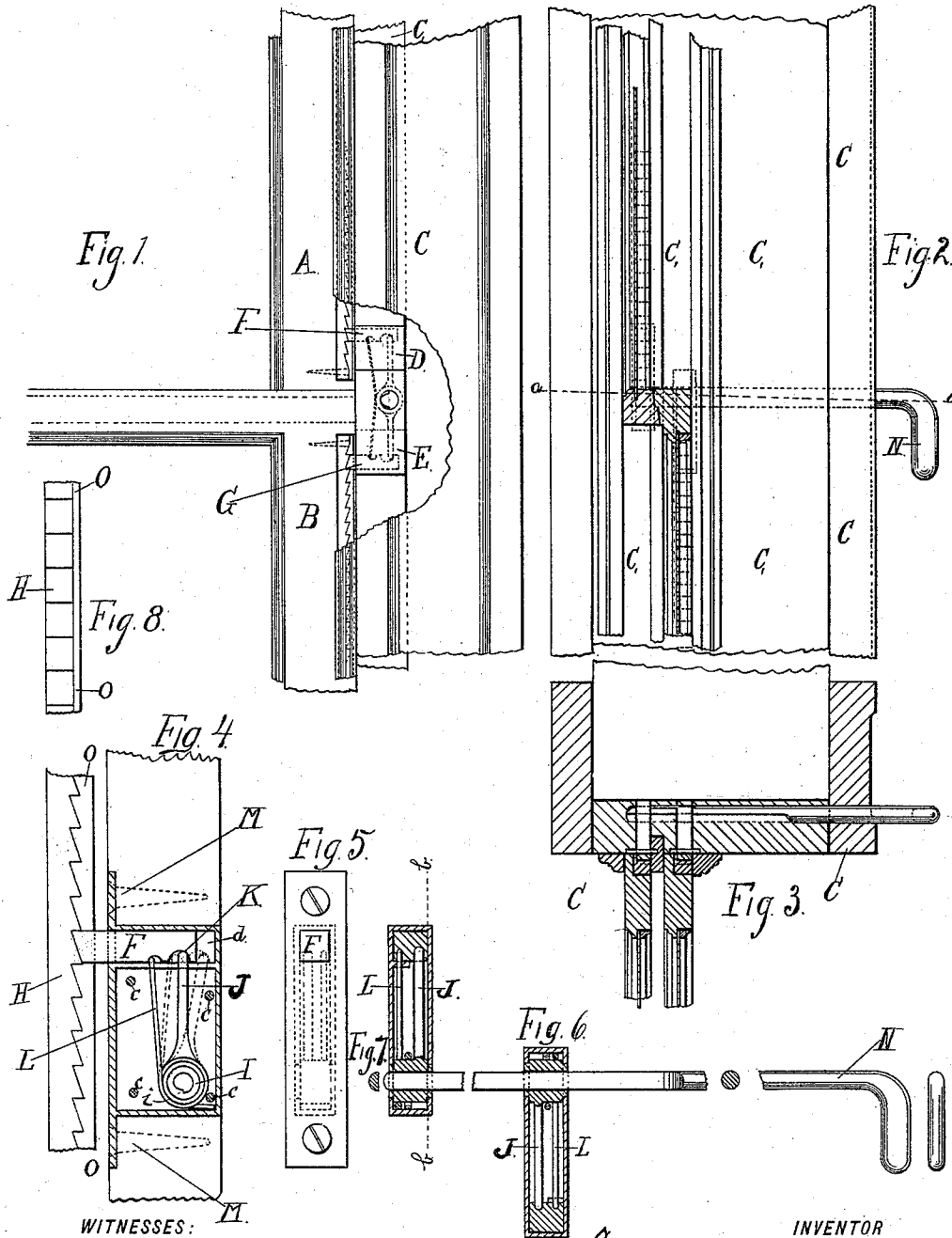


(No Model.)

D. A. CRICHTON.
SASH FASTENER.

No. 540,149.

Patented May 28, 1895.



WITNESSES:

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DAVID ARTHUR CRICHTON, OF LOS ANGELES, CALIFORNIA.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 540,149, dated May 28, 1895.

Application filed December 29, 1894. Serial No. 533,325. (No model.)

To all whom it may concern:

Be it known that I, DAVID ARTHUR CRICHTON, a subject of the Queen of Great Britain and Ireland, and a resident of Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Locks or Fastenings for Window-Sashes and Sliding Doors, the same being applicable to other purposes, of which the following is a full, clear, and exact description or specification, reference being had to the accompanying sheet of drawings, forming a part hereof.

My present invention relates to an apparatus for fastening the sliding sashes of windows, or sliding doors, or other analogous sliding appliances.

The object of the invention is to provide an improved sash lock sure, positive and effective in action, and comprising a minimum number of parts to accomplish the ends in view.

The invention consists in certain novel features of construction and in combinations and arrangements of parts more fully and particularly pointed out and described herein-after.

Referring to the accompanying drawings, Figure 1 is an inside elevation of a portion of the window and window-casing, showing my improved locking apparatus applied thereto. Fig. 2 is a side elevation of the same, showing the window-sashes and glass in section. Fig. 3 is a horizontal section on the line *a a*, Figs. 1 and 2. Fig. 4 is a vertical section on the line *b b*, Fig. 6, of the casing and lock shown in its place therein, the sliding bolt of the lock, also the operating-lever, spring, and ratchet-bar, being shown in elevation. Fig. 5 is a front elevation of the lock, showing the interior operative parts in dotted lines. Fig. 6 is a section of two of the said locks, drawn full size, in the relative positions which they occupy in the upper and lower sashes, also showing the key which passes through the holes in the levers of both locks simultaneously. Fig. 7 is a cross-section showing the shape of that part of the key which enters the holes in the levers of each of the locks. Fig. 8 is a front elevation of a portion of the ratchet-bar shown in side elevation, Fig. 4.

In Figs. 1, 2 and 3 the upper sash frame is marked A, and the lower sash frame is marked B. The sash frames are of ordinary construction and fitted to slide in the casings C.

The lock for controlling the opening of the upper sash is marked D, and the lock for controlling the opening of the under sash is marked E. Both locks are of the same construction, which construction is shown more particularly in Figs. 4, 5 and 6. The lock which controls the upper sash is placed with its movable bolt F, uppermost and the lock which controls the lower sash is placed with its movable bolt G, lowermost.

The lock as shown in Figs. 4, 5 and 6 is constructed with one of its side plates removable and which is held to the body of the lock by the screws *c*, passing through the side plate and entering the corresponding screw holes in the opposite side plate, after the manner of a common lock.

In the upper part of the lock casing there is situated a rectangular transverse way or recess *d*, open at its outer end and under side, for receiving the bolt, which is one of the bolts marked respectively F, and G, Fig. 1. In Fig. 4 the bolt is marked F, and its outer end protrudes into and engages with the adjacent tooth of the ratchet bar H, as shown.

In the lower part of the lock casing shown in Figs. 4 and 5, a cylindrical barrel I is situated and carried in the bearings in the two sides of the lock casing. From this barrel there projects upward the lever J, which enters the recess K, formed in the lower part of the bolt F, and around this barrel there is also fixed a coil of wire spring L, the upper part of which enters a notch also in the lower part of the bolt F. This spring L, has in turn its lower part or tail resting against the bottom plate of the lock casing, so that the upper tail of the spring L, at all times forces the bolt F, into the ratchet tooth adjacent to it. The entire lock is fixed in the casing by the screws M, as shown.

Through the center of the barrel I, to which the lever J, and the spring L, are attached as hereinbefore described, there is formed a circular orifice with a notch or tooth *i* projecting inward from one side of it. The inner end of the key N, Fig. 6, is shaped semi-circularly so as to fit into this orifice, and one

edge of its flat side bears against the said projecting piece or notch, so that when the key N, is turned in one direction, it operates the lever J, so as to withdraw the bolt F, from the ratchet notch in the bar H, wherein it is engaged and thereby unlocks the lower sash, thus enabling the sash to be lifted to any desired point. After having unlocked the lower sash, the turning of the key N, in the opposite direction then unlocks the upper sash, thus enabling the upper sash to be lowered to any required extent. By allowing the key N, to return to its normal position, the holes I, respectively in the locks of the upper and lower sashes which are situated in alignment with each other, admits of the key N, if desired to be withdrawn from the locks, or it may be allowed to remain therein permanently.

The ratchet bars H, Figs. 4 and 8, fitted into the window sashes are formed with a flange O, projecting from one side thereof, as shown, the object of which is to prevent a burglar or other person from sliding in, or inserting a piece of thin iron or other instrument, which in locks of this class as hitherto constructed, can be used to force back the bolts, thus enabling burglars to open the windows farther and to pass through windows. By means of the flange O, such thin piece of metal or other material inserted between the sash frame and the window casing, can only be forced against the lower or upper side of the bolt F, and thus the forcing endwise of the bolt by such act or artifice is rendered impossible. The ratchet bars H, may be formed without the flange O, providing the groove in the window casing is made sufficiently deep to allow the bar H, to lie therein far enough away from the casing so as to enable the bolt F, to pass thereinto, in the position corresponding to that shown in Fig. 4.

Although I have, on the annexed sheet of drawings, shown my sash or sliding door locking apparatus as applied for locking an upper and under sash by means of the said locks being fixed in the window casings and the ratchet bars fixed in the sash frames, yet I desire it to be understood that the relative positions of the locks and the ratchet bars

may be reversed, that is to say, the locks may each be placed respectively in the upper and under sash frames and the ratchet bars may be respectively fixed in the window casings, and in this case the teeth in the ratchet bars are by preference made after the manner of an ordinary square tooth rack, while the sliding bolts of the locks are also made with their outer ends so as to fit into the space between said teeth. When the locks are placed in the sash frames and the ratchet bars in the window casings, it follows that the locks must be operated independently of each other, in place of simultaneously as hereinbefore described when they are placed in alignment in the window casings. It is also to be understood that in place of applying the two locks as hereinbefore described for locking the two sashes of a window or the two halves of a double sliding door, one of such locks, with its corresponding ratchet bar and operating key, may be used for locking such single sash or door.

Having now described the nature of my said invention and the manner of carrying the same into practical effect, what I consider new and original, and therefore claim as the invention to be secured to me by Letters Patent, is as follows:

The lock comprising a rack, in combination with a case having the transverse way near one end thereof open at the outer end and inner side, the reciprocating bolt in said way, the rotary barrel journaled in the opposite end of the case to rock in a plane parallel with the throw of the bolt and provided with an arm extending longitudinally of the case and loosely engaging the bolt to throw the same, the interior of the barrel formed to receive an operating key, and a spring in the case yieldingly forcing the bolt outwardly, substantially as described.

In testimony whereof I have hereunto set my signature in presence of two subscribing witnesses:

DAVID ARTHUR CRICHTON.

Witnesses:

GEO. A. HOWARD, Jr.,

E. M. DAYTON.