

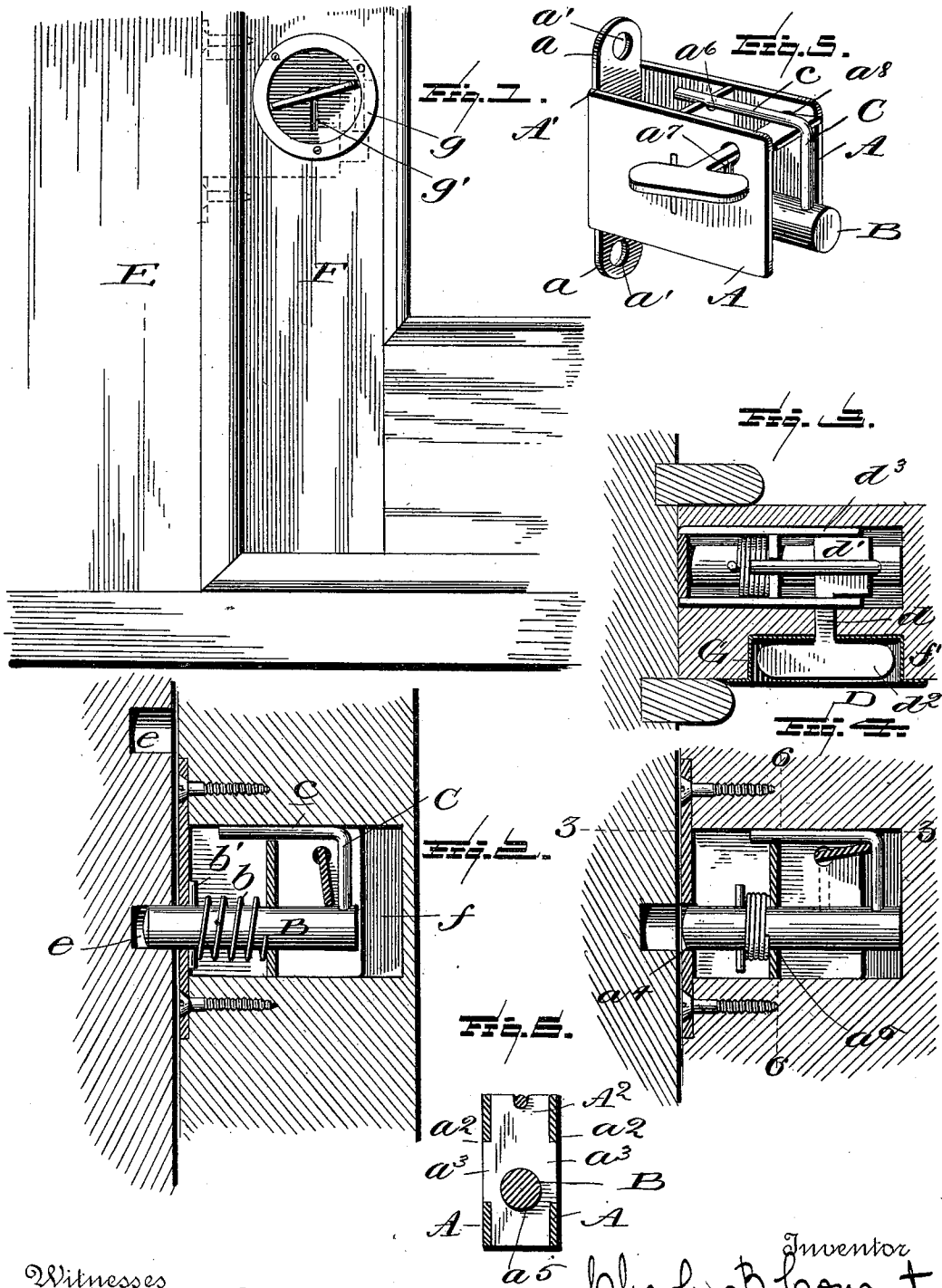
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Patented Aug. 8, 1899.

C. B. CONANT.
SLIDING BOLT LOCK.

(Application filed May 27, 1899.)

(No Model.)



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SLIDING-BOLT LOCK.

SPECIFICATION forming part of Letters Patent No. 630,594, dated August 8, 1899.

Application filed May 27, 1899. Serial No. 718,576. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. CONANT, a citizen of the United States, residing at Adrian, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Sliding-Bolt Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is an improvement in sliding-bolt locks adapted particularly for use in securing the sliding sashes of windows from movement in their casings; and it consists in the novel features hereinafter described, reference being had to the accompanying drawings, which illustrate one form in which I have contemplated embodying my invention, and said invention is fully disclosed in the following description and claims.

Referring to the drawings, Figure 1 represents a portion of a window-casing and sliding sash, the latter being provided with one of my improved locks. Fig. 2 is a central vertical longitudinal sectional view of the casing, sash, and lock. Fig. 3 is a horizontal sectional view on line 3 3 of Fig. 4. Fig. 4 is a view similar to Fig. 2, showing the bolt of the lock thrown back. Fig. 5 is a perspective view of the lock itself. Fig. 6 is a vertical transverse section on lines 6 6 of Fig. 4.

The main frame of my improved lock consists of a single piece of sheet metal, comprising the two parallel rectangular plates A A, connected at one end of the same by a narrow face-plate A', disposed perpendicularly to the side plates, and having portions *a* extending beyond the edges of the side plates at each end and provided with apertures *a'* to receive screws, by means of which it is held in position. The side plates A A are provided between their front and rear edges with vertically-disposed slots *a² a²*.

A² represents a guiding and spacing plate inserted between the side plates A A, disposed perpendicularly thereto and provided with laterally-extending projections *a³*, which extend through the slots *a² a²* in the side plates and are riveted therein in a well-known way. The integral plates A A A' and the guiding and spacing plate A² thus form a light strong lock-frame which can be very cheaply made

from sheet material and put together as described.

B represents the sliding bolt, which engages registering guiding-apertures *a⁴ a⁵* in the face-plate A' and spacing-plate and guiding-plate A², respectively.

b represents a spring surrounding the bolt B between the spacing-plate A² and the face-plate A'; and *b'* represents a pin extending through the bolt B in front of the spring *b*. The spring *b* presses against the pin *b'* and forces the bolt outward when the latter is not acted upon by the key, as hereinafter described, and the pin *b'* is so located in the bolt B as to form a stop to limit the outward movement of the bolt B by engaging the inner side of the face-plate A'.

C represents an arm which is secured in a recess in the rear end of the bolt B, extends perpendicularly therefrom, and is provided at its upper end with a guiding portion *c* parallel with the bolt B, which guiding portion engages a notch or aperture *a⁶* in the upper portion of the guiding and spacing plate A². The engagement of this guiding portion *c* with the spacing-plate A² prevents the bolt B from turning in its bearing, and the arm C proper forms a device which can be engaged by the bit portion of the key.

One of the plates A is provided with a keyhole-slot *a⁷*, and the other plate A is provided with a circular aperture *a⁸* in line with the circular portion of the keyhole-slot *a⁷*. The centers of the circular aperture *a⁸* and the circular portion of the keyhole-slot *a⁷* are slightly below the plane of the horizontal guiding portion *c* of the arm C.

D represents the key, the form of which is clearly illustrated in Fig. 3. This key is also preferably stamped from sheet metal and consists of a short stem *d*, provided with a bit portion *d'* of substantially the width of the space between the two side plates A A and at the outer end with a finger-piece in the form of a cross-bar *d²*. The key is also provided with a projection *d³*, extending beyond the bit *d'*, which extends into the aperture *a⁸* of one of the side plates A when the key is in operative position. The key is inserted through the keyhole-slot *a⁷*, with the projection *d³* engaging the aperture *a⁸*, as above described, and when the key is turned

the bit d' will engage the arm C and draw back the bolt B against the tension of the spring b until the bit d' is arrested by coming into contact with the horizontal guiding portion c of the arm C. As this portion c of the arm C is slightly above the centers of the circular aperture a^8 and the circular portion of the keyhole-slot a^7 , as before described, when the key is arrested by the part c it will have been turned past a position perpendicular to the arm C, as clearly illustrated in Fig. 4 and also in Fig. 5, so that the key is held against accidental displacement by the tension of the bolt-spring b and will remain in this position, holding the bolt in its inner or unlocked position until the key is positively turned by hand to release the bolt. It will also be noticed that when the key has forced the bolt back, as just described, and is held in this position it cannot be removed from the lock, as the bit has been turned at an angle to the elongated portion of the keyhole-slot a^7 .

In Figs. 1 to 4 I have shown the manner in which my improved lock is used as a fastening for the sliding sashes of windows. In these figures, E represents the window-frame or casing, and F represents a vertically-sliding sash. The vertical side rails of the sash are provided on their outer faces with a recess f , in which the frame of the lock is inserted, and the projecting portions a of the face-plate A' are set in shallow recesses, so that the outer face of the said face-plate is flush with the outer edge of the sash. The casing E is provided at any suitable interval with locking-recesses e to engage the locking-bolt B, as shown in Fig. 2. I also prefer to provide the front face of the side rail of the sash F with a circular recess f' to receive a cup-shaped plate G, provided with flanges g , having apertures therein by means of which it can be secured by nails or screws to the rail, as shown in Fig. 1. The handpiece or cross-bar d^2 of the key lies within this cup-shaped plate when in operative position, as shown in Fig. 3, so that the key does not project beyond the face of the side rail. The cup-shaped plate G is provided with a keyhole-slot g' , which registers with the keyhole-slot a^7 in the side plate of the lock. One or both of the side rails of the sash may be provided with my improved lock, as preferred. When it is desired to lock the sash, the key is turned

to release the locking-bolt B and allow it to enter the desired locking-recess e in the window-casing. The outer end of the bolt B is preferably rounded, as shown, so that should the bolt be released when not exactly opposite one of the locking-recesses e the sash can be moved up or down, as required, and when the bolt comes into line with the desired recess the spring will force it to enter the same.

While my improved lock is specially adapted for use as a window-sash fastener, it may also be used to advantage for other purposes.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In a lock, the combination with the frame comprising the parallel side plates, the face-plate and the guiding and spacing plates, of a spring-actuated sliding bolt mounted in apertures in the face-plate and said spacing-plate and an arm secured to the bolt and having an angularly-disposed portion engaging a guide in the said spacing-plate, said angular portion being located out of line with the axis of rotation of the key and serving as a stop to limit the movement of the key, substantially as described.

2. In a lock, the combination with the main frame comprising the face-plate, two parallel side plates formed integrally therewith and provided with apertures in line with each other, and the spacing-plate interposed between said side plates, and provided with lateral projections engaging the said apertures in the side plates, of a longitudinally-movable bolt mounted in apertures in the face-plate and space-plate and provided with a stop-pin adapted to engage the inner side of the face-plate to limit the outward movement of the bolt, a key-engaging arm, secured to said bolt, extending at an angle therefrom and provided with a guiding portion, parallel to the bolt and engaging a guide in the spacing-plate, said guiding portion forming a stop for the key, and a spring surrounding the bolt and lying between the spacing-plate and the stop-pin on said bolt, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES B. CONANT.

Witnesses:

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