

F. LIERS.
LOCK.

APPLICATION FILED APR. 5, 1910.

971,763.

Patented Oct. 4, 1910.

Fig. 1.

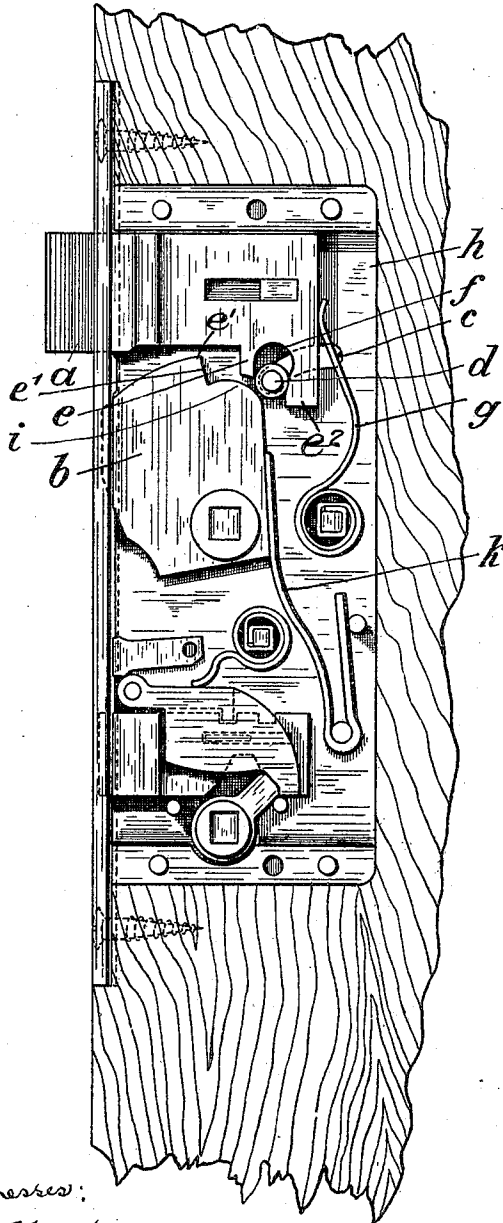


Fig. 2.

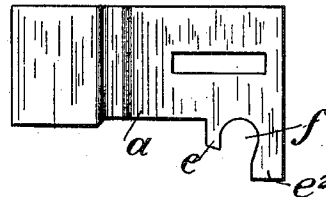


Fig. 3.

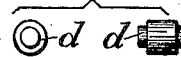
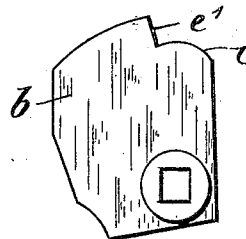


Fig. 4.



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UNITED STATES PATENT OFFICE.

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LOCK.

971,763.

Specification of Letters Patent.

Patented Oct. 4, 1910.

Application filed April 5, 1910. Serial No. 553,653.

To all whom it may concern:

Be it known that I, FRITZ LIERS, a citizen of the German Empire, residing at Rummelsburg, near Berlin, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in 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 relates to improvements in locks, and more particularly to that class of locks in which a spring actuated bolt co-operates with a lock-strike the bolt-nab of which is forced backward by the spring bolt when closing the door, whereupon the bolt-nab holds the bolt in its locking position until said bolt is retracted by a key or the like. A lock-strike of this general construction has been described in my application for patent of even date herewith.

The object of the improvements is to provide means for locking the spring bolt in its projected position, which locking means can be thrown into inoperative position merely by means of the door knob or the like designed for opening the lock.

With this object in view my invention relates to the matters to be described hereinafter and particularly pointed out in the appended claims reference being had to the accompanying drawing forming a part of this specification and to the letters of reference marked thereon.

In said drawing—Figure 1, is a vertical section of the part of the door inclosing my improved lock, Fig. 2, is a detail view of the bolt, Fig. 3, shows an end view and a side view of the roller used for locking the bolt, and Fig. 4, is a detail view showing the turn-buckle.

The same letters of reference have been used in all the views to indicate corresponding parts.

Within a casing *h* a bolt *a* is located which is provided with a short nose *e* and a long nose *e*² forming a recess or notch *f*, said shorter nose *e* being adapted to be engaged by an abutment *e'* of a turn-buckle *b* adapted to be rocked by means of a door knob or the like so as to retract the bolt *a*, while it is thrown forward into its inoperative position by a spring *g*, and the bolt *a* can be shot for-

ward into its operative position by a spring *g*.

As shown both side faces *h* of the casing of the lock are formed with curved slots *c* providing guides for a roller *d*. The latter engages in a notched portion *f* of the bolt *a* in such a way as to lock the same against being forced backward into its inoperative position by any pressure exerted on the bolt. The said roller coöperates with a cam face *i* formed on the turn-buckle, and it is adapted to be shifted upward and rearward thereby so as to permit the bolt *a* to be retracted by the turn-buckle. The relative position of the nose *e* and the abutment *e'*, and the cam face *i* and the roller *d* is such that when rocking the turn-buckle *b* the roller *d* is first shifted into its non-locking position before the abutment *e'* comes into engagement with the nose *e*, so that the latter is free to retract the bolt *a*.

If after retracting the bolt, the door knob or the like is released, the spring *g* forces the bolt *a* forward and at the same time the roller *d* slides downward into its locking position shown in Fig. 1, in which it locks the bolt *a* in such a way that it can not be forced backward by any pressure exerted on the same.

I claim herein as my invention:

1. In a lock the combination with a casing having curved slots in both of its side faces of a bolt, a spring normally holding said bolt in locking position, an inner shorter and an outer longer nose at the lower rear end of said bolt, a recess formed by said noses, a roller loosely guided in said curved slots and adapted to be held in its lower position within said slots and recess by the shorter nose of the bolt, means to disengage said rollers and nose and to throw said bolt out of its locking position, and means to return said disengaging means to their original position, substantially as described and for the purpose set forth.

2. In a lock the combination with a casing having curved slots in both of its side faces of a bolt, a spring normally holding said bolt in locking position, an inner shorter and an outer longer nose at the lower rear end of said bolt a recess formed by said noses, a roller loosely guided in said curved slots and adapted to be held in its lower position within said slots and recess by the shorter

nose of the bolt, a turn-buckle having a cam
face adapted to be operated by the locking
means of the lock for disengaging said roller
and nose, an abutment upon said turn-buckle
5 engaging the outer face of said shorter nose
for limiting the movement of said buckle
and a spring tending to return said turn-

buckle into its original position, substan-
tially as described and for the purpose set
forth.

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Witnesses:

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