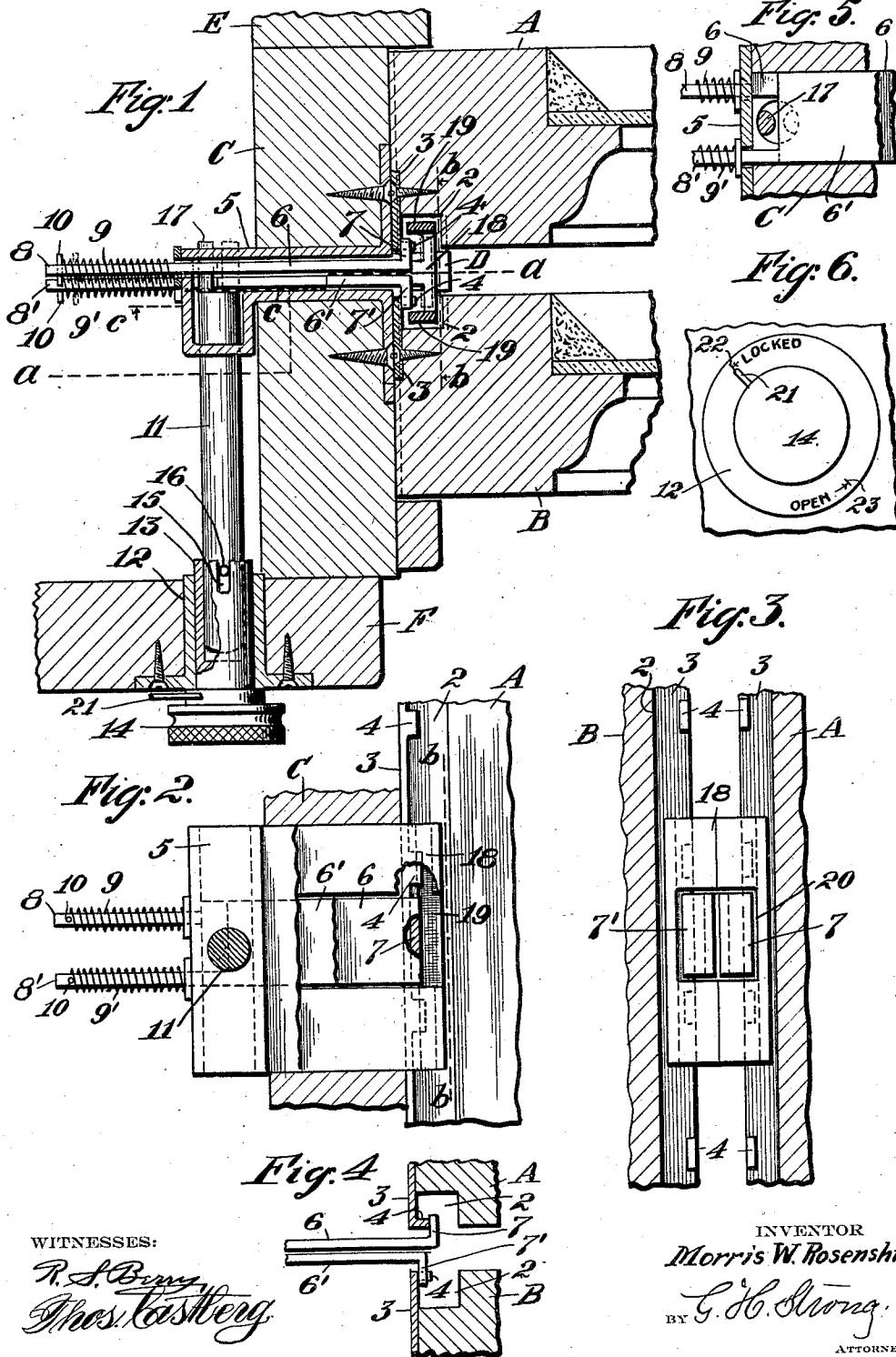


M. W. ROSENSHINE.
SASH LOCK.
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WITNESSES:

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SASH-LOCK.

1,066,152.

Specification of Letters Patent.

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Continuation of application Serial No. 736,764, filed December 14, 1912. This application filed March 22, 1913. Serial No. 756,158.

To all whom it may concern:

Be it known that I, MORRIS W. ROSENSHINE, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Sash-Locks, of which the following is a specification.

This invention relates to a sash fastener for windows.

It is the object of this invention to provide a lock for vertically slidable window sashes, which is adapted to lock the sashes against movement in either direction, in any position.

Another object is to provide a sash or window lock, which is especially applicable for use on double-hung windows, for locking both upper and lower sashes against movement irrespective of their positions in relation to each other.

A further object is to provide a sash lock of the above character which is spring-actuated to normally lock the sashes and which is adapted to be manually operated in opposition to the spring members, to release the sashes.

Another object is to provide a sash lock which is so constructed as to engage a sash and pull it against the sash-casing and clamp it against lateral vibration, and at the same time lock it against vertical movement; and to provide means for insuring the sash being disposed in an operatively relative position to the sash lock and prevent its being thrown out of such position by the shrinking of the sash.

Other objects will appear hereinafter.

The invention primarily resides in a pair of independently reciprocal plates mounted in the window casing and extending between a pair of window sashes and having teeth on their outer ends adapted to engage the sashes, springs acting on said plates for normally retaining the teeth thereon in engagement with the sashes to clamp the latter against the window casing and lock them against vertical movement, means for moving the plates in opposition to the springs and throwing the teeth out of engagement with the sashes and retaining them in their disengaged position to permit the sashes be-

ing raised or lowered, and means adapted to engage the sashes and retain them in engageable relation with the teeth.

The invention further consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a horizontal section showing the invention as applied and in the locking position. Fig. 2 is a vertical section on the line *a—a* of Fig. 1, with parts broken away. Fig. 3 is a sectional elevation on the line *b—b* of Figs. 1 and 2. Fig. 4 is a detail horizontal section with parts removed, illustrating the locking plates as disposed in different positions in relation to each other. Fig. 5 is a detail section on the line *c—c* of Fig. 1. Fig. 6 is a front elevation of the hand-hold for operating the sash lock.

In the drawings, A and B represent the side rails of the upper and lower sashes of a double-hung window; C indicates a pulley stile; D the parting strip; E the outside casing, and F the inside casing.

The side rails A and B of the sashes are formed with vertical grooves or channels 2 on their outer adjacent edges, which grooves extend approximately the length of the side rails. Mounted on the outer edges of the side rails A and B are plates 3, which extend over the grooves or channels 2 and are formed with inwardly turned rectangular rack teeth 4 on their outer edges; the rack teeth 4 extending parallel to the faces of the sashes adjacent the parting strip D.

Mounted in the pulley stile C is a rectangular guide casing 5, which casing extends through the pulley stile and has a pair of independently movable plates 6 and 6' slidably mounted therein. The inner ends of the plates 6 and 6' extend between the side plates A and B of the sashes; a portion of the parting strip D being removed to permit of this arrangement.

Formed on the inner ends of the plates 6 and 6' are projections or teeth 7 and 7', which extend at right angles to the plates 6 and 6', and are adapted to engage the inwardly turned rack teeth 4 on the plates 3; the teeth 7 and 7' extending in opposite directions in relation to each other. The outer

end of each plate 6 and 6' is formed with an extension 8 and 8', adjacent one of its edges; the extension 8 on the plate 6 being disposed on the edge opposite to the extension 8' on the plate 6', as shown in Fig. 2. Mounted on the extensions 8 and 8' are coiled springs 9 and 9', which are secured at their outer ends to the extensions 8 and 8' by means of pins 10, and bear against the outer end of the guide casing 5 in such manner as to normally retain the teeth 7 and 7' on the inner ends of the plates 6 and 6' in engagement with the rack teeth 4; the springs 9 and 9' also operating to draw the sashes A and B against the face of the pulley stile C, thereby clamping the sashes against lateral vibration to prevent rattling of the sashes in the casing. When the teeth 7 and 7' are engaged with the rack teeth 4, the window sashes are securely held against slidable movement.

Means are provided for retracting the plates 6 and 6' in unison in opposition to the springs 9 and 9', to move the teeth 7 and 7' out of engagement with the rack teeth 4. This means is here shown as consisting of a shaft 11 having one end journaled in the casing 5, and its outer end extending into a tubular bearing 12 on the inner casing F. The outer end of the shaft 11 is adapted to be engaged by a removable sleeve 13, formed on a hand-wheel 14; the sleeve 13 being formed with a slot 15 which is engageable with a pin 16 on the shaft 11. The sleeve 13 is designed to be inserted and removed from the bearing 12 when it is desired to engage it with the shaft 11; the sleeve 13 being removed from the bearing 12 when it is desired to prevent the sash lock being operated either to lock or unlock the window sashes by unauthorized persons; the end of the shaft 11 terminating within the bearing 12 in such manner as to prevent its being easily taken hold of and operated.

Formed on the inner end of the shaft 11 is a pin 17 which forms a continuation of the shaft 11 and is arranged eccentric to the longitudinal center thereof. This pin 17 forms a cam which is adapted to be thrown into contact with the outer ends of the plates 6 and 6' when the shaft 11 is rotated, in such manner as to move the plates 6 and 6' in unison in opposition to the springs 9 and 9' and dispose them in the advanced position shown in dotted lines in Fig. 1, in which position the teeth 7-7' are out of engagement with the teeth 4, which will permit of the sashes A and B being freely raised and lowered, as desired.

Formed on the inner end of the casing 5 and projecting into the grooves or channels 2 on the sashes A and B, is an extension 18, having vertical side flanges 19, which are positioned behind the rack teeth 4 and

terminate adjacent the inner faces of the plates 3. The extension 18 on the casing 5 is cut away at 20 to permit of the projections or teeth 7-7' on the plates 6 and 6' entering the projection 18, so as to be substantially flush therewith. The side flanges 19 are provided for the purpose of limiting the movement of the sashes A and B away from the pulley stile C, thereby serving to prevent the plates 6 and 6' being moved inward by the sashes, such as would be occasioned by the shrinking of the sashes, a sufficient distance to prevent the plates 6 and 6' being actuated by the pin 17 on the shaft 11 to disengage the teeth 7-7' from the rack teeth 4. In operating to prevent inward lateral movement of the sashes A and B, the flanges 19 engage with the inner faces of the plates 3, rearward of the teeth forward thereon.

In the operation of the invention, when it is desired to lock the sashes against movement, the shaft 11 is rotated by means of the hand-wheel 14 so as to move the pin or cam 17 out of contact with the rear edges of the plates 6 and 6'. The springs 9 and 9' will then act on the extensions 8 and 8' to retract the plates and dispose the teeth 7-7' in engagement with the rack teeth 4, and at the same time exert a side-wise pull on the sashes to clamp them against the pulley stile to prevent lateral movement and vibration of the sashes and thus obviate rattling thereof. The teeth 7 and 7', extending into the interstices between the rack teeth 4, lock the sashes against vertical movement in either direction. The rack teeth 4 extending substantially the full length of the window sashes, it is possible to lock the sashes against movement irrespective of their position, thus enabling the sashes being locked against opening or closing in a fully opened or closed position, or in a partially open or closed position; the sash lock being disposed in the stile C at such point as to engage both sash when they are in the closed position. When it is desired to release the sashes, the shaft 11 is turned by means of the hand-wheel 14 in such manner as to cause the pin or cam 17 to engage the rear ends of the plates 6 and 6', as before described, to reciprocate the plates inwardly and thereby move and hold the teeth 7 and 7' out of engagement with the rack teeth 4.

Means are provided for indicating the position of the pin or cam 17 for the purpose of denoting when the sashes are locked or unlocked. This means consists of a pointer 21, mounted on the hand-wheel 14, which pointer is arranged to register with marks 22 and 23 on the outer face of the bearing 12, as shown in Fig. 6. When the indicator 21 points to the mark 23, the cam 17 will be so positioned as to hold the teeth 7-7' out

of engagement with the rack teeth 4, and when the indicator registers with the mark 22 the cam 17 will be moved sufficiently far out of the path of travel of the plates 6 and 6' to allow the springs 9 and 9' to act on the plates and move them rearwardly into the position shown in full lines in Figs. 1 and 2, in which position the teeth 7-7' will be engaged with the rack teeth 4 to lock the sashes against movement.

By providing a pair of plates 6 and 6', with separate spring members acting on each plate, the plates can be actuated by the springs to move rearwardly independent of each other. This is advantageous in that when one of the sashes is so positioned that a tooth 7 or 7' will strike a tooth of the rack 4 and thereby be prevented from passing into the interstices between the rack teeth, while the tooth on the other plate will register with the spaces between the teeth on its adjacent rack, the latter will be operated independent of the former to lock one of the sashes, as shown in Fig. 4. The other sash may then be moved a short distance so as to cause the teeth 7 or 7' to ride off the tooth 4 into the space between the teeth on the rack, and thereby lock this sash against movement.

It is manifest that while I have described this invention as applied to a double-hung window, it is equally applicable for use in connection with a single sash, and that it is also adapted for use on a horizontally slidable sash.

This application is substituted for the application filed by me on December 14th, 1912, Serial No. 736,764, and is a continuation thereof.

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

1. A sash fastener comprising a rack having rectangular teeth, extending inwardly in a groove on the sash, a reciprocal plate, a tooth on the plate extending into the groove in the sash, spring means operating on the plate for normally holding the tooth thereon in engagement with the toothed rack to clamp and hold the sash against lateral and vertical movement, and means for reciprocating the plate in opposition to the spring to release the tooth on the plate from the toothed rack.

2. A sash fastener comprising a rack having rectangular teeth, extending inwardly in a groove on the sash, a reciprocal plate, a tooth on the plate extending into the groove in the sash, spring means operating on the plate for normally holding the tooth thereon in engagement with the toothed rack to clamp and hold the sash against vertical and lateral movement, a shaft, and a pin on the shaft extending rearward of the plate and adapted to engage the plate

on the turning of the shaft to move the plate inwardly toward the sash and disengage the tooth thereon from the rack.

3. A sash lock comprising a pair of parallel separately and independently movable plates, a tooth on each of said plates extending in opposite directions, toothed racks arranged between the teeth on the plates and the sash frame, said racks carried by the sashes, springs connected to each plate normally exerting a pull to engage the teeth on the plates with the racks to pull the sashes against the casing and hold them against lateral and vertical movement.

4. A sash lock comprising a pair of parallel separately and independently movable plates, a tooth on each of said plates extending in opposite directions, toothed racks on the sashes arranged between the teeth on the plates and the sash frame, springs connected to each plate normally exerting a pull to engage the teeth on the plates with the racks to pull the sashes against the casing and hold them against lateral and vertical movement, a shaft, and a pin on the shaft extending rearward of the plate and adapted to engage the plate on the turning of the shaft to move the plate inwardly toward the sashes and disengaging the tooth thereon from the rack.

5. The combination with a sash and a casing therefor, of a toothed rack on the sash, said rack having rectangular teeth extending inwardly parallel with the face of the sash, a slidable plate in the casing extending alongside of the rack, a lateral tooth on the plate projecting in front of the rack teeth, a spring exerting an outward pull on the plate to engage the tooth thereon with the rack and pull the sashes against the casing, means on the casing for limiting the inward transverse movement of the sashes, and means for reciprocating the plate in opposition to the spring.

6. The combination with a sash and a casing therefor, of a toothed rack on the sash, said rack having rectangular teeth extending inwardly parallel with the face of the sash, a slidable plate in the casing extending alongside of the rack, a lateral tooth on the plate projecting in front of the rack teeth, a spring exerting an outward pull on the plate to engage the tooth thereon with the rack and pull the sash against the casing, and means engageable with the plate for moving it in opposition to the spring to hold the tooth out of engagement with the rack.

7. In a sash lock the combination of a reciprocal locking plate, a guide casing therefor, a lateral projection on one end of said plate engageable with a sash, a spring operating on the other end of the plate to exert a pull on the plate and clamp the sash against the sash casing, means for advancing

ing the plate in opposition to the spring to disengage the sash and hold the plate in its advanced position, and a fixed flange on the casing arranged in slidable engagement
5 with the sash to prevent the latter being moved out of operable relation to the locking plate.

8. In a sash lock the combination of a pair of reciprocal locking plates extending
10 between a pair of sashes, a guide casing for said plates, projections on said plates engageable with the sashes, a spring operating on each of the plates exerting a pull on the plates to normally hold the projections thereon in engagement with the sashes
15 to clamp the sashes against the sash casing and lock them against vertical move-

ment, said plates arranged to be operated by the springs independent of each other, means for advancing the plates in opposition to the springs to disengage the sashes and hold the plates in their advanced position, and means carried by the guide casing for slidably engaging the sashes to prevent the latter being moved out of operable relation to the locking plates. 25

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

MORRIS W. ROSENSHINE.

Witnesses:

JOHN H. HERRING,
W. W. HEALEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
