No. 611,790. Patented Oct. 4, 1898.

E. D. MILTIER.

LOCK.

(Application filed Jan. 8, 1898.)

(No Model.)

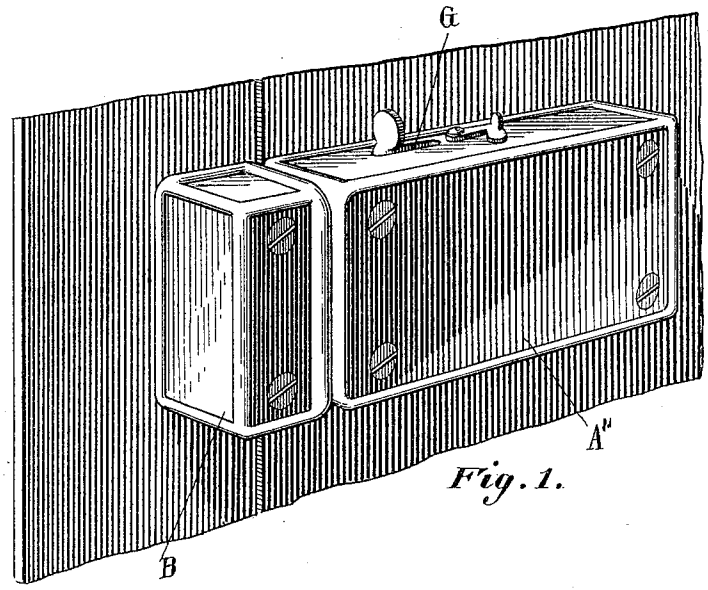


Fig. 1.

Fig. 2.

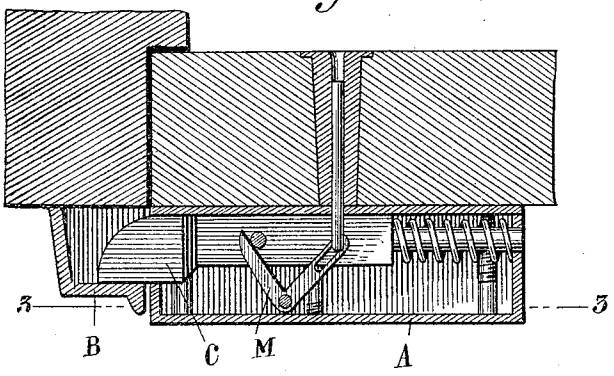


Fig. 4.

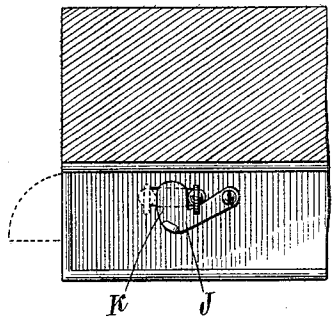


Fig. 6.

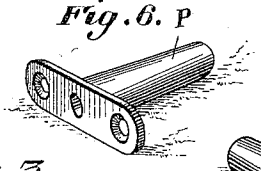


Fig. 5.

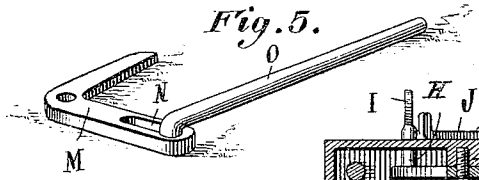


Fig. 3.

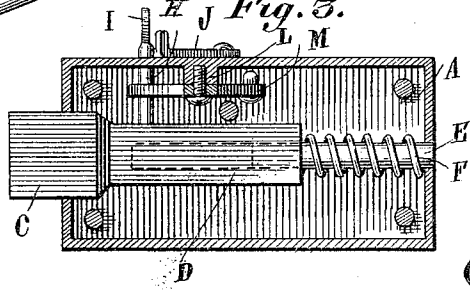
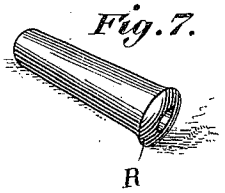


Fig. 7.



Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ERNEST D. MILTIER, OF SAVANNAH, GEORGIA.

LOCK.

SPECIFICATION forming part of Letters Patent No. 611,790, dated October 4, 1898.

Application filed January 8, 1898. Serial No. 666,069. (No model.)

To all whom it may concern:

Be it known that I, ERNEST D. MILTIER, residing at Savannah, in the county of Chatham and State of Georgia, have invented a new and useful Lock, of which the following is a specification.

This invention relates to improvements in locks, and particularly to door-locks.

The object of the invention is to provide a simple and improved construction of lock, which is self-locking and which dispenses with the use of a key for unlocking the same.

With the above object in view the invention consists of a spring-actuated bolt held normally projected, a finger-piece for retracting the bolt from the interior of the door, a latch adapted to engage the finger-piece and hold the bolt either projected or retracted, a bell-crank lever pivoted in the lock-casing and adapted at one end to engage the bolt, and a push-rod engaging the opposite end of said lever and movable in the door, to be engaged and operated by a suitable object inserted in the escutcheon from the exterior of the door for the purpose of operating the bell-crank lever and retracting the bolt.

The invention further consists in the improved construction, arrangement, and combination of parts hereinafter fully described and afterward specifically pointed out in the claim.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, having reference to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of a portion of the interior of a door, showing my lock applied thereto. Fig. 2 is a horizontal longitudinal sectional view of the same. Fig. 3 is a vertical longitudinal sectional view on the line 3 3 of Fig. 2. Fig. 4 is a top plan view showing the bolt held retracted by the engagement of the latch with the finger-piece. Fig. 5 is a perspective view of the bell-crank lever and push-rod. Fig. 6 is a perspective view of the bushing and the escutcheon. Fig. 7 is a similar view of a modified form of bushing and escutcheon.

Like letters of reference mark the same parts wherever they occur in the various figures of the drawings.

In the accompanying drawings, A indicates a casing which is secured upon the inner face of the door, and B a casing which is positioned upon the door-frame and constitutes the keeper to receive the bolt C, which is movable within casing A. This bolt is provided with a central passage or bore D to receive the post E, carried by the casing, and upon which the bolt is movable, a spring F, coiled about said post and bearing against the bolt, serving to hold the latter normally projected from the casing.

Secured at one end to the bolt and projecting upwardly therefrom and movable in a longitudinally-extending slot G, formed in the upper wall of the casing, is an arm H, having upon its upper end the finger-piece I. By means of this arm the bolt is retracted from the interior of the door.

Pivoted upon the upper wall of the casing and in rear of the finger-piece I is a latch J, which serves a twofold purpose—namely, that of holding the bolt retracted by having its angular end K moved in front of the finger-piece when the same has been moved rearwardly and preventing the retraction of said bolt when the angular end of said latch has been moved in rear of the finger-piece. In the former instance the latch serves as a night-latch.

Pivoted to a lug L, depending from the under side of the upper wall of the casing, is a bell-crank lever M, which at one end is adapted to engage the upwardly-projecting arm H and at its opposite end is slotted, as illustrated at N.

O is a push-rod having its inner end bent to engage the slot N of the bell-crank lever, said push-rod being movable in a bushing P, positioned within the door and having the plate or escutcheon Q at its outer end, which is secured upon the outer face of the door. In its normal position the outer end of this push-rod does not project quite to the outer face of the door, but terminates a little short thereof, so as to not be readily discernible from the outer side of the door. When this push-rod is moved inwardly, the bell-crank lever is operated and the bolt retracted.

In Fig. 7 a modified form of bushing is

shown, in which construction the plate Q is dispensed with and the outer end of the bushing enlarged slightly, as illustrated at R.

The improved keyless lock above described is especially designed to be used upon office or bedroom doors, so that when the occupant leaves the room the door is locked by simply closing the same, and when it is desired to reenter the room the push-rod is operated by inserting a match-stem, toothpick, or lead-pencil to operate the lever. Thus the door is very conveniently locked and unlocked, and the occupant is not bothered with a key, and at the same time persons are prevented from entering the room, inasmuch as there is nothing visible from the exterior of the door, excepting the escutcheon, it would not occur to them to insert a match or toothpick to operate the push-rod.

From the above description it will be seen that I have produced a very simple construction of door-lock, which dispenses with the use of keys, and have also provided a latch for holding the bolt either projected or retracted.

While I have illustrated and described the best means now known to me for carrying out my invention, I do not wish to be understood as restricting myself to the exact details of construction shown and described, but hold that any slight changes or variations such as might suggest themselves to the ordinary mechanic will properly fall within the limit and scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

In a lock, the combination with the casing, of a normally-projected bolt movable therein, an arm carried by said bolt movable in a slot in the casing and formed with a finger-piece, a bell-crank lever pivoted in said casing and engaging said arm, and a push-rod connected with said bell-crank lever and adapted to be operated from the exterior of the door, substantially as set forth.

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