

C. NOVY.
DOOR LOCK.

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1,055,943.

Patented Mar. 11, 1913.

Fig. 1.

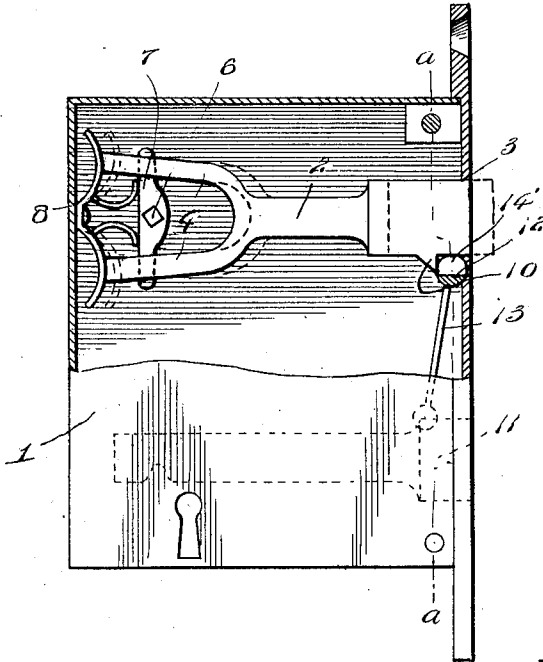


Fig. 2.

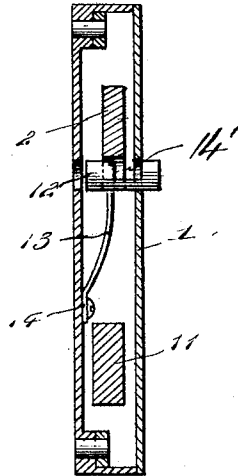


Fig. 4.

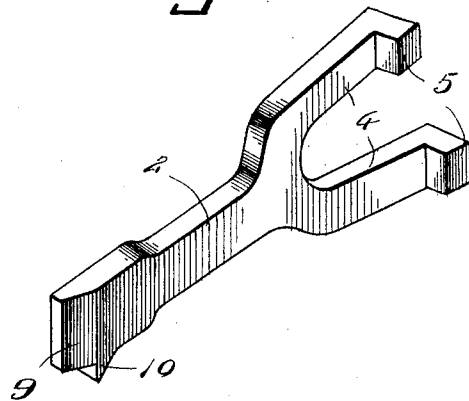
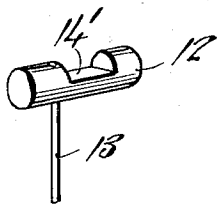


Fig. 3.



Witnesses

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DOOR-LOCK.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES NOVY, a citizen of the United States, residing at Baltimore, State of Maryland, have invented new and useful Improvements in Door-Locks, of which the following is a specification.

This invention is an improved door lock and consists in the construction, combination and arrangement of devices hereinafter described and claimed.

The object of my invention is to provide an improved door lock embodying a spring actuated latching bolt and automatically operating means to noiselessly release the spring actuated latch bolt to cause the latter to secure the door when the same is in closed position.

In the accompanying drawing:—Figure 1 is an elevation of an improved door lock constructed in accordance with my invention with a portion of the lock case removed so as to disclose the construction of the latching bolt and the spring operating locking pin. Fig. 2 is a vertical sectional view of the same on the plane indicated by the line *a—**a* of Fig. 1. Figs. 3 and 4 are detail views.

The lock case 1 is here shown as rectangular in form. In practice, this may be constructed to be secured to one side of a door or to be secured in a mortise in the door. In accordance with my invention, I provide a latching bolt 2 which operates in an opening 3 in the front side of the lock case and is provided at its rear or inner end with a pair of yoke arms 4, each of which has a tappet 5 on one side. The usual knob stem is indicated at 6 and is provided with a cross arm 7, the ends of which bear, respectively, against the inner sides of the said tappets. A spring 8 is employed which bears against one side of the cross arm and bears at its ends against the inner side wall of the lock, this spring acting to normally hold the cross arm of the knob stem in vertical position and the latching bolt in projected position. The latching bolt is provided on the side corresponding with the inside of the room or door in which the bolt is used with a beveled cam face 9 to facilitate the engagement of the latching bolt with the usual keeper when the door is closed. The latch bolt is provided at a suitable distance from its outer end, on one side, with a projection 10.

The usual key actuated bolt is indicated

at 11 and may be of any suitable construction and specifically forms no part of my present invention.

In connection with the latch bolt, I provide a locking pin 12 which is arranged transversely and is mounted for longitudinal movement in openings in the sides of the lock case. A spring 13 has one end secured in the lock case as at 14. The free end of this spring is connected to the locking pin and this spring acts to normally move the locking pin in one direction so as to project one end of the locking pin beyond the outer side of the lock case, or in other words, beyond that side of the lock case which is opposed to the door jamb when the door is closed. This locking pin is provided in the side next the projection 10 of the latching bolt with a recess 14' of a size and shape adapting it to receive the said projection when the locking pin is pressed inwardly against the tension of the spring 13 by the pressure of the jamb against the outer end of the locking pin when the door is closed. Hence, when the door is closed and the locking pin is in withdrawn position, its notch 14' being coincident with the projection or shoulder 10, the latch bolt is then free to be moved by the spring 8 to engaging position with the keeper so as to secure the door in closed position.

In opening the door, the initial act of turning the knob causes the cross arm to be partly turned and said cross arm to withdraw the latch bolt so that the projection or shoulder 10 is to one side of the locking pin. As the door is moved to open position, the locking pin when it moves from engagement with the jamb is by the action of the spring 13 projected from the outer side of the door and, hence, the locking pin is arranged in the path of the shoulder or projection 10 and by coaction therewith holds the latching bolt in withdrawn, released position, even after the knob has been released. Hence, when the door is again closed, the locking pin by striking against the jamb is moved against the tension of the spring 13 so as to cause its recess 14' to coincide with the projection or shoulder 10 as before stated and thereupon the latching bolt is caused by the coaction of the spring 8 and cross arm 7 to reengage the keeper in the door jamb or frame and thus the door is secured in closed position.

It will be understood from the foregoing

that the act of merely closing the door against the jamb causes my improved lock to secure the door in closed position. This too is done noiselessly and without unpleasant clicking of any of the parts of the lock.

While I have herein shown and described a preferred form of my invention, I would have it understood that changes may be made in the form, proportion and construction of the several parts without departing from the spirit of my invention and within the scope of the appended claim.

I claim:—

In a lock of the class described, the combination of a lock case, a spring projected latching bolt mounted for movement in the lock case and having a detent shoulder on its under side, a locking pin mounted in openings in the sides of the lock case for

longitudinal movement of the pin and transversely with respect to the latching bolt, the said pin having a recess in one side at a point intermediate its ends to clear the shoulder of the latching bolt, said pin being in the path of said shoulder, and a spring arranged in the lock case connected at one end to one side of the lock case and having its free end connected to the pin, said spring acting to move said pin in one direction and cause one end thereof to normally project beyond one side of the lock case.

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

CHARLES NOVY.

Witnesses:

ALOIS MASEK,
FRANK HEJNAL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."