J. A. QUESNEL.

LOCKS FOR PRISON DOORS.

No. 186,060. Patented Jan. 9, 1877.

Fig. 1.

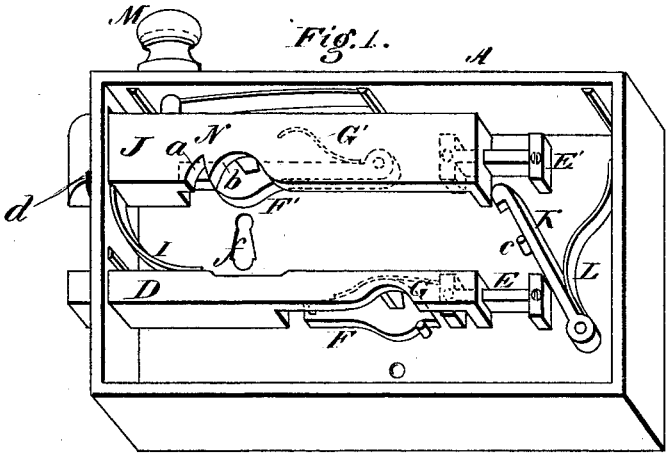


Fig. 2.

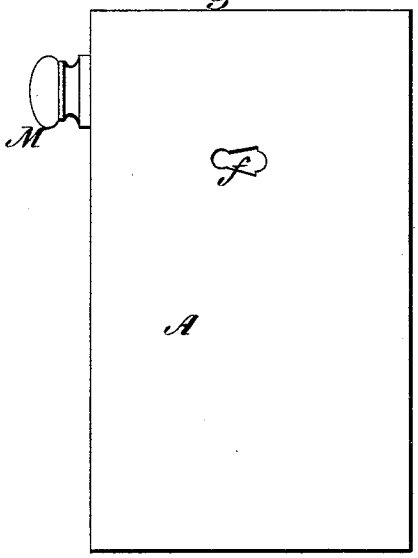
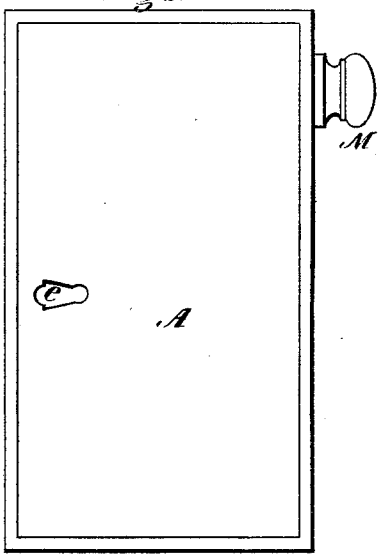


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH A. QUESNEL, OF ARTHABASKAVILLE, QUEBEC, CANADA.

IMPROVEMENT IN LOCKS FOR PRISON-DOORS.

Specification forming part of Letters Patent No. **186,060**, dated January 9, 1877; application filed August 26, 1876.

To all whom it may concern:

Be it known that I, JOSEPH AUGUSTE QUESNEL, of the village of Arthabaskaville, in the county of Arthabaska, in the Province of Quebec and Dominion of Canada, sheriff, have invented new and useful Improvements in Prison-Locks, which improvements are fully set forth in the following specification, reference being had to the accompanying drawings.

My invention relates to a safety-lock for prisons, reformatories, and other houses of detention; and consists in the combination of two lock-bolts, having each its key and key-holes. One of the hey-holes of the lock is placed at the middle of the box-case, and the other key-hole at the lower part of the box-plate, the whole in such a manner that the turnkey, in order to open a cell-door, gives two turns of the outside key to open the upper bolt, while a detent falls into the hole of the upper edge of the upper bolt; and, by the falling of the detent, as aforesaid, the key becomes fixed and at a stand in the lock. The turnkey, in shutting the lower bolt with the other key, causes a spring to enter into the notch of the upper bolt. By this means the turnkey prevents any one from shutting the upper bolt, and puts an insuperable obstacle to the removing and carrying away of the keys.

The object of my invention is twofold: the first to force the turnkey to not forget the keys in the lock of the cell-door, and the second more particularly to prevent the prisoners from escaping.

Figure 1 represents the inside mechanism of the lock. Fig. 2 represents the box-case. Fig. 3 represents the box plate and case.

A represents the metal case or body of the lock, consisting of a strong rectangular box, having one of its side plates removable, and having in its opposite sides two key-holes, *e* and *f*, arranged as shown, so that they do not stand opposite to each other. D represents a sliding locking-bolt mounted horizontally in the lower part of the case A, and guided at its rear end on a rib, E, which is secured to the inside of the case and arranged to enter a groove in the end of the bolt, as shown. F represents a common pivoted tumbler for locking the bolt D, located between the bolt and the side plate of the case, and operated by means of a key inserted through the key-hole *e*, for the purpose of throwing the bolt D, (the key being omitted from the drawings.) G represents a spring seated in the guide E, and bearing on the tumbler F, to cause its proper action. J represents a second locking-bolt, mounted in the upper part of the case, and guided at its rear end on a rib, E′, as shown; and F′ represents a common pivoted tumbler, mounted by the side of the bolt J, to lock the same. The bolt J and tumbler F′ are operated by means of a common key inserted through the key-hole *f* and rotated in the usual manner. In the edge of the bolt J there are two notches, *a* and *b*, for the bit of the key to act in in throwing the bolt, instead of one, as usual, the parts being so arranged that the first rotation of the key causes its bit to engage in the notch *b* and move the bolt half the required distance, while on the second rotation the bit engages in the notch *a* and moves the bolt the remainder of the distance. K represents a pivoted arm, bearing against the bolt J and urged forward by a spring, L, which is made of such strength as to prevent the bolt from being pushed back by hand.

As shown in the drawing, the forward movement of the arm is limited by a stud, *c*, on the inside of the case. To the upper side of the lower bolt D there is secured one end of a flat spring, I, which has its free end curved upward against the inside of the front end of the case, as shown, so that as the bolt D is thrown forward the end of the spring is forced upward into a notch, *d*, made for the purpose in the upper bolt J, so as to lock the latter in position.

M is a detent or stop, seated in the top of the case and urged downward by a spring, N, by which it is caused to enter a hole made in the upper bolt J, so as to hold the latter back automatically whenever it is moved inward. The stop or detent is located on the outside of the lock, the side which is to be placed outside of the cell, and serves, by locking the upper bolt inward, to fasten the bit of the key in the notch *a*, so that it cannot be removed, and also to hold the bolt J until the

forward movement of the lower bolt causes the spring I to enter the notch *d*. The lock being affixed to the cell-door with the key-hole *f* on the outside, and both bolts thrown back, is locked by raising the stop M and allowing the arm K to throw the bolt J forward half its distance, and then inserting a key through the outside key-hole *f*, and throwing the bolt thereby the remainder of the distance.

To unlock the door, the key is inserted from the outside and given two turns to throw the bolt back the full distance, the stop M falling into the bolt and locking it fast within the case, so as to prevent the removal of the key from the outside. The cell thus unlocked is entered and locked from the inside, by inserting a second key into the inner key-hole *e*, and throwing the lower bolt, the forward movement of which also causes the spring I to enter the notch *d* of the upper bolt and lock the latter, so that it cannot be thrown nor its key removed from the outside.

The spring I, in addition to holding the upper bolt back, also serves, when the upper bolt is thrown, by coming in contact therewith, to prevent the lower bolt from being advanced by the prisoner within the cell.

I claim as my invention—

1. In a cell-lock, the combination of a spring-bolt, J, having its key-hole on the outside of the lock, an outside detent, M, to hold said bolt back, and a dead-bolt, D, having its key-hole on the inside of the lock, substantially as shown.

2. In a cell-lock, the combination of the upper spring-bolt J, having the notch *d*, the outside detent M, and the lower dead-bolt D, provided with a device, I, to enter the notch *d*, substantially as and for the purposes described.

3. In a cell-lock, the combination of the spring-bolt J, having the two notches *a b* to receive the bit of the key, and the automatic detent M, serving to lock the bolt back, and thereby prevent the removal of the key.

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Witnesses:

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