

J. M. FAIRCHILD.

Locks for Fire-Alarm Boxes, &c.

No. 144,079.

Patented Oct. 28, 1873.

fig. 1.

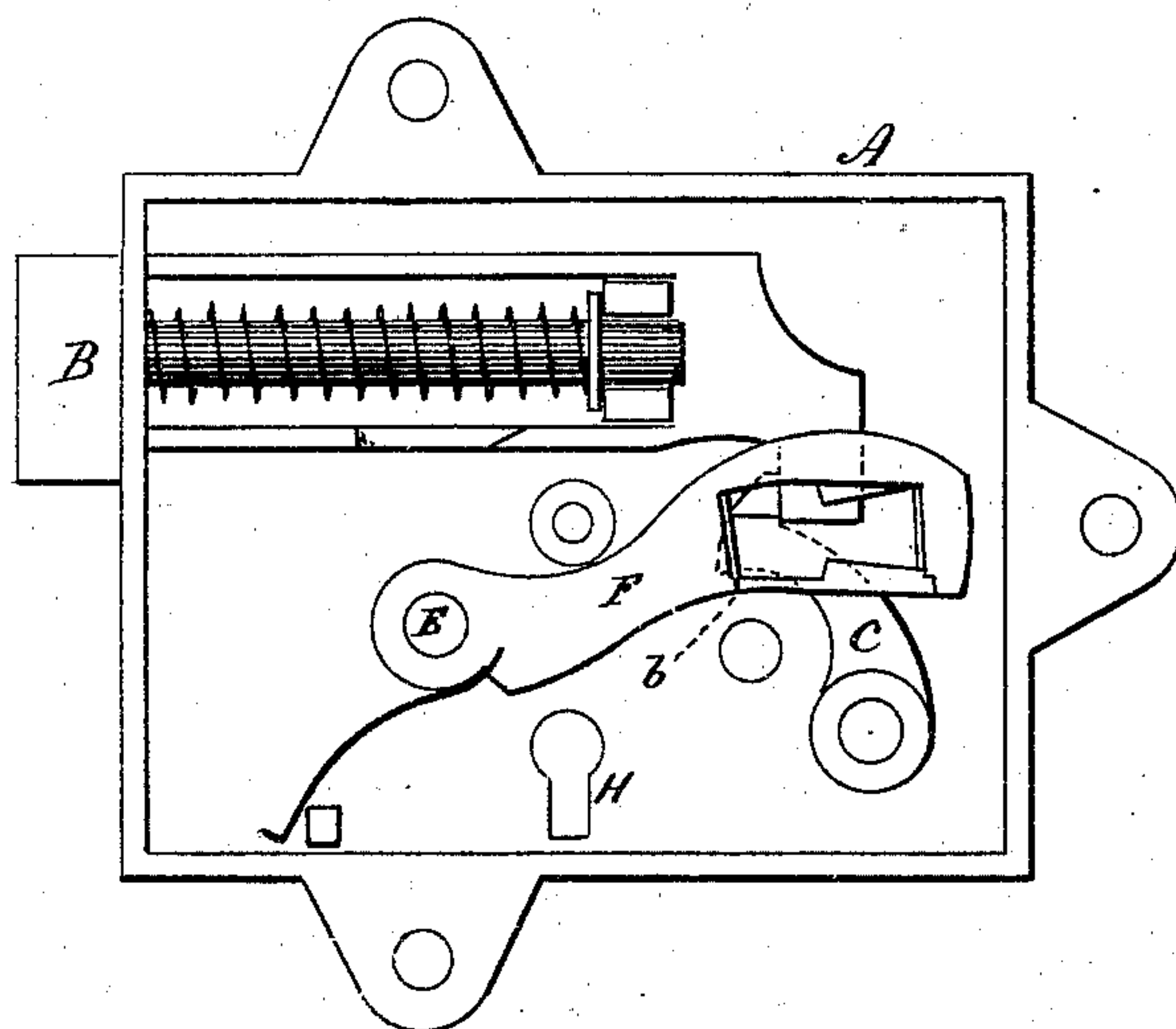
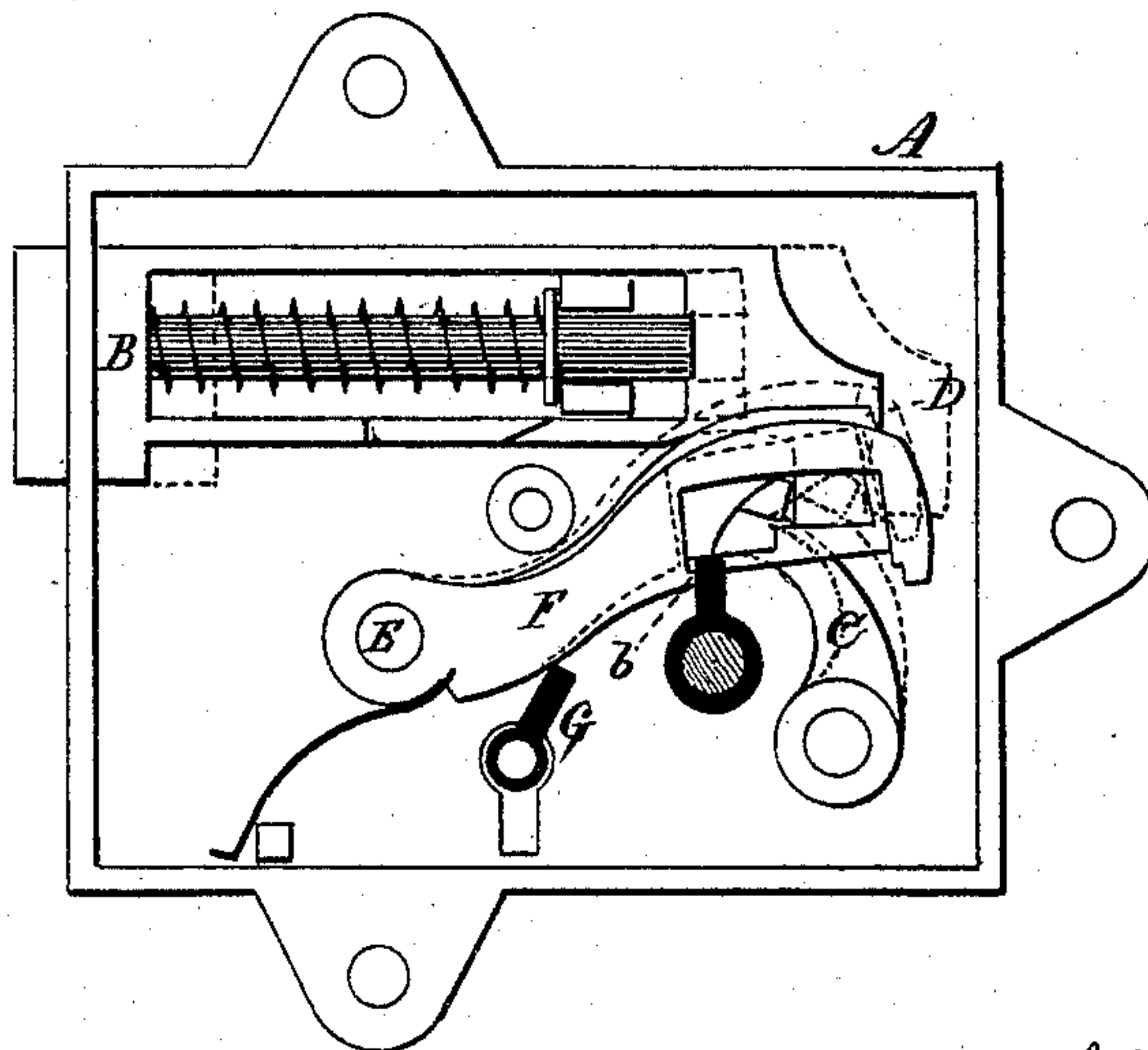


fig. 2.



Witnesses.

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IMPROVEMENT IN LOCKS FOR FIRE-ALARM BOXES, &c.

Specification forming part of Letters Patent No. **144,079**, dated October 28, 1873; application filed July 9, 1873.

To all whom it may concern:

Be it known that I, J. MURRAY FAIRCHILD, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Trap-Locks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, an inside view of the lock as set for trapping; and in Fig. 2, the same with the principal key trapped, and the releasing-key as in the act of freeing the trapped key.

This invention relates to an improvement in locks, particularly to that class in which the bolt is thrown out by a spring, yet applicable to other constructions; the object of the invention being to catch the key which may be inserted to draw the bolt, whether it be properly or improperly introduced, and is to be applied to such positions where the misuse of a key is suspected; and the invention consists in combining, with the principal tumblers, an auxiliary tumbler, which, permitting the key to draw the bolt, will, when the bolt is drawn, fall down on the bit and prevent the further turning of the key; and also an auxiliary key, acting only upon the auxiliary tumbler, for the purpose of freeing the trapped key.

A is the case (shown with the covering-plate removed;) B, the bolt; C, a lever, against which the key strikes to throw the bolt, as denoted in Fig. 2. The key is here represented as a pipe-key. One or more tumblers, D, are arranged upon a stud, E, combined with the bolt, and so as to be actuated by the key to permit the drawing or throwing of the bolt, as in locks of common construction. F is an auxiliary tumbler, preferably arranged upon the same pivot E, and is raised by the principal key, substantially as the other tumblers; but when the key has been turned partially over, a notch or shoulder, b, falls down upon the

bit of the key and prevents its further movement. Therefore, as the key cannot be turned, it cannot be withdrawn from the lock, and is there securely held by the tumbler F; and this will be the case whether the lock be properly opened or not.

This lock is not designed for general uses of security, but is to be used where it is supposed the proper key or a duplicate is surreptitiously used, as in cases where many locks are used having the same key. In such a case the lock commonly used is removed, and this lock, with the trap, attached, the same key which operated the original lock also operating the trap-lock. Therefore, when the key is inserted to open the lock, it will be caught and held, as before described, and thus lead to the detection of the person who inserted the key. The object accomplished, the trap is removed and the original lock replaced.

As a convenience for freeing the trapped key without opening the lock, I provide an auxiliary key, G, inserted through a second key-hole, H, preferably upon the opposite side to that in which the principal key is inserted. This key G operates upon the auxiliary or trapped tumbler F, so as to raise it, as denoted in broken lines, Fig. 2, and free the trapped key.

I claim as my invention—

1. The auxiliary tumbler F arranged to be operated by the principal key, and to engage the bit of the said key after the bolt is withdrawn, and prevent its removal from the lock, substantially as described.

2. In combination with the auxiliary tumbler F, constructed to engage the principal key after the bolt is withdrawn, the auxiliary key G, for operating the said tumbler to free the principal key, substantially as described.

J. MURRAY FAIRCHILD.

Witnesses:

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