(Model.)

P. LACROIX.
Locking Latch.

No. 241,225. Patented May 10, 1881.

Fig. 1.

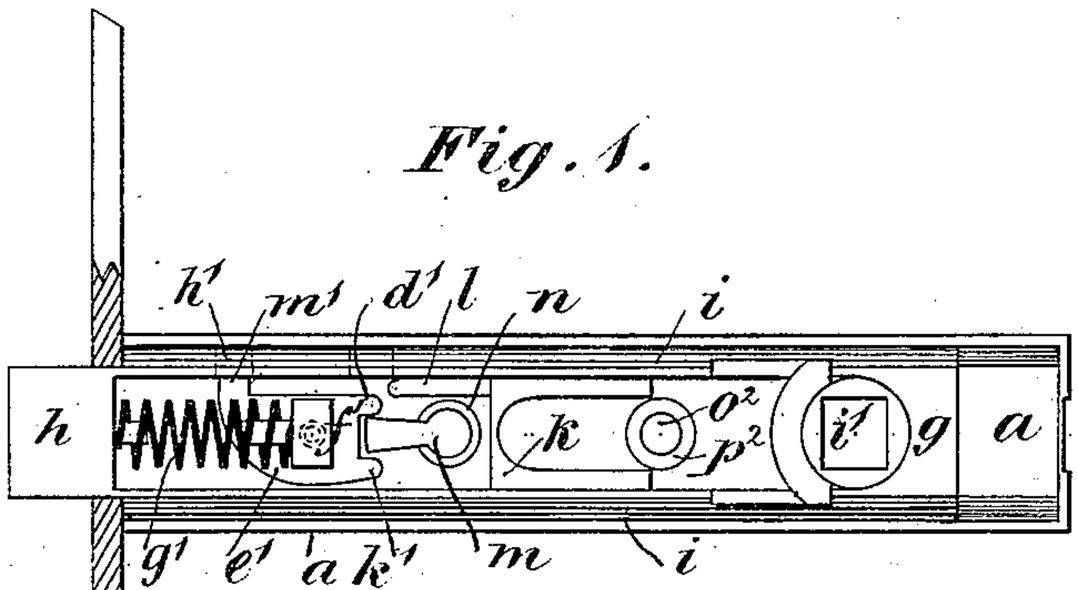


Fig. 3.

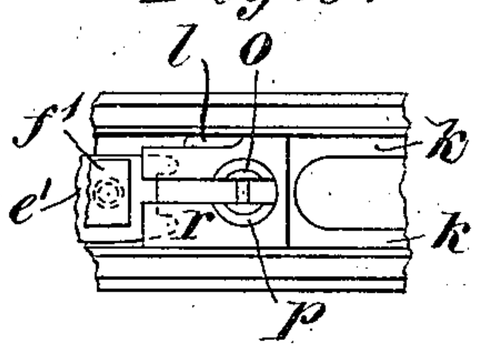
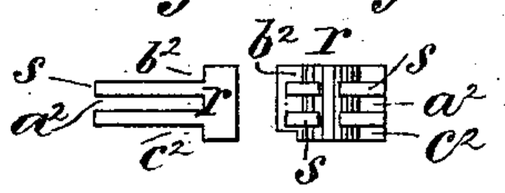


Fig. 4. *Fig. 5.*



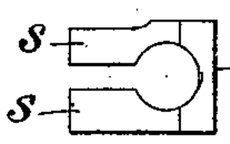


Fig. 6.

Fig. 2.

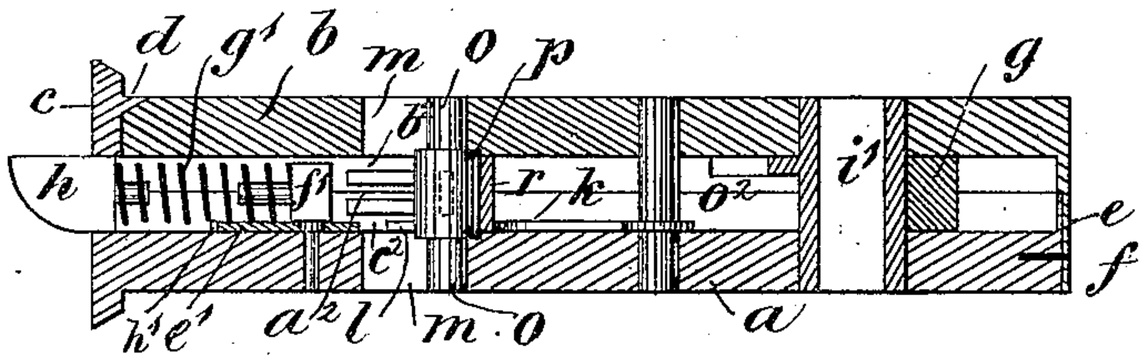
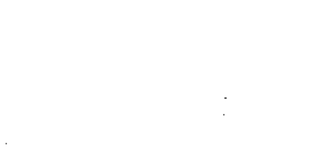


Fig. 7.

Fig. 8.

Fig. 9.



Witnesses

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PIERRE LACROIX, OF MONTREAL, QUEBEC, CANADA, ASSIGNOR TO PIERRE EDOUARD LABELLE, TRUSTEE, OF SAME PLACE.

LOCKING-LATCH.

SPECIFICATION forming part of Letters Patent No. 241,225, dated May 10, 1881.

Application filed January 18, 1881. (Model.)

To all whom it may concern:

Be it known that I, PIERRE LACROIX, of the city and district of Montreal, Province of Quebec, Canada, have invented certain new and useful Improvements in Locks; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention has reference to further improvements in the class of lock for which Letters Patent of the United States were granted to Charles H. Labelle on the 22d January, A. D. 1878, under No. 199,452, and Letters Patent of Canada were also granted on the 4th June, A. D. 1880, under No. 8,884. In this case the outer configuration—that is to say, the construction of the outer shell, face-plate, and sliding bolt—is the same as those described and shown in the aforesaid patents; but improvements are made in the operating parts to render the said lock more suitable for general use.

In the drawings hereunto annexed similar letters of reference indicate like parts.

Figure 1 is a side elevation of a lock embodying my invention, but having certain parts removed for the sake of clearness. Fig. 2 is a horizontal section of Fig. 1 with all the parts present. Fig. 3 is in part the reproduction of Fig. 1 with the parts that are removed in said Fig. 1 in place in this figure. Figs. 4, 5, and 6 are views of the tumbler-block. Figs. 7 and 8 are views of the key-pivot, and Fig. 9 is a side elevation of the key.

Letters *a* and *b* are two halves of a cylinder, forming the cylindrical shell of the lock, similar to the lock shown in aforesaid patents. The part *a* is shown as made in one with the face-plate *c*, while the half *b* is secured in place at one end by a projection, *d*, formed on the plate *c*, and by a projection, *e*, of the part *b*, which overlaps the part *a*, and is secured by inserting a screw at *f*.

g is the sliding bolt, which terminates in the ordinary latch end, *h*. This sliding bolt fills the space or chamber formed in the two halves *a b* of the shell. As shown in Fig. 1 it is represented as having rounded edges *i;* but flat ones would answer equally well.

In what I have thus far described I do not claim any invention, being substantially the same as shown in the aforesaid patents.

The sliding bolt *g* in this case is made up of the end on which the letter *g* is placed, the two sides *i*, and the latch end *h*, leaving an open space throughout the whole of the body of the sliding bolt, with the exception of a cross-piece, *k*, and a projection, *l*.

m is the key-hole formed in each half *a b* of the shell, in which and in recesses *n* are received the ends *o* of the key-pivot *p*.

Embracing the key-pivot is a ward-block, *r*. This block and key-pivot are removed in Fig. 1, but they are shown in their relative position in Figs. 2 and 3, and the block by itself in Figs. 4, 5, and 6, where it is provided with four arms or wards, *s;* and it will be understood that these wards will be changed in position, &c., in various locks, so that one key will not open all the locks.

The key suitable for the wards shown in Figs. 4, 5, and 6 is shown in Fig. 9. The projection a' moves in the space a^2, and the projections b' and c' in the respective spaces b^2 c^2. (See also Figs. 2 and 4.) When the key A is turned upward the projection c' comes in contact with the projection d' of the pawl e', pivoted on a standard, f', carrying the ordinary spring, g', for keeping the latch end *h* pushed out. This disengages the pawl from a notch, h', in the bolt *g*, as shown, and allows the latch to be operated in the ordinary way by a handle attached to the ordinary means, (shown at i'.) The projection c', after the said pawl and key have turned a sufficient distance to clear one another, comes in contact with the projection *l*, which draws back the bolt *g* and latch end *h*, made in one therewith, as hereinbefore mentioned. At any rate, as soon as the pawl h' is moved to the position described the bolt *g* may be also operated by a hand at i'.

When it is desired to lock the door the key is turned downward, which causes the projection c' to engage with the projection k' of the pawl e' and turn it, so that the end m' of the pawl e' enters the notch h' and prevents the slide *g* from moving, and thus locks the door.

It will be observed that the key has a slot, n', in it. This is to enable the key to enter the lock. Otherwise the bridge-piece *q* would prevent it from doing so. So that the said bridge-piece *q* answers the doubly-useful purpose of

rendering the key that will open the lock more complicated, and thus prevents the lock from being easily picked, and at the same time it and the slot n' gage the proper distance to insert the key both sides of the door.

In the above description of the operation of the part c' of the key with the parts of the lock it will be understood that the key is supposed to be inserted as from on the under side of Fig. 2. If it were inserted on the upper side, the projection b' would take the place of c' in operating the parts of the lock.

o^2 is a pin, which answers the purpose of a double pin in holding the parts a and b together, and by making the collar to fit the opening in k it serves as an additional guide to the bolt g.

What I claim, and wish to secure by Letters Patent, is as follows:

1. The combination of the key-pivot p, having bridge-piece q, ward-block r, and key A, having slot n' and projections, substantially as described.

2. The combination of key A, key-pivot p, ward-block r, pawl e', and bolt g, having projection l and notch h', the whole constructed, arranged, and operated substantially as and for the purposes set forth.

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Witnesses:
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