J. Brady,

Latch.

No. 108,099. Patented Oct. 11. 1870.

Fig. 1.

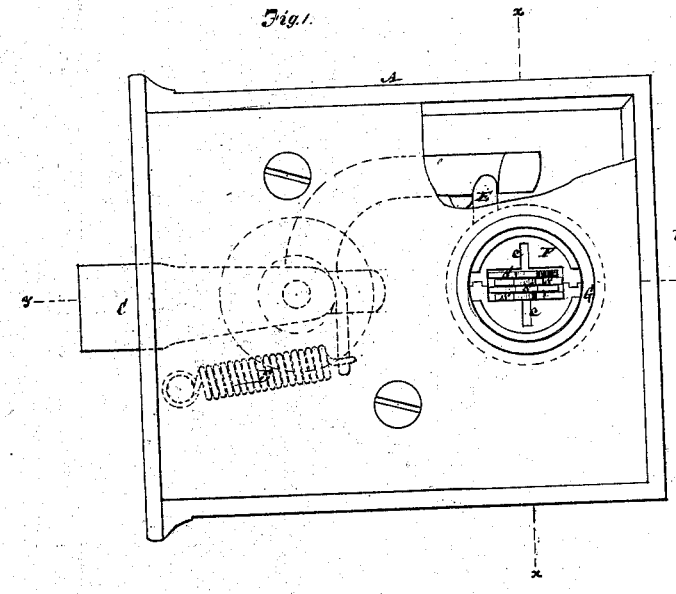

Fig. 2.

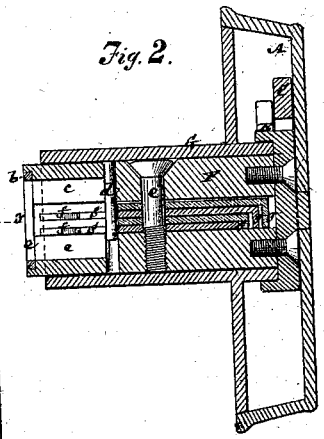

Fig. 3.

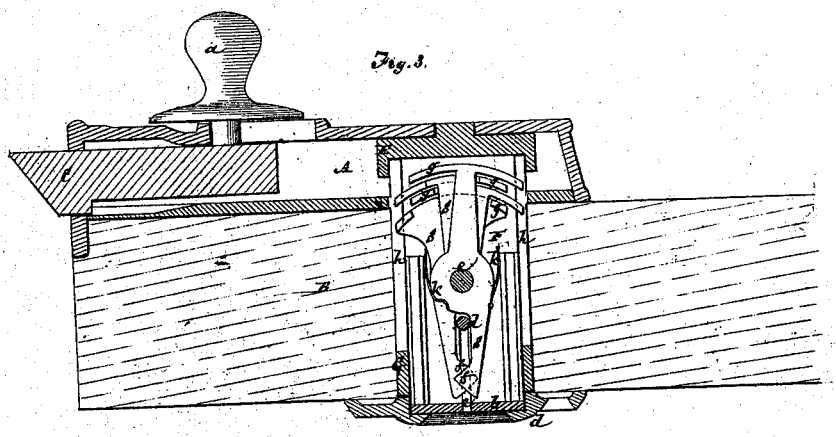

Fig. 4.

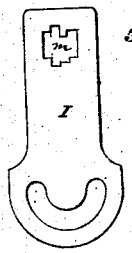

Fig. 5.

Witnesses,
Fred. Haynes
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United States Patent Office.

JAMES BRADY, OF BRANFORD, CONNECTICUT, ASSIGNOR TO THE "BRAN FORD LOCK WORKS," OF SAME PLACE.

Letters Patent No. 108,099, dated October 11, 1870.

IMPROVEMENT IN LOCKS.

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, JAMES BRADY, of Branford, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Locks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents a front view of a lock constructed to illustrate my improvement, and as applied to or including a night-latch;

Figure 2, a transverse section of the same, taken as indicated by the line *x x;* and

Figure 3, a longitudinal section, taken as denoted by the line *y y*, in fig. 1.

Figures 4 and 5 are side and edge views of a key to said lock, constructed in accordance with my invention.

Similar letters of reference indicate corresponding parts.

My invention, although here shown in connection with a night-latch, is applicable to various kinds of locks, including among others, chest-locks, padlocks, and trunk-locks, it only being necessary to make such changes, without altering the principle of the invention, as are necessary to adapt it to any particular kind of lock.

The invention consists in a novel construction of tumblers adapted for operation by a key of flat character, having a series of perforations in it, into which the lips of the tumblers fall, to cause their adjustment, as contradistinguished from mere ward notches.

In locks employing no follower, the tumblers themselves may also constitute the bolt or bolts; thus the perforated key may be applied to a padlock having the tumblers of a circular plate form and turning upon a center, with hooks in them to lock on the hasp, and lips to secure the adjustment of them by the perforation or perforations in the key; or the tumblers may be otherwise constructed to operate also as bolts.

Referring to the accompanying drawing—

A represents a lock or latch-case, arranged on the inside of a door, B, and containing a latch, C, under control of a spring, D, and capable of operation from the interior by a knob, *a*.

Said latch is operated from the exterior, to open the door, by a follower, E, made capable of turning, and having connected with it a cylindrical extension, F, arranged to turn within a hollow cylinder, G, fast to the plate of the lock, and projecting within or through the door.

The cylindrical extension or body F of the follower runs through said cylinder G to the outside of the door, and is faced at its outer end by a plate, *b*, which has an oblong slot, *c*, in it, for entry of the key, and which is inclosed and shielded on the exterior by an escutcheon, *d*.

The key-hole *c* is extended to run through the body F of the follower, and has connected with it a stop-pin, *d*, which determines the depth of the key's entry, and may also act as a stop to the tumblers when out of line or in lock.

Arranged within this body F is a series, consisting of any suitable number, of tumblers, *s*, arranged one against or over the other, and pivoted as at *e*, so as to present front and rear arms, the former of which have noses or lips *f* on their inside edges, suitably constructed, to admit of the passage of the key I between them, while the rear arms of said tumblers are formed with double or transverse locking-wings *g*, free to enter openings or slots *h h* in opposite sides of the cylinder G, and whereby the follower E is prevented from being operated.

Springs *k* serve to give to the tumblers their locking position, which is secured by the wing *g* of each tumbler entering the one slot *h*, and being free of the opposite slot, certain of the tumblers thus locking with one side of the cylinder G, and others with the opposite side thereof.

To adjust the tumblers S, that is, to bring their locking-wings *g* within the follower or its body F, free from projection into the slots *h h* on either side of the cylinder G, so that the follower may be turned, the key I has a perforation, *m*, in it, so stepped or shaped on its front and rear edges, that on the key being properly introduced and inserted between the lips *f*, each tumbler is adjusted, by its lip *f* entering to the requisite distance the perforation *m*, to insure its freedom from lock with the cylinder G on either side, when the follower is at liberty to be turned by the key.

Instead of a single perforation, *m*, in the key, each tumbler may have its separate perforation, or suitably-shaped divided perforations may be arranged to apply to a specific number of tumblers.

A single perforation, as here shown, is in fact but a combination of suitably-disposed separate perforations applicable to a series of tumblers, all of which require to be adjusted before the lock can be opened.

The springs *k*, which control the tumblers, throwing them into lock when the key is withdrawn, and securing the entry of their lips *f* within the perforation *m* when the key is inserted, may be variously arranged.

It may here be observed, however, that the lips *f* should be so constructed as to secure the moderately easy passage of the key between them, in bring-

ing its hole *m* into and out of gear with said lips against the pressure of the springs that control the tumblers.

What is here claimed, and desired to be secured by Letters Patent, is—

The tumblers S, provided with lips *f* and locking-wings *g*, in combination with the key I, having one or more tumbler-adjusting perforations *m*, therethrough for operation, essentially as shown and described.

JAMES BRADY.

Witnesses:

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JOHN J. BARTHOLOMEW.