(No Model.)

J. J. PETERSON.

LOCK.

No. 590,334. Patented Sept. 21, 1897.

Fig. 1.

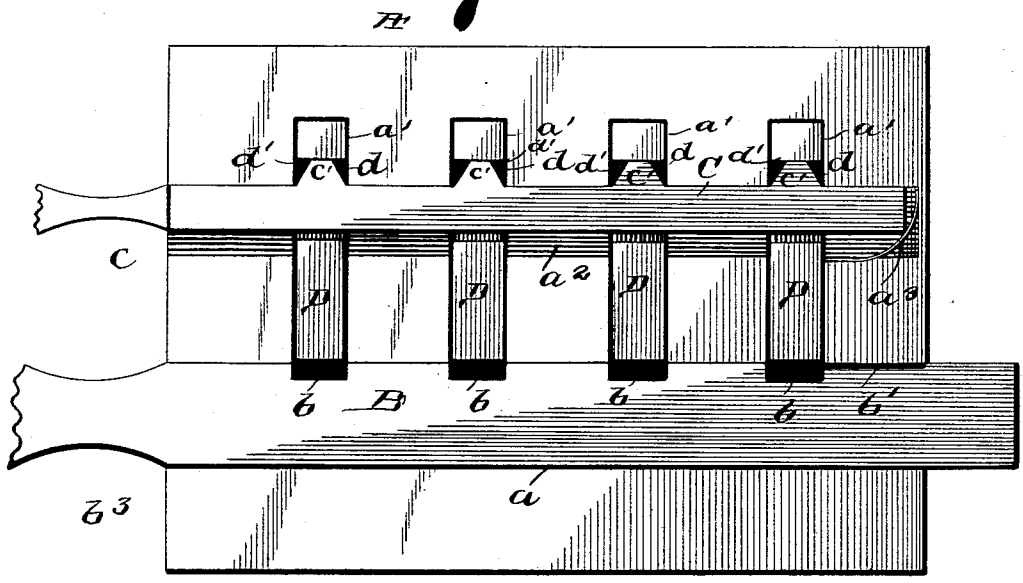
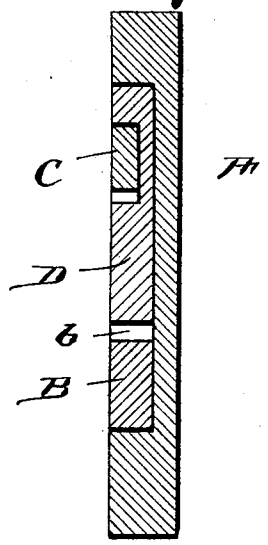


Fig. 2.



WITNESSES

C. D. Kesler.

Marcus L. Byng.

INVENTOR,

John J. Peterson.

by John Wedderburn

Attorney

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

UNITED STATES PATENT OFFICE.

JOHN J. PETERSON, OF PORT LAVACA, TEXAS.

LOCK.

SPECIFICATION forming part of Letters Patent No. 590,334, dated September 21, 1897.

Application filed December 29, 1896. Serial No. 617,388. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. PETERSON, a citizen of the United States, residing at Port Lavaca, in the county of Calhoun and State of Texas, 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.

This invention relates to improvements in locks; and it consists of certain novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a rear elevation of the lock embodying my invention detached from the door, and Fig. 2 represents a central vertical transverse section through said lock on the line of the vertically-movable tumblers.

A in the drawings represents the casing; B, the bolt; C, the key, and D the vertically-movable tumblers. Said bolt B is provided in its upper surface with a plurality of notches b of similar depth and an end notch b' of less depth. This bolt is adapted to slide longitudinally within a suitable groove a, formed in the casing, so as to project from one end of the casing to enter the door-casing and lock the door to which the casing A is secured in position. The opposite end of said bolt B is provided with a handle b^3, whereby it may be operated, said handle projecting from the opposite side of the casing A. The said casing A is also formed with a plurality of vertical grooves a', in which are mounted the tumblers D. Each of the grooves a' is adapted to correspond in position with one of the notches b of the bolt B, so that when said bolt B is in the proper position the respective tumblers of the grooves a' will lock into engagement with said notches b and thus prevent the withdrawal of the bolt. Each of said tumblers D is provided with a groove d, forming a shoulder d'. A longitudinal groove a^2 is formed in said base A and intersects the grooves a'. This groove is adapted for the reception of the key C, which projects at one end from said casing A and is provided with an operating-handle c. Said key is provided with a plurality of vertical projections c', adapted to correspond in position with the grooves a' when the key is in the proper position. The rear of the passage a^2 is provided with a segmental guide or spring a^3.

It will be observed from the foregoing description that when the tumblers D are in engagement with the notches b of the bolt they prevent said bolt from being moved. When it is desired to unlock the bolt, the key C is forced into the passage a^2 until the rear end of said key engages the segmental spring a^3. This forces this end of the key upward, so that one of the projections c engages the shoulder d' of the end tumbler and presses said tumbler out of its notch in the bolt. The key is then raised at its forward end, the rear end acting as a fulcrum, which action causes all the projections c to engage all of the shoulders upon the tumblers and raise said tumblers, thus permitting the bolt to be withdrawn. When it is desired to lock the key in the lock against any accidental displacement after the bolt B has been partly withdrawn, the said bolt B is only withdrawn far enough to permit the last tumbler D within the casing A to rest with its lower end in the notch b'. This last tumbler thus prevents the entire withdrawal of the bolt, while the remaining tumblers by their elevated positions hold the key so elevated that its projections c cannot disengage from the grooves a' to permit the withdrawal of the key. To withdraw the key it is first necessary to shoot the bolt.

It will be observed from the foregoing description that when the bolt is in its withdrawn position the key cannot be removed. The construction and operation of this lock are very simple, and no complicated parts liable to injury or disarrangement are employed. The lock is particularly applicable to very heavy doors, in which the bolts must be shot by hand because of their weight. It will also be observed that the action of this lock does not in anywise depend upon springs, and it is next to impossible to release the bolt B when it is shot without the employment of the proper key, as all of the tumblers arranged along the casing must be lifted at the same time to permit this withdrawal.

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

1. In a lock, the combination with a suitable casing, of a plurality of vertically-movable tumblers mounted therein, a sliding bolt also mounted in said casing, and provided with a protruding operating-handle and a plurality of notches along its upper edge, one of which is provided with a shallow notch or extension in which one of the tumblers operates to prevent the entire withdrawal of the bolt but at the same time permits of its being drawn into the casing, and a removable key having projections upon its upper edge adapted to lift the tumblers and also prevent its withdrawal from the casing while held in an elevated position by the tumblers engaging the top of the bolt; the construction and operation being such that when the bolt is drawn, the key as well as the bolt is locked in said casing against withdrawal, substantially as described.

2. In a lock, the combination with a suitable casing having key and bolt receiving grooves, of a sliding removable bolt mounted in said grooves and provided with a protruding operating-handle formed along its upper edge with a plurality of notches, vertical movable tumblers mounted in said casing, an inclined key-elevating guide located at the rear of the key-groove, and a key provided with tumbler-engaging projections and adapted to be forced into the casing and caused to rise to elevate the tumblers by engaging the inclined guide at the rear of the key-groove and riding up over the same, substantially as described.

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

JOHN J. PETERSON.

Witnesses:
JOHN B. MAHON,
B. KINSELL.