

(Model.)

E. NYSWONGER.

LOCKING LATCH.

No. 291,392.

Patented Jan. 1, 1884.

Fig. 1.

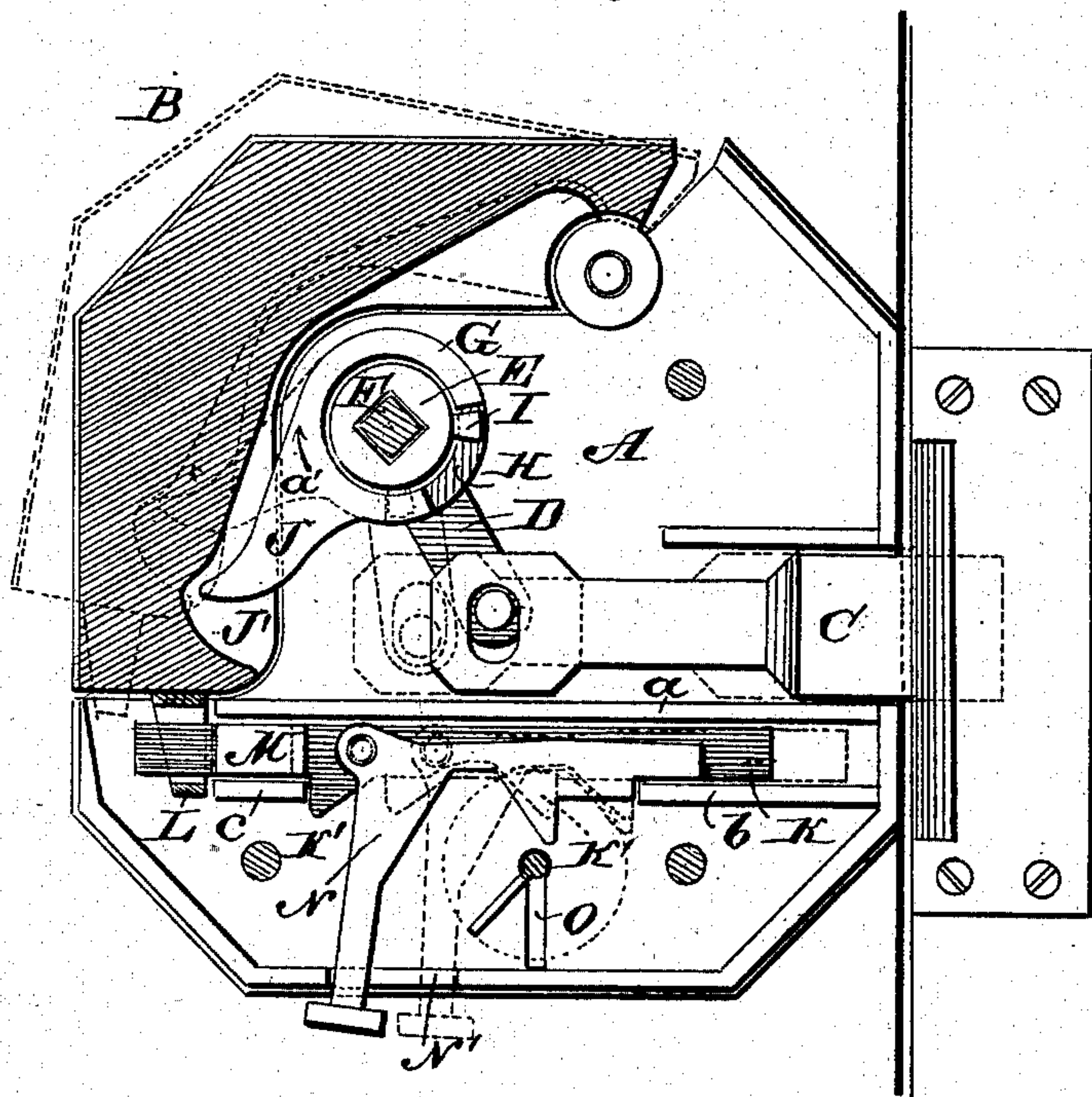


Fig. 2.

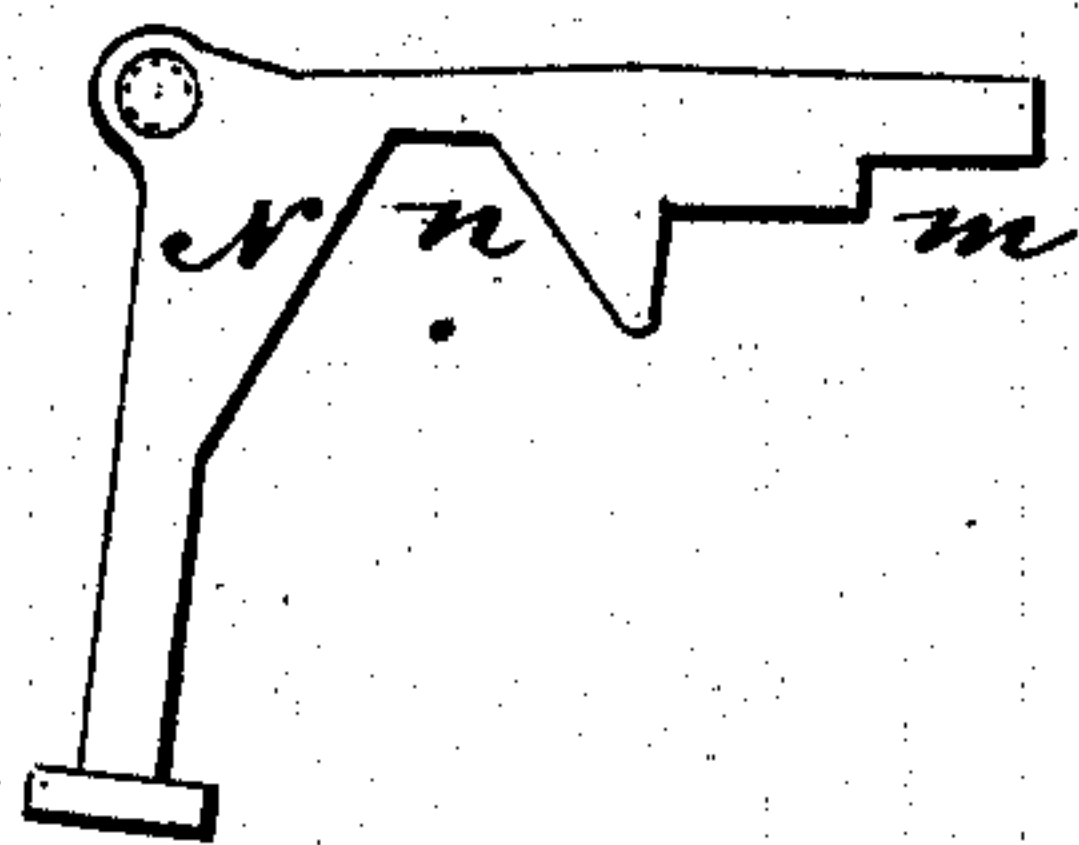
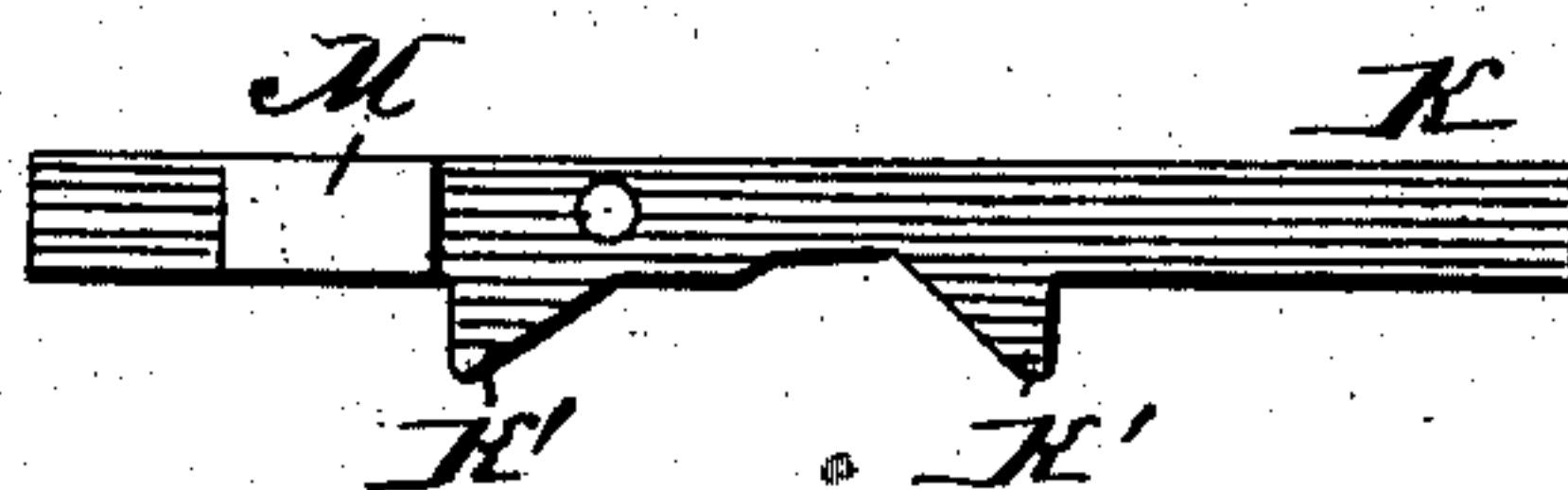


Fig. 3.



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ELIJAH NYSWONGER, OF HANFORD, CALIFORNIA.

LOCKING-LATCH.

SPECIFICATION forming part of Letters Patent No. 291,392, dated January 1, 1884.

Application filed August 17, 1883. (Model.)

To all whom it may concern:

Be it known that I, ELIJAH NYSWONGER, of Hanford, in the county of Tulare and State of California, have invented a new and Improved Lock, of which the following is a full, clear, and exact description.

The object of my invention is to provide a lock which operates without a spring, and which can be easily adjusted in such a manner that it cannot be opened from the outside.

The invention consists in a lock having a casing formed of a fixed part and a movable part hinged thereto, the hinged part being adapted to act on the locking-bolt and throw the same outward by the weight of the said hinged part, thereby dispensing with the use of a spring. The lock-casing is provided with a latch-bolt for locking the hinged part in such a manner that it cannot be raised, and prevents withdrawing the locking-bolt, which latch bolt can be operated by means of a key or suitable catch or projection.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional elevation of my improved lock. Fig. 2 is a side view of the tumbler. Fig. 3 is a side view of the latch-bolt.

The lock-casing is composed of a fixed section, A, and a movable section, B, pivoted to the top of the section A. The bolt C is held to slide between suitable guides in the casing A, and can be projected out of the end of the casing. The inner end of the bolt is provided with a slot, through which a pintle passes, which is on the end of an arm, D, secured to a nut, E, through which a knob-bolt, F, passes, so that by turning the knob the bolt C will be moved inward or outward. A collar, G, surrounding the nut E, is provided with a notch or recess, H, in its upper edge, into which notch a tooth, I, projecting from the nut E, passes. The collar G is provided with a downwardly-projecting arm, J, which passes into a recess, J', in the inner surface of the hinged part B of the lock-casing, which hinged part is made solid, so as to give it as much weight as possible. A latch-bolt, K, is held to slide between guide-ridges *a b c*, projecting from the inner surface of the back of the lock-casing.

The bolt K is provided with downwardly-projecting lugs K', which strike against the ends of the ridges *b c* and limit the movement of the sliding latch-bolt K in the direction of its length. The hinged part B of the lock-casing is provided in its lower end with a loop, L, into which the inner end of the latch-bolt K is adapted to pass when the said hinged part of the casing is lowered. A block, M, projects from the side of the latch-bolt, to prevent it from being forced through the loop L too far. An elbow-shaped tumbler, N, is pivoted to the latch-bolt K, and has one shank projecting through a slot, N', in the bottom of the lock-casing. The tumbler is provided in its horizontal shank with a beveled recess, *n*, for receiving the bit of the key, and with an offset, *m*, in its lower edge a short distance from the end. The key-hole O is so arranged in the casing that the bit of the key can easily pass into the recess *m*.

The operation is as follows: Fig. 1 shows the door locked and the parts of the lock in such a position that the door cannot be opened by turning the knob, for if the knob is turned in the direction of the arrow *a'* to withdraw the bolt C the end of the arm J will strike against the hinged part B of the lock-casing and cannot raise the same, as the end of the latch-bolt K is passed through the loop L on the lower end of the hinged part B, and thus locks the same in place. In order to release the hinged part B the tumbler N must be raised either by means of a key or by hand, and then must be pushed toward the outer edge of the lock-casing, whereby the inner end of the latch-bolt K will be withdrawn from the loop L. The tumbler must always be raised before it is possible to withdraw the latch-bolt K from the loop L, as the offset *m* catches on the end of the ridge *b* and prevents moving the latch-bolt outward. When the latch-bolt is moved inward, the bottom edge of the tumbler slides on the ridge *b* and drops automatically, thereby locking the latch-bolt K in place. As stated, the latch can be moved by a key or by a person in the room by seizing the lower end of the vertical arm, which projects from the bottom of the lock-casing. If the knob is now turned in the direction of the arrow *a'*, the tooth I of the nut E strikes against one end of the notch H and turns the collar G in the direction of

the arrow α' , and causes the hinged part B to be raised into the position shown in dotted lines in Fig. 1, and at the same time the bolt C is drawn into the casing, thus permitting the door to be opened. As soon as the knob is released the weighted hinged part B drops back into its normal position, and thereby swings the arm J and the collar G in the inverse direction of the arrow α' , and causes the arm D to push the bolt C outward. As the lock requires no spring, its construction is simplified materially. The tumbler N and the bolt K form a perfect night-latch, which can be adjusted from the interior of the room, or can easily be unlocked from the exterior by a person having the proper key.

In place of providing the hinged part of the casing with a loop, L, it can be provided with an aperture or recess for receiving the end of the latch-bolt K.

I do not abandon or dedicate to the public any patentable features set forth herein and not hereinafter claimed, but reserve the right to claim the same either in a reissue of any patent that may be granted upon this application or in other applications for Letters Patent that I may make.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a lock, the combination, with a sliding bolt, of a hinged section of the casing for thrusting the bolt outward, and means for locking said hinged section in position, substantially as herein shown and described.

2. In a lock, the combination, with a casing having a hinged section, and means for locking the same in position, of a sliding bolt connected to an arm of a nut surrounding the knob-spindle, and a collar surrounding the nut, and provided with a downwardly-projecting arm, substantially as herein shown and described.

3. In a lock, the combination, with a casing provided with a hinged section having a loop at its free end, of a sliding latch-bolt for en-

gagement with the loop of the hinged section, and means for operating said latch-bolt, substantially as herein shown and described.

4. In a lock, the combination, with a casing provided with a hinged section having a loop on its free end, of a sliding latch-bolt for engagement with the loop of the said hinged section, a tumbler pivoted to the latch-bolt, and means for operating the tumbler, substantially as herein shown and described.

5. In a lock, the combination, with a lock-casing provided with the hinged part B, having loop L, the bolt C, connected to the arm of the nut E, surrounding the knob-spindle, and the armed collar G, surrounding the nut, of the latch-bolt K, provided with the lugs K', and the angular tumbler N, pivoted to the latch-lock, substantially as herein shown and described.

6. In a lock, the combination, with a lock-casing provided with the hinged part B, having loop L, the bolt C, connected to the arm of a nut, E, surrounding the knob-spindle, and an armed collar, G, surrounding the nut, of the latch-bolt K, provided with the lugs K' and the projection W, and the angular tumbler N, pivoted to the latch-bolt and provided with the offset m , substantially as herein shown and described.

7. The combination, with a lock-casing, of the hinged part B, the nut E, the collar G, provided with an arm, J, and the arm D, the latter connected with the sliding bolt C, substantially as herein shown and described, and for the purpose set forth.

8. The combination, with a lock-casing, of the hinged part B, having a recess, J', the nut E, provided with a tooth, I, the collar G, provided with a recess, H, and an arm, J, and the arm D, the latter connected with the sliding bolt C, substantially as herein shown and described, and for the purpose set forth.

ELIJAH NYSWONGER.

Witnesses:

MILTON ENGLISH,

ADOLPH E. G. SCHLICHT.