(Model.)

C. F. BATT.

Lock and Latch Combined.

No. 235,983. Patented Dec. 28, 1880.

Fig: 1

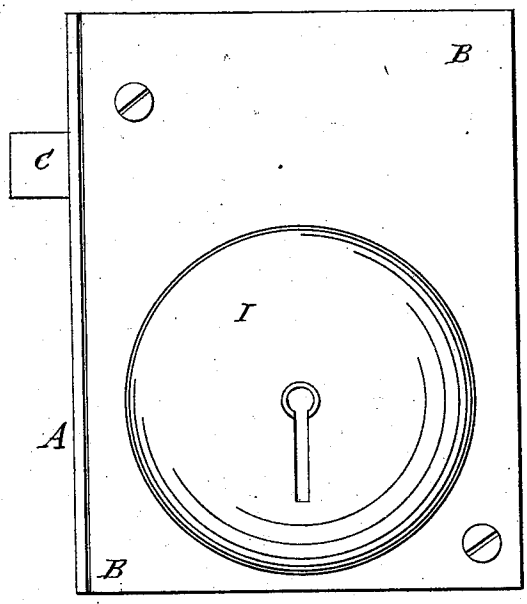

Fig: 2.

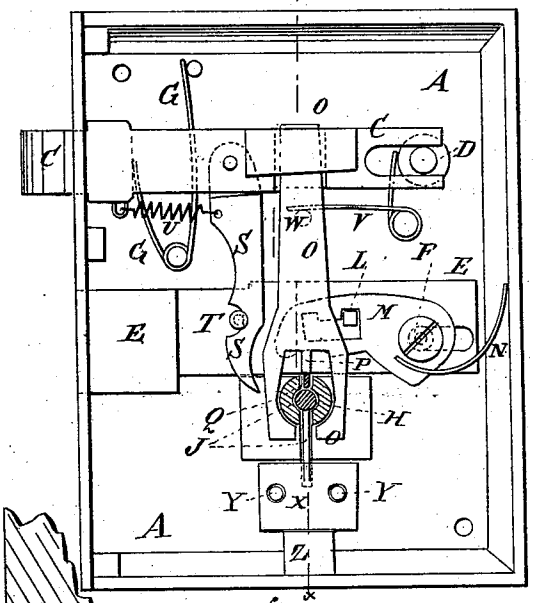

Fig: 4.

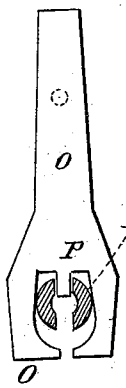

Fig: 3.

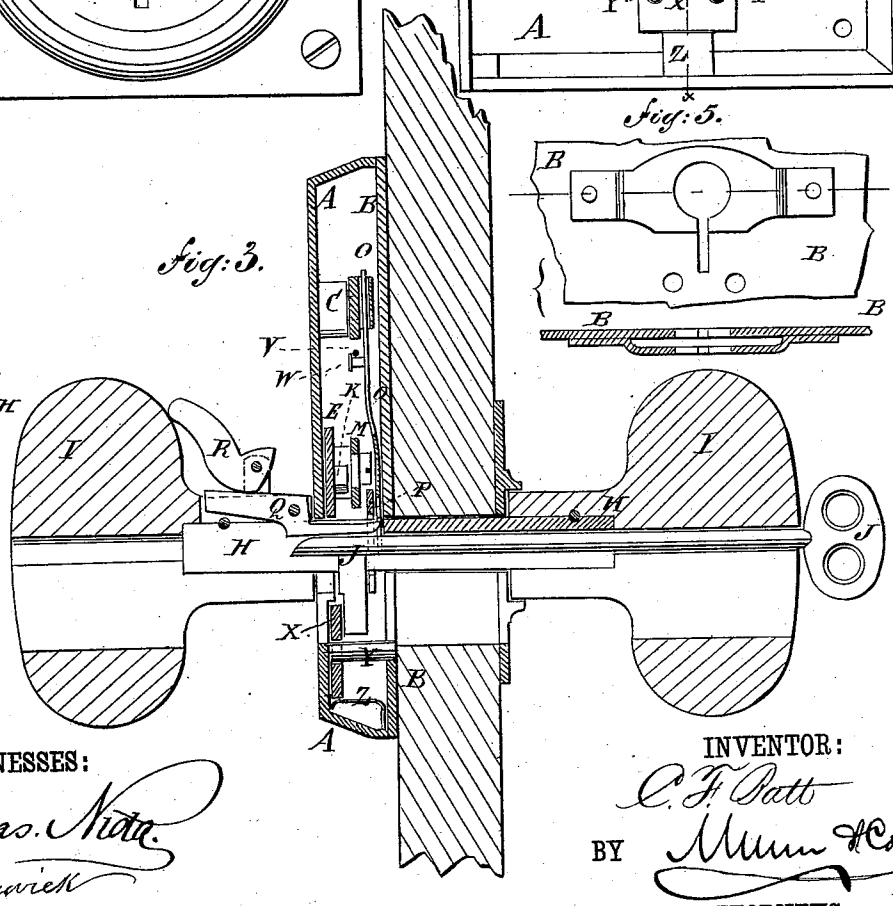

Fig: 5.

WITNESSES:

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CHARLES F. BATT, OF PHŒNIXVILLE, PENNSYLVANIA.

LOCK AND LATCH COMBINED.

SPECIFICATION forming part of Letters Patent No. 235,983, dated December 28, 1880.

Application filed August 13, 1880. (Model.)

To all whom it may concern:

Be it known that I, CHARLES FRANKLIN BATT, of Phœnixville, in the county of Chester and State of Pennsylvania, have invented a new and useful Improvement in Locks, of which the following is a specification.

Figure 1 is an elevation of the improvement. Fig. 2 is an elevation with the inner plate of the case removed and the spindle shown in cross-section. Fig. 3 is a sectional elevation taken through the line *x x*, Fig. 2. Fig. 4 represents the drop-plate that connects the spindle with the latch. Fig. 5 is a plan and section of the drop-plate guide.

The object of this invention is to furnish locks so constructed that they cannot be readily picked, that the bolt and latch can be both operated by the same key, and that will allow the latch to be thrown into and out of gear with the spindle.

The case of the lock is made in two parts—an outer plate, A, having flanges upon its edges, and an inner detachable plate, B, secured to the plate A by screws.

C is the latch, which slides through an aperture in the forward flange of the plate A, has its forward end beveled, and has its rear end slotted to receive a guide-pin or stud, D, attached to the plate A. The guide-pin or stud D is made with a shoulder to support the inner part of the latch C out of contact with the plate A.

E is the bolt, which slides through an aperture in the front flange of the plate A, and has a slot in its inner part to receive a guide-pin or stud, F, formed upon or attached to the plate A. The latch C is held forward by a spring, G, attached to the plate A, and which rests against a shoulder of the said latch C.

H is the spindle, which passes through the lock-case A B through the door, and has a knob, I, secured to each end. In one side of the spindle H is formed a longitudinal groove, the inner part of which is enlarged to receive and fit upon the shank of the key J and support the key when throwing the bolt E. The key-hole is formed in the knobs I in line with the groove in the spindle H. Upon the sides of the bolt E are formed projections or wards K for the key J to engage with when operating the lock.

The bolt E is fastened in each position by a stop, L, formed upon or attached to the said bolt, and which passes through a slot in the plate M and enters notches in the said plate at the end of its slot, as shown in Fig. 2. The plate M is pivoted to the stud F, and is held down upon the stop L by a spring, N, attached to the said plate and to the case A.

O is a plate, the upper part of which slides in a keeper, slot, or mortise attached to or formed in the latch C, and its lower part slides in a keeper attached to the plate B of the lock-case. In the lower part of the plate O is formed an aperture, through which the spindle H passes, and which is made larger than the said spindle, so that the said plate O can have a vertical movement. The lower end of the plate O is slotted to allow the bit of the key J to pass through.

Upon the plate O, at the upper end of its aperture, is formed a point, P, to enter a recess in the spindle H opposite its groove, so that the latch C can be drawn back by turning the said spindle H. The point P rests upon a lever, Q, placed in a slot in the spindle H and in the shank of the knob I. The lever Q is pivoted to the inner end of the knob-shank, and its outer end rises above the said shank, so that it can be pressed inward to raise its inner end and raise the point P out of the recess in the spindle *h* and prevent the latch C from being drawn back by turning the knob I and spindle H.

The lever Q is operated to raise the point P out of gear with the spindle H and hold it raised by a small lever-cam, R, pivoted to the knob-shank or to supports attached to the said knob-shank. With this construction, by operating the lever-cam R the latch can be made a dead-latch, that cannot be drawn back by turning the knob and spindle.

The lower side of the inner part of the lift-lever Q projects down into the slot of the spindle H, and its forward end is beveled, so that it will be raised to disengage the point P of the drop-plate O by the stem of the key as the said key enters the lock. The end of the key-stem is also beveled to cause it to readily pass under and raise the lift-lever Q.

To the latch C is secured, by a screw, pin, or rivet, the upper end of a downwardly-project-

ing arm, S, which is made with an offset or shoulder to rest against the lower edge of the latch C, and which is so formed as to give the arm S a little play. The rear side of the lower end of the arm S is concaved, so that the bit of the key J can pass it when the bolt E is thrown forward or locked. The forward side of the lower end of the arm S is convexed, so that the bit of the key J can strike it when the bolt E is drawn back, and thus draw back the catch C. The forward side of the lower part of the arm S has a notch formed in it to receive a pin, T, attached to the bolt E, so that the lower end of the arm S will be drawn back into the sweep of the key-bit by drawing back the said bolt E. The arm S is held against the pin T by a spring, U, one end of which is connected with the upper part of the said arm, and its other end is connected with the latch C.

The drop-plate O is held down by a spring, V, attached to the plate A, and which presses against a pin, W, attached to the said plate O. With this construction, by operating the lever-cam R to raise the inner end of the lift-lever Q the drop-plate O will be disengaged, and the latch C cannot be drawn back by turning the knob and spindle. In this case the latch C can only be drawn back from outside the door by means of the key J, which is inserted through the key-hole and turned in the direction in which the latch C is to be moved. This movement brings the bit of the key against the convexed edge of the lower end of the arm S and forces back the latch C. When the lock is locked as well as latched the first turn of the key J throws back the bolt E, and the second turn forces back the latch C.

In the lower part of the lock-case is placed a plate, X, which slides upon two pins, Y, so that it will move squarely. The plate X covers the lower part of the key-holes in the plates A B, and is moved from one to the other of the said plates A B by the bit of the key J as it enters the lock from one or the other side. The plate X stops the key J in proper position to be turned, and is held in either position by a spring, Z, attached to the lower part of the case, and which bears against the lower edge of the plate X. The pins Y are attached at one end to the plate A, and their other ends rest in holes in the plate B or against the said plate.

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

1. A lock constructed substantially as herein shown and described, consisting of the case A B, the latch C and its spring G, the bolt E, having wards K and stop L, the slotted plate M, having spring N for holding the bolt E in place, the apertured drop-plate O, having the point P and spring V for connecting the latch with the knob-spindle H, the grooved and recessed knob-spindle H, the knob I, having key-holes, the arm S, having spring U, and the pin T, as set forth.

2. In a lock, the combination, with the latch C and recessed knob-spindle H, of the apertured drop-plate O, having point P and spring V, substantially as herein shown and described, whereby the latch can be drawn back by turning the spindle, as set forth.

3. In a lock, the combination, with the grooved and recessed knob-spindle H and the apertured drop-plate O, having point P, of the lift-lever Q and the lever-cam R, substantially as herein shown and described, whereby the latch is disconnected from the spindle, as set forth.

4. In a lock, the combination, with the latch C and the bolt E, of the arm S, having spring U, and the stop T, substantially as herein shown and described, whereby the latch can be drawn back, as set forth.

5. In a lock, the combination, with the case A B, of the guide-pins Y, the sliding stop-plate X, and the holding-spring Z, substantially as herein shown and described, whereby the key is stopped in proper position, as set forth.

CHARLES FRANKLIN BATT.

Witnesses:
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