

(No Model.)

H. A. PALMER.
LOCK.

No. 452,385.

Patented May 19, 1891.

Fig. 1.

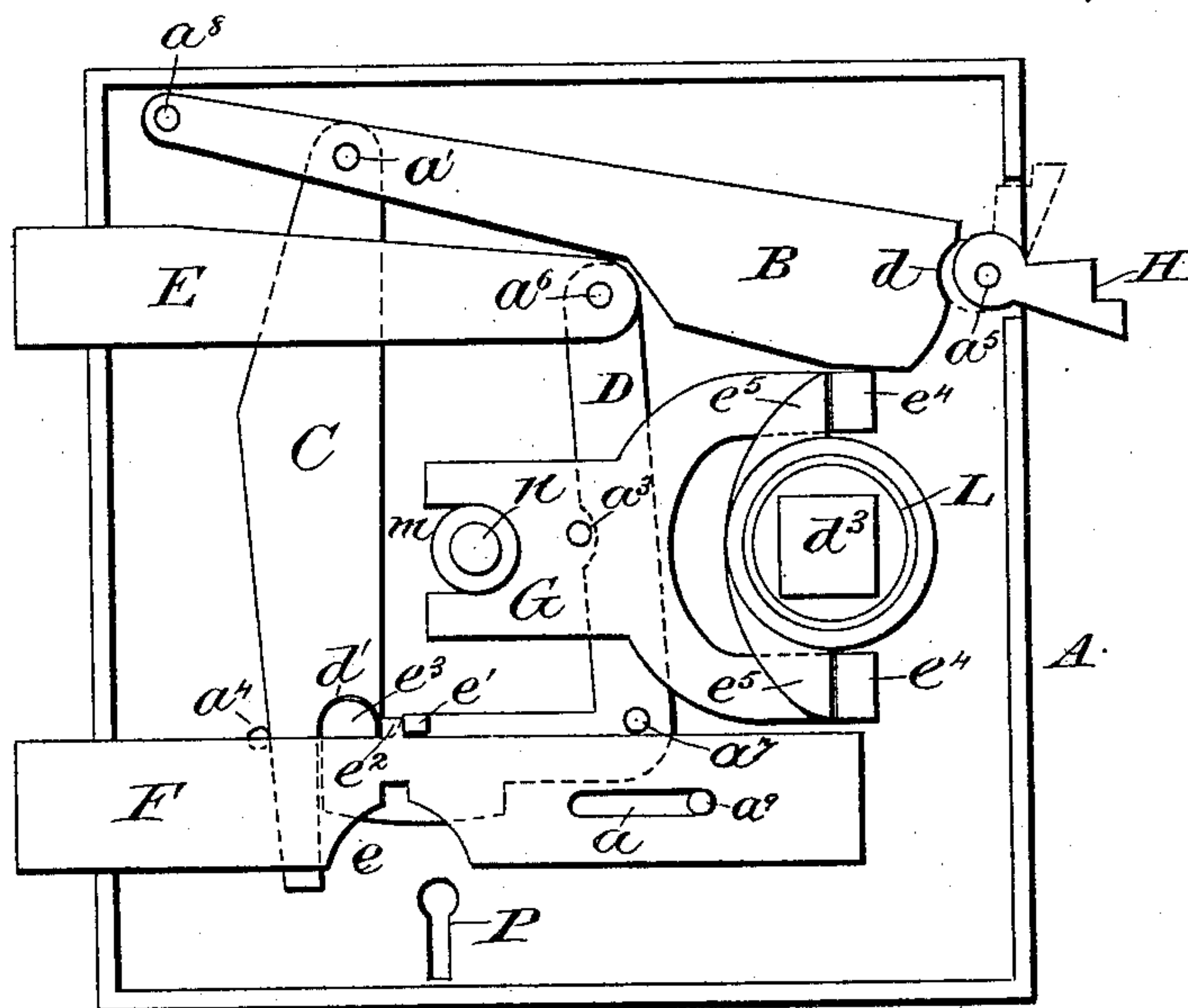


Fig. 2.

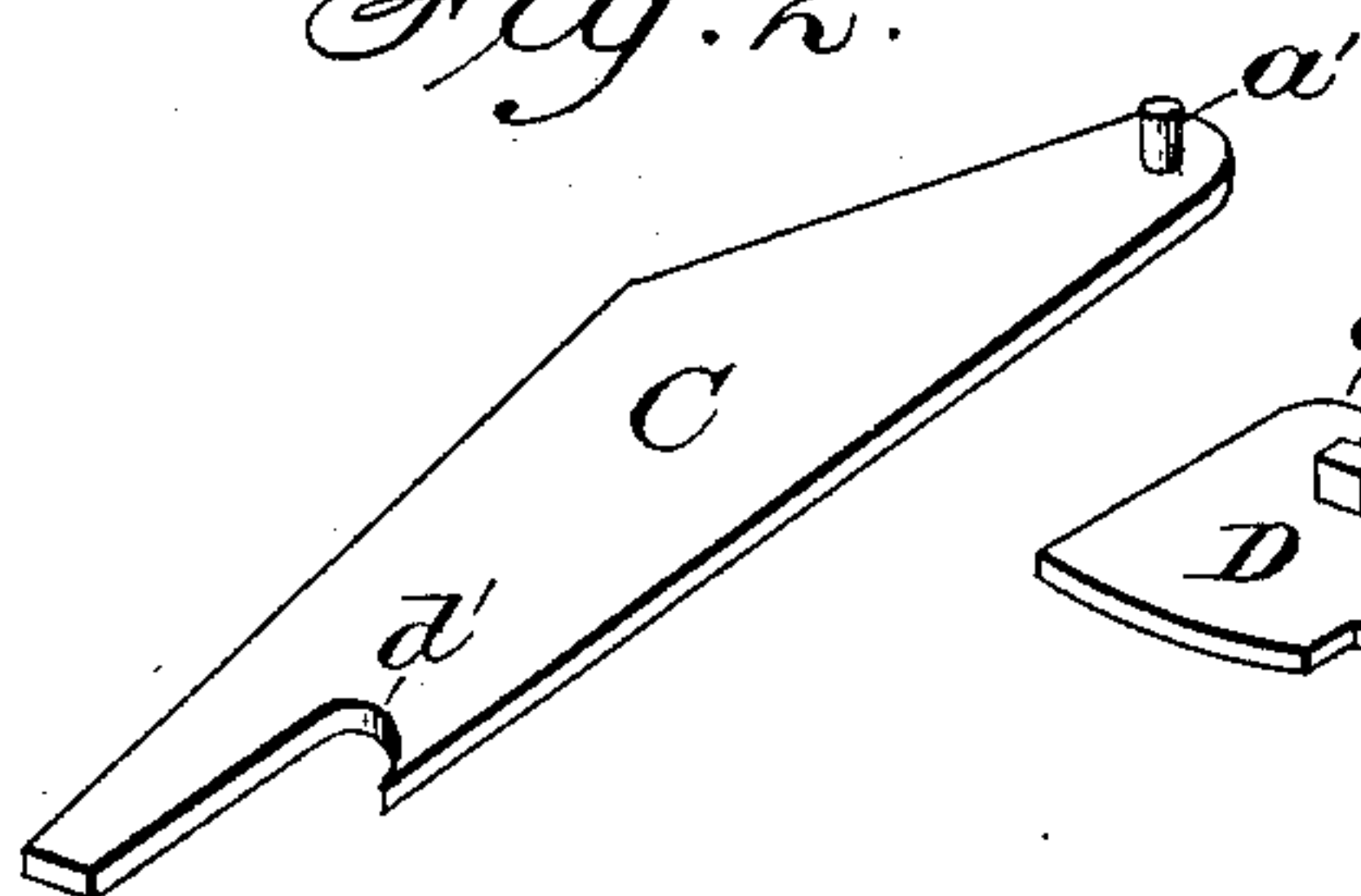
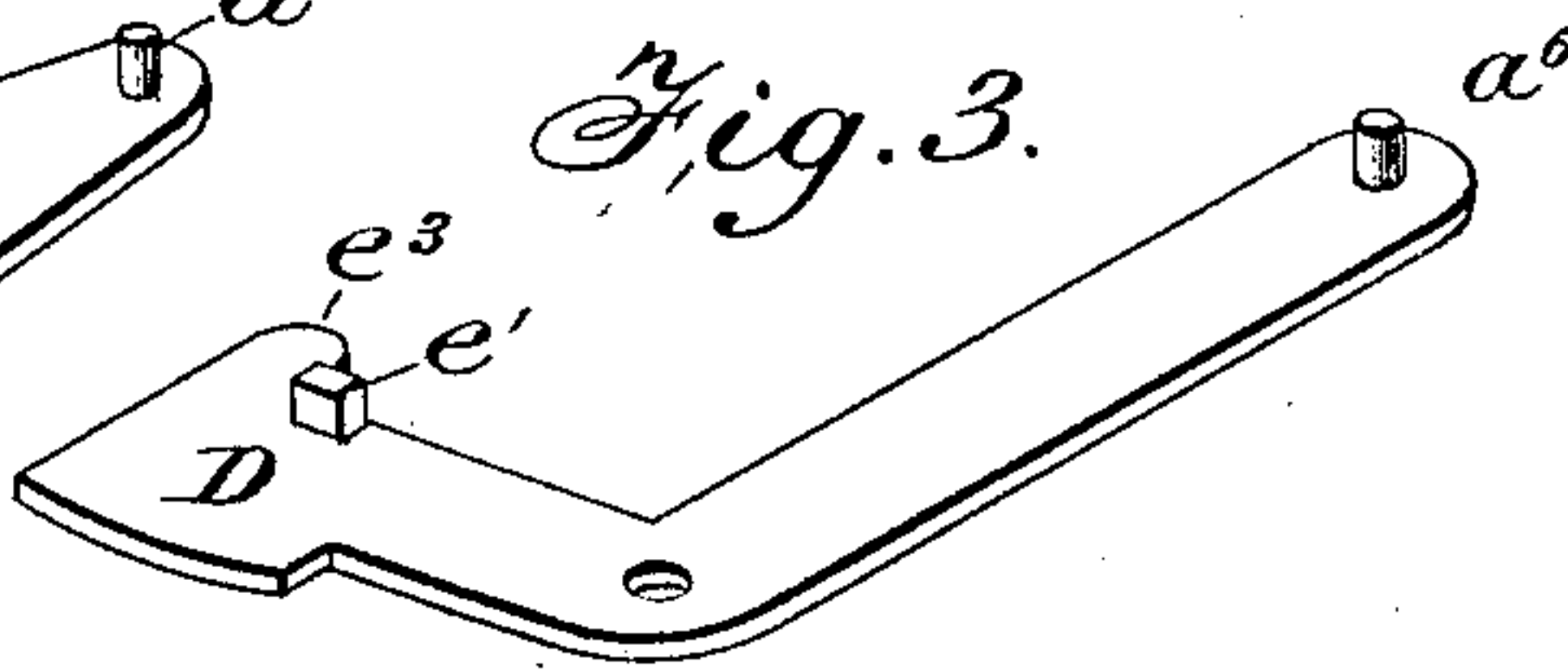


Fig. 3.



Witnesses:
William Campbell
Chauncey Keff

Inventor:
Henry A. Palmer
By Swan & Boorman
His Attorneys

UNITED STATES PATENT OFFICE.

HENRY A. PALMER, OF ATLANTIC, IOWA.

LOCK.

SPECIFICATION forming part of Letters Patent No. 452,385, dated May 19, 1891.

Application filed November 15, 1889. Serial No. 330,504. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. PALMER, a citizen of the United States, residing at the city of Atlantic, in the county of Cass and State of Iowa, have invented a new and useful Lock, of which the following is a specification.

My invention relates to improvements in locks; and the object of my improvement is to provide a springless lock so constructed that when the latch-bolt is locked it will be impossible to unlock the lock-bolt by means of a key inserted through the keyway. I attain this object by the device illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved lock having the cap removed therefrom the better to show the inner working parts. Fig. 2 is a perspective view of the bar that is pivotally connected to the weighted lever, and Fig. 3 is a perspective view of the bell-crank lever.

Similar letters refer to similar parts throughout the several views.

B is a lever pivoted at one of its ends by means of the pivot a^3 to the lock-case and weighted at its other end.

D is a bell-crank lever pivoted to the lock-case by means of the pivot a^7 . It is also pivoted at its upper end to the inner end of the latch-bolt E by means of the pivot a^6 . It has the projection e^3 and lug e' . The lower horizontal portion of the lever acts as a tumbler. The bar C is pivoted at its upper end to the lever B by means of the pivot a' . It has its lower portion cut away, forming the concave shoulder d' , which rests upon and receives the projection e^3 of the lever D. The lock-bolt F is provided with the ward e , the lug or projection e^2 and the open slot a operating over a small pin or projection a^9 .

G is a sliding bar having each of its ends bifurcated. One of its bifurcated ends straddles the stud m and the other the barrel L. The end that straddles the barrel is provided with lugs e^4 . It is provided with a pin a^3 , which projects from the sliding bar G and comes in contact with that edge of the upright portion of the lever D the nearest to the stud m . The barrel has lugs e^5 e^5 , which engage with the lugs e^4 e^4 in the usual manner. It also is provided with the ordinary aperture

d^3 for the reception of the knob-bolt. The eccentric-catch H is pivoted to the lock-case by means of the pivot a^5 . When the catch is turned down, it permits the weighted end of the lever B to move freely upward and downward past it; but when it is turned up, as shown by the broken lines in Fig. 1, it enters the notch d in the end of the lever B and locks or secures the weighted end of the lever B, so that it cannot be moved.

a^4 is a stud that guides the lower end of the bar C.

P is the keyway or key-hole.

When the lock-bolt F is projected, as shown in Fig. 1, it is prevented from sliding into the case A by means of the lug e' coming in contact with the lug e^2 ; but by inserting an ordinary key of suitable size through the key-hole P and operating it the end of the lever D having the lug e' will be raised, so as to disengage the lug e' from the lug e^2 and permit the bolt F to slide into the lock-case. It is evident that if the weighted end of the lever B is locked by the catch H the end of the lever D having the lug e^2 cannot be raised by a key and disengaged from the lug e^2 .

The operation of my invention will be very readily understood from the foregoing description and the accompanying drawings.

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

1. The combination, in a lock, of the weighted lever B, pivoted at one end to the lock-case, the bell-crank lever D, pivoted at its upper end to the latch-bolt and at its bend to the lock-case, the latch-bolt E, and the upright bar C, which engages with the horizontal portion of the lever D and is pivoted at its upper end to the weighted lever B, substantially as described.

2. The combination, in a lock, of the weighted lever B, pivoted to the lock-case, the bell-crank lever D, pivoted at its upper end to the latch-bolt and at its bend to the lock-case and having the lug e' , the latch-bolt E, the upright bar C, which engages at its lower end with the horizontal portion of the lever D and is connected at its upper end with the weighted lever B, and the lock-bolt F, having the lug e^2 , all combined substantially as set forth.

3. The herein-described lock, consisting of

the lock-case A, the weighted lever B, pivoted to the case, the latch-bolt E, the bell-crank lever D, pivoted at its bend to the case and at its upper end to the latch-bolt and having
5 the lug e' , the upright bar C, pivotally connected at its upper end with the weighted lever and having its lower portion engaged with the end of the horizontal part of the lever D, the lock-bolt F, having the lug e^2 and
10 the ward e , the slide G, having the pin a^3 , and lugs e^4 , the knob-bolt barrel L, having the lugs e^5 , which engage with the lugs e^4 of the

slide, and the means for locking the weighted end of the lever B, all combined substantially as described. 15

In testimony that I claim the foregoing as my own I have hereto affixed my signature, in presence of two witnesses, this 12th day of November, 1889.

HENRY A. PALMER.

Witnesses:

BENJAMIN A. CRAMER,
GUY S. SWIRES.