

(No. Model.)

E. J. WILLARD.
SLIDING DOOR LOCK.

No. 512,139.

Patented Jan. 2, 1894.

Fig. 1.

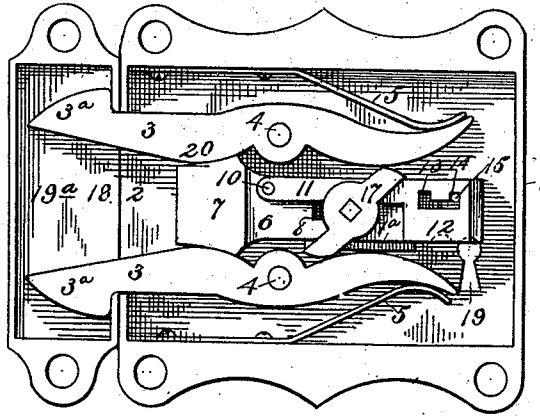


Fig. 2.

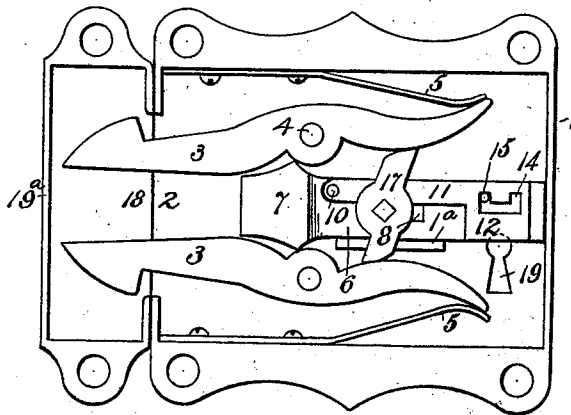


Fig. 3.

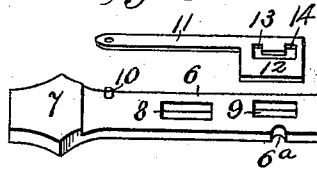
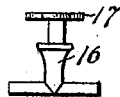


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

EPHRAIM J. WILLARD, OF GENEVA, NEW YORK.

SLIDING-DOOR LOCK.

SPECIFICATION forming part of Letters Patent No. 512,139, dated January 2, 1893.

Application filed March 13, 1893. Serial No. 465,794. (No model.)

To all whom it may concern:

Be it known that I, EPHRAIM J. WILLARD, a citizen of the United States, residing at Geneva, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Sliding-Door Locks; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention consists in a new and improved spring lock for sliding doors, for the covers of pianos, roll-top desks, &c.; and my invention will be hereinafter fully described and claimed.

Referring to the accompanying drawings: Figure 1 is a plan view, with the inner side of the casing removed, showing the lock locked. Fig. 2 is a similar view showing the lock unlocked. Fig. 3 illustrates in detail the bolt and its tumbler. Fig. 4 illustrates in detail the key 16 and cam 17, hereinafter described.

The same numerals of reference indicate corresponding parts in all the figures.

Referring to the several parts by their designating numerals: 1 indicates the usual outer casing of the lock, which is formed at one end with the opening 2 through which the ends of the catches project and play.

3, 3, indicate the two catches, which are formed at their outer ends with the locking heads 3^a, and are pivotally mounted near their centers on pins 4 within the casing. Springs, 5, 5, bear with their free ends against the inner ends of the pivoted catches, and tend to press their outer ends apart, as shown.

6 indicates the sliding bolt, by means of which the catches are locked in their operative position. This bolt is formed with the inclined head 7, and with the central longitudinal slot 8 and upper slot 9, and slides upon a guide-rib, 1^a, on the inner side of the casing. Near its head, 7, a pin, 10, projects from the side of the bolt, on which is pivoted the end of the bolt-tumbler, 11. The wide inner end of this tumbler is formed with a

slot, 12, which registers with the upper slot 9 of the bolt, and with two locking-notches or recesses, 13, 14, at the upper edge of said slot. A locking-pin, 15, passes from the side of the casing through the slot 9 of the bolt and the slot 12 of this tumbler.

16 indicates a key which is permanently mounted in the casing, and on its squared spindle, which passes through the central slot 8 of the sliding bolt, is secured a double ended cam, 17, which is arranged as shown between the inner ends of the pivoted catches.

In operation, when the door provided with my lock is slid to, or closed, the inclined outer ends of the catches enter the openings 18, formed in the keeper 19^a, being pressed inward as they slide through said opening, and when they have passed through said opening are pressed apart by the springs 5. To lock the catches in this position the key which is inserted through the key-hole 19 is turned, when it enters a recess, 6^a, in the lower edge of the bolt and raises the inner end of the tumbler 11, with which it comes in contact, until it frees the locking-pin 15 from the front locking-notch 13 of the tumbler, when the key slides the bolt forward until its inclined head comes in contact with the inclined inner sides, 20, of the catches 3, in front of their pivotal points, when the inner end of the tumbler drops, engaging the locking-pin 15 in the rear locking notch, 14, as shown in Fig. 1 of the drawings, thus locking the sliding bolt in this position, while the head of the bolt locks the catches, and prevents the lock being unlocked by turning the cam-spindle, 16. To unlock the lock the key is inserted in the key-hole 19 and turned to the left, when it will raise the inner end of the pivoted tumbler to free its notch 14 from the locking-pin 15, and then slide the bolt back, into the position shown in Fig. 2; when by turning the spindle 16 by the knob at its outer end the cam 17 will press the inner ends of the pivoted catches apart, against the pressure of their springs 5, thus bringing the outer locking ends of the catches together, and unlocking the door, which can then be slid open.

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

The combination, with a suitable casing, of the spring-actuated centrally pivoted catches having the locking heads at their outer projecting ends, the double ended cam arranged
5 between the inner ends of said catches and having the operating spindle, the sliding bolt having the locking head at its outer end, having the pivot-pin 10, and formed with the central slot 8 and the upper slot 9, the tumbler
10 11, pivoted at its forward end on the bolt-pin

10 and formed at its rear end with the slot 12 and locking-notches 13, 14, and the locking-pin 15, arranged as specified; substantially as set forth.

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

EPHRAIM J. WILLARD.

Witnesses:

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