A. Sprague,

Latch.

No. 84,391. Patented Nov. 24, 1868.

Fig. 1.

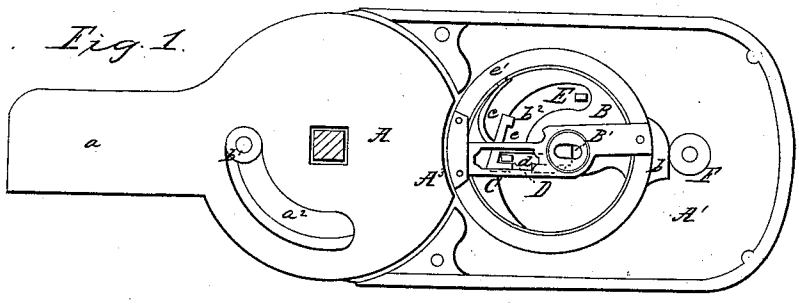


Fig. 2.

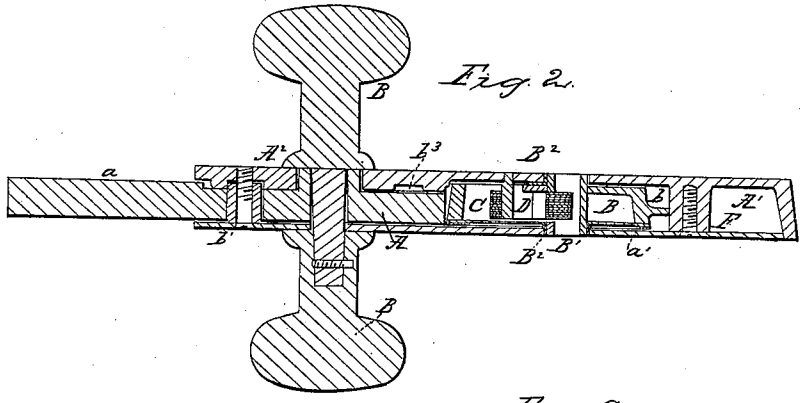
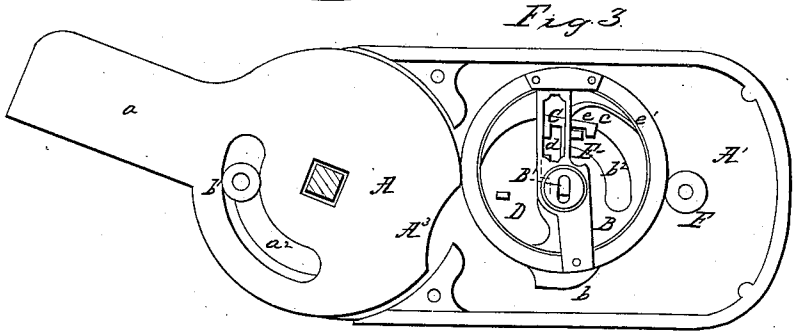


Fig. 3.



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ARNOLD SPRAGUE, OF POLAND, NEW YORK.

Letters Patent No. 84,391, *dated November* 24, 1868.

IMPROVEMENT IN COMBINED LATCH AND LOCK.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ARNOLD SPRAUGE, of Poland, in the county of Herkimer, and State of New York, have invented certain new and useful Improvements in a Combined Latch and Lock, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 represents a view of my improved latch and lock in elevation, the parts being shown in the position which they assume when locked, and the cover of the case removed to show the construction more clearly;

Figure 2 represents a horizontal longitudinal section of the same; and

Figure 3, a view in elevation when unlocked, and the cover of the case removed.

The object of my invention is to provide a simple and convenient device for locking the latch of a door or gate, by the use of which the functions of a lock and latch will be combined, and a separate lock and bolt dispensed with; to which end,

My improvements consist in mounting a rotary latch having a bolt or catch formed upon it, and having a curved recess in its periphery, in a suitable case or frame, said latch being locked by an eccentric, which engages in its recess, and which is provided with a projection, which bears against a fixed stop in the case to receive the lateral pressure of the latch, and with tumblers, by means of which it is held either in or out of gear with the latch, to lock and unlock the same.

In the accompanying drawings—

A represents a rotary latch, which is mounted in a case or frame, A^1. The latch is provided with a short neck or journal, A^2, fig. 2, working in a suitable bearing in the case, and is turned by the knobs B. A bolt or catch, *a*, is formed in one piece with the latch, and engages in a suitable hasp upon the door-frame. The latch is prevented from being turned too far, in either direction, by a stop, b^1, attached to the case, which strikes the ends of a segmental slot, a^2, in the latch at the proper limits of its traverse. A curved recess, A^2, is formed in the latch, opposite to the bolt *a*, in which an eccentric, B, which forms the lock, engages, and is released therefrom by being rotated by a key, when the latch is to be unlocked. The eccentric B is provided with journals, B^2, which rest in bearings in the case A^1 and cover a^1, and has a horn or projection, *b*, upon its periphery, which bears against a fixed stop, F, on the case, when the eccentric is in gear with the recess A^3 of the latch, to sustain any pressure which is brought to bear to raise the latter. Tumblers C are arranged one above the other in the eccentric B, each having a curved spring, *c*, which bears against a stop, e^1, thereon. Slots *d* and recesses *e* are formed in the tumblers, in which stops D and E, attached to the case, catch when the latch is locked and unlocked, and prevent further rotation of the eccentric.

In fig. 1 the parts are shown as locked, a portion of the periphery of the eccentric entering the recess A^3 of the latch, and the eccentric being held in that position by the slots *d* of the tumblers, catching upon the stop D. To unlock the latch, the key is inserted into the key-hole B^1, and the tumblers C pressed sufficiently far towards the latch to enable them to be drawn clear of the stop D, when the eccentric is rotated by turning the key until it assumes the position shown in fig. 3, when the latch can be turned at pleasure. When the key is withdrawn, the springs C force the tumblers up towards the stop E, which engages in the recesses *e*, and prevents the eccentric from turning.

The case A^1 is provided with grooves, b^2, at the back of the latch, to diminish friction and wear thereon.

The cover a^1 is attached to the case by screws, in the usual manner.

It will be seen that this device furnishes a ready means of locking a latch, and thereby enables the extra lock and bolt to be dispensed with. At the same time, its first cost is small, and its construction and operation simple.

Having thus fully described my invention,

What I claim therein as new, and desire to secure by Letters Patent, is—

1. The combination of the slotted vibrating latch A, a^2, provided with a stop, b^1, and the eccentric B, with stops D E, arranged and operating substantially as described.

2. In combination with the said eccentric, the spring-tumblers C and stops D E, arranged and operating substantially as described.

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