,278, dated September 18, 1894.

Application filed May 7, 1894. Serial No. 510,339. (No model.)

To all whom it may concern:

Be it known that I, DANIEL B. WESSON, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Sash-Locking Devices, of which the following is a specification.

This invention relates to improvements in locking devices for the meeting rails of window sashes which are operated through means of an actuating rod which extends to the locking device proper from a lower portion of the sash.

The object of the invention is to generally improve the construction of the locking device and its actuating means to the end of rendering them very efficient, easy, and certain in operation, and furthermore concealing the greater part of the locking device, and its actuating means,—the latter especially comprising the rod,—within the thickness of the sash, or window casing.

To these ends the invention consists in constructions and combinations of parts all substantially as will hereinafter fully appear and be set forth in the claims.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a perspective view showing portions of two sashes and indicating the locking device as applied on the lower sash for locking its upper rail with the meeting rail of the upper sash. Fig. 2 is a vertical section taken on the plane indicated by line 2—2, Fig. 1. Fig. 3 is a vertical section taken on the line 3—3, Fig. 2. Fig. 4 is a vertical section on line 4—4, Fig. 2. Figs. 5, 6, and 7 are perspective views of detached detail parts which will hereinafter be particularly described or referred to. Fig. 8 is a rear face and partial sectional view of the sash lock actuating device.

In the drawings, A represents the upper sash having in its lower part, or meeting rail, the horizontal transverse socket, *a*.

B is the lower sash having set within a mortise, or opening, at its upper corner, the sash lock, C, comprising the horizontal transversely sliding bolt, *b*, which may be shot into and out from, the aforesaid socket, *a*, of the opposite sash.

The sash lock will be now described in detail, before describing the construction and disposition of the actuating device and the connecting rod which is engaged with said actuating device and the sash lock. In the top edge of the sash is made an angular shaped socket, *x*, the horizontal branch extending transversely to the rear edge of the sash from the vertical branch, which is just back of the front face of the sash. Within this socket is fitted the angular, or L-shaped lock casing, *d*, the horizontal member, d^2, of which has at its top the sidewise extended plate, d^3, through which are passed the screws which confine the lock casing in its place. The said horizontal member, d^2, of the casing is drilled smoothly from end to end to produce the bolt-way, *f*, in which plays the round bolt, *b*. The vertical limb, d^4, of the lock casing has the vertical way, d^5, for the free play of the bar, *g*, and it also has opening to its side the recess, d^6, in which is pivotally hung the elbow lever, *h*. The ends of the arms of this elbow lever are of disk form and have free rocking bearing engagements within the aperture, b^3, in the bolt, *b*, and the aperture, g^3, in the vertically sliding bar, *g*. The bolt is prevented from turning (whereby might be cramped the extremity of the elbow lever within the aperture, to prevent the easy movements of the one part relative to the other) by reason of the cross-pin, *i*, engaging the slabbed under side of the bolt which is seen at i^2, Fig. 6. The movement of the said bar, *g*, is effected to rock the lever and shoot, or draw, the bolt by the longitudinal thrust of the rod, *j*, connected to the bar and to the slide block, *m*, of the actuating device, D, which is set within the socket, *y*, at the lower part of the sash. The said rod plays within a hole, *n*, bored vertically within the thickness of the sash to extend between the sockets, *x* and *y*.

The aforementioned sash-lock operating device, D, comprises a plate, *p*. to screw onto the face of the sash to cover the said socket, *y*, and it has the bored hub, p^2, through which is journaled the shaft, *t*, which has the cam, (eccentric disk) *u*, on its inner end, while on the forward squared end of this shaft is fitted and confined the handle lever, t^2, or a knob might be substituted; and the block, *m*, is located within the said socket, *y*, to which the

lower end of the connecting rod is detachably and adjustably fastened, while this block has lateral abutment members, m^2, m^2, which embrace the eccentric cam, u. The block has a free vertical guiding engagement with the plate, p, by the provision of the forwardly extended lips, m^3, on the block and the straight vertical groove, p^3, in the plate, within which groove the lips project. Manifestly, the turning of the handle effects the oscillation of the eccentric cam, the endwise thrust of rod, j, the swinging of elbow lever, h, and the shooting, or drawing,—as the case may be, of the bolt, b. The handle and its shaft, and the eccentric, are limited—so that they may have just sufficient movements to operate the bolt, but no lost motion,—by the provision of the arc-shaped slot, p^4, within the inner face of the plate, and of the stud, u^2, which is projected forwardly from the face of the eccentric into said slot so that by the stud striking the end of the slot, the movements of the said parts will be duly arrested.

The vertical wooden side of the sash may have a series of sockets, a^2, at different heights, if desired, above and in line with the one, a, so that the window may be locked in any one of a number of open positions.

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

1. The combination with the sash having the socket within its upper edge, the lock set in said socket which comprises the casing with the horizontal transverse bolt-way, and the bolt, b, therein, the vertical way, d^5, and the bar, g, movable therein, and the elbow lever pivotally mounted within the casing and having the arms thereof engaging the said bolt and said bar, the vertical rod, j, connected to said bar and means for imparting its endwise movement thereto, substantially as described.

2. The combination with the sash equipped at its top with the lock-case, bolt, bar, and inter-engaging elbow lever, and having the hole, n, and rod therein, j, which is connected to the bar, and having the recess, y, within its side at a lower portion thereof, of the plate covering said recess and having the shaft journaled through it, and the cam on the inner end of said shaft which engages projections with which a lower fixture of said rod is provided, substantially as described.

3. The combination with the sash equipped with the lock at its top and having the vertical hole within its thickness, and the rod in said hole which has an operative connection with the lock mechanism, said sash also having the recess, y, at its lower portion, the block, m, within said recess which is connected to said rod and which has the vertically separated abutment lugs, m^2, m^2, the plate overlying said recess and having journaled through it the shaft, which is provided with the eccentric cam, u, and having on its outer end the operating handle, substantially as described.

4. The combination with the sash equipped with the lock at its top, and having the vertical hole within its thickness and the rod in said hole which has an operative connection with the lock mechanism, said sash also having the recess, y, at its lower portion, the block, m, within said recess which is connected to said rod and which has the vertically separated abutment lugs, m^2, m^2, and the lips, m^3, m^3, the plate overlying said recess which has on its inner face the vertical groove, p^3, within which said lips, m^3, have guiding engagements and having journaled through it the shaft, which is provided with the eccentric cam, u, and having on its outer end the operating handle, substantially as described.

5. The combination with the sash equipped with the lock at its top and having the vertical hole within its thickness and the rod in said hole which has an operative connection with the lock mechanism, said sash also having the recess, y, at its lower portion, the block, m, within said recess which is connected to said rod and which has the abutment members, the plate overlying said recess and having the arc-formed slot, p^4, within its inner face and having journaled through it the handle-shaft which is provided with the eccentric cam, u, having the stud, u^2, which works in said slot, substantially as described and shown.

6. In a sash fastening, the lock in a mortise at the top of the side rail of the sash, and having a bolt sliding transversely of said rail and capable of projection at the rear thereof, the vertically movable rod concealed in a hole in the rail and extending well toward the bottom thereof, said rod operatively connected to the transverse bolt, and the rocking handle projecting from a mortise at the front of the rail, operatively connected to said vertically movable rod inside the mortise, all combined substantially as described.

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