

APPLICATION FILED JAN. 3, 1911.

Patented Sept. 19, 1911.

2 SHEETS--SHEET 1.

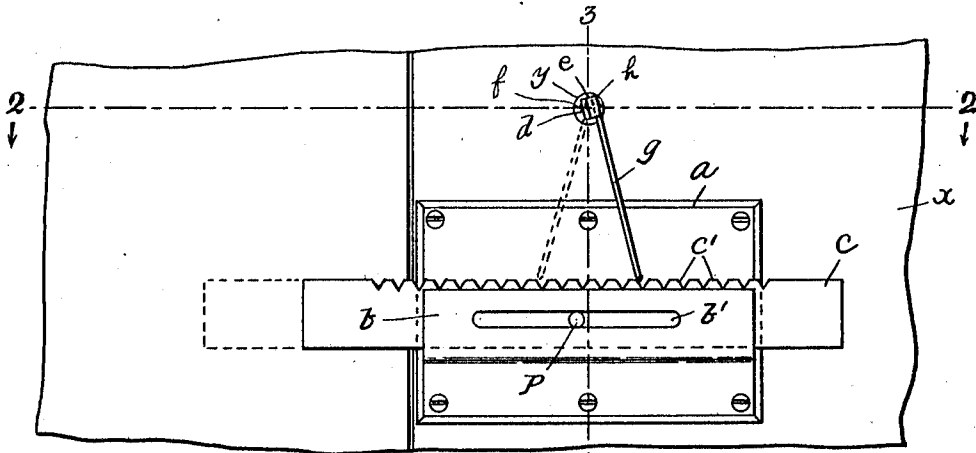


Fig. 1.

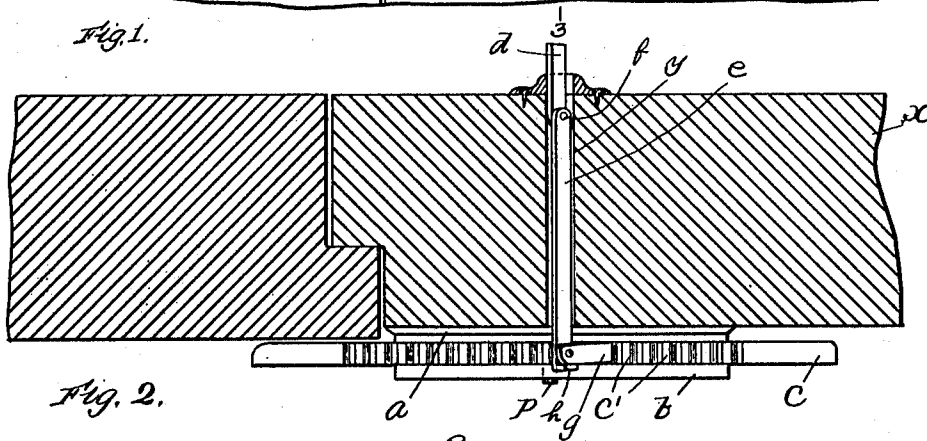


Fig. 2.

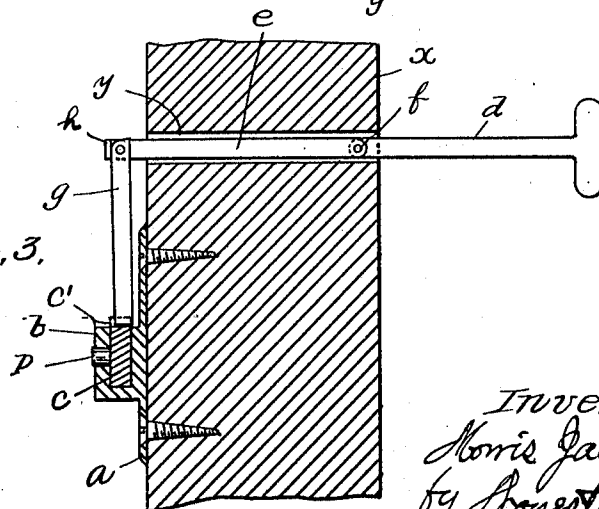


Fig. 3.

Witnesses

H. B. Davis,
D. Howard

Inventor:
Moris Jacobs
by Royce Hamman
Atty.

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2 SHEETS-SHEET 2.

Fig. 4.

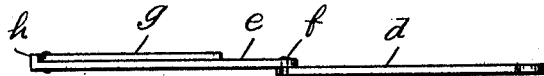


Fig. 5.



Fig. 6.

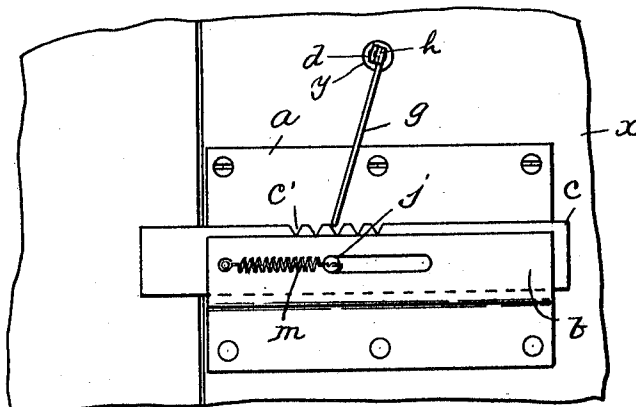


Fig. 7.

Home Jacobs
 by Roger Horniman
 atty's

UNITED STATES PATENT OFFICE.

MORRIS JACOBS, OF BOSTON, MASSACHUSETTS.

BOLT-LOCK.

1,003,748.

Specification of Letters Patent. Patented Sept. 19, 1911.

Application filed January 3, 1911. Serial No. 600,438.

To all whom it may concern:

Be it known that I, MORRIS JACOBS, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Bolt-Locks, of which the following is a specification.

This invention relates to certain improvements in sliding bolts for locking doors, and the like, and has for its object to provide a bolt of this character which may be either moved from locked to unlocked position, and vice-versa, by hand from the inside, or by means of a suitable key, operated in a certain manner from the outside.

A further object is to provide a simple device of this character which can not be unlocked readily from the outside, except with a suitable key, operated in a particular manner by one who is familiar with the device.

For a complete understanding of my invention, reference is made to the accompanying drawing, in which:—

Figure 1 is a front elevation of a lock made according to my invention. Fig. 2 is a plan view thereof, the same being shown partly in section on the line 2—2, of Fig. 1. Fig. 3 is a sectional view on the line 3—3 of Fig. 1. Fig. 4 is a view, similar to Fig. 3, showing the parts in a different position. Figs. 5 and 6 are detail views of the key. Fig. 7 is a front elevation of a modified form of my invention.

According to my invention I provide a base-plate *a*, having a guideway *b* formed therein, in which a bolt *c* is adapted to slide horizontally, said base-plate being adapted to be secured on the casing, so that the bolt may be slid to prevent the opening of the door. A pin *p*, on the bolt *c*, extends into a slot *b'* in guideway *b*, to limit the movement of the bolt in either direction.

While the device is shown as applied to the casing, so that the bolt may be slid in front of the door, to prevent the door from being opened inwardly, it will be obvious that the device may be applied in the various well-known ways in which sliding bolts are ordinarily applied, to lock a door.

According to my invention I provide the middle portion of the bolt *c* with a series of teeth *c'*, similar to an ordinary rack, said teeth being arranged on the upper edge of the bolt, as shown. The casing *x* is provided with an aperture *y* leading from the outside

and directly above the middle portion of the bolt.

A key is provided, preferably of flat sheet metal, the shank of which comprises the handle portion *d*, and an end-portion *e*, said portions being connected by a pivot *f*, so that the key may be folded, and a finger *g* is pivotally connected to the end of the shank-portion *e*, said finger being of less thickness than the spaces between teeth *c'* and of sufficient length to swing between said teeth *c'* when the shank is in aperture *y* and the finger is in a position approximately at right angles to the shank. A lug *h* is provided on the end of the shank-portion *e*, which is adapted to limit the swinging movement of the finger *g*, between a position in which it is coincident with the shank, as shown in Figs. 4, 5 and 6, and a position which is nearly, but not quite perpendicular to the shank-portion, as shown in Figs. 1, 2 and 3.

The key is adapted to be folded, as shown in Fig. 6, and, when the bolt is to be moved from locked to unlocked position from the outside, the shank-portion of the key is unfolded, as shown in Fig. 5, and the key is inserted with the finger *g* in folded or coincident position, until the finger has been carried beyond the casing. Then the shank is turned, or held so that the finger may swing down, by gravity, to the position of Fig. 3. The key is then drawn back until the finger is drawn against the casing and its end is passed between the teeth *c'* of the bar *c*, the shank being turned so that the finger is held in dotted position of Fig. 1. The shank is then turned so as to swing the arm *g* away from the door, moving the bolt back until the finger swings out of engagement with the bolt, as shown in full lines in Fig. 1, or back to its fullest extent. If the bolt is not moved back far enough to unlock the door, the key is pushed in again and swung to the dotted position of Fig. 1, and then the operation is repeated. The bolt is moved to locked position by opposite movements, as will be obvious. By this means the bolt may be slid, by successive movements, a considerable distance in either direction, so that the door may be securely locked, the difficulty of unlocking it by unauthorized persons being thereby greatly increased. When the key is to be removed, it is pushed in to the position of Fig. 4,

and turned so that the finger *g* will fall by gravity from the dotted to the full line position of Fig. 4.

It will be apparent that the relative arrangement of the aperture *y* and the upper edge of the bolt must correspond to the length of the finger *g*, for if the finger *g* is either too long or too short it cannot be moved into engagement with the teeth.

10 In Fig. 7 I show a slight modification, in which I provide a spring *m* which is attached at one end to the guideway *b*, and at the other end to the pin *h*, said spring being arranged to hold the bolt in locked position, 15 so that when the door is unlocked the bolt is moved against the action of the spring by the key, and will immediately be moved to locked position when released.

I claim:—

20 In combination with a door and its casing, one having a key aperture, a U-shaped support mounted at one side of said aperture and provided with an elongated slot in one wall thereof, a bolt mounted to slide in

said support to lock and unlock the door, 25 said bolt having a series of teeth formed thereon in its side next the aperture, a pin projecting laterally from said bolt into said slot for limiting the movements of the bolt, and a key comprising a shank adapted 30 to be inserted in said aperture having a finger pivotally connected to the ends thereof and movable from a position coincident with said shank in an angular position with relation thereto and in successive engagement 35 with the different teeth of said bolt, to cause the bolt to be moved to or from locking position by successive movements, as the shank is oscillated in said aperture, substantially as described. 40

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

MORRIS JACOBS.

Witnesses:

L. H. HARRIMAN,

H. B. DAVIS.

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