

(Model.)

J. R. AMES.

LOCK.

No. 327,053.

Patented Sept. 29, 1885.

Fig. 1.

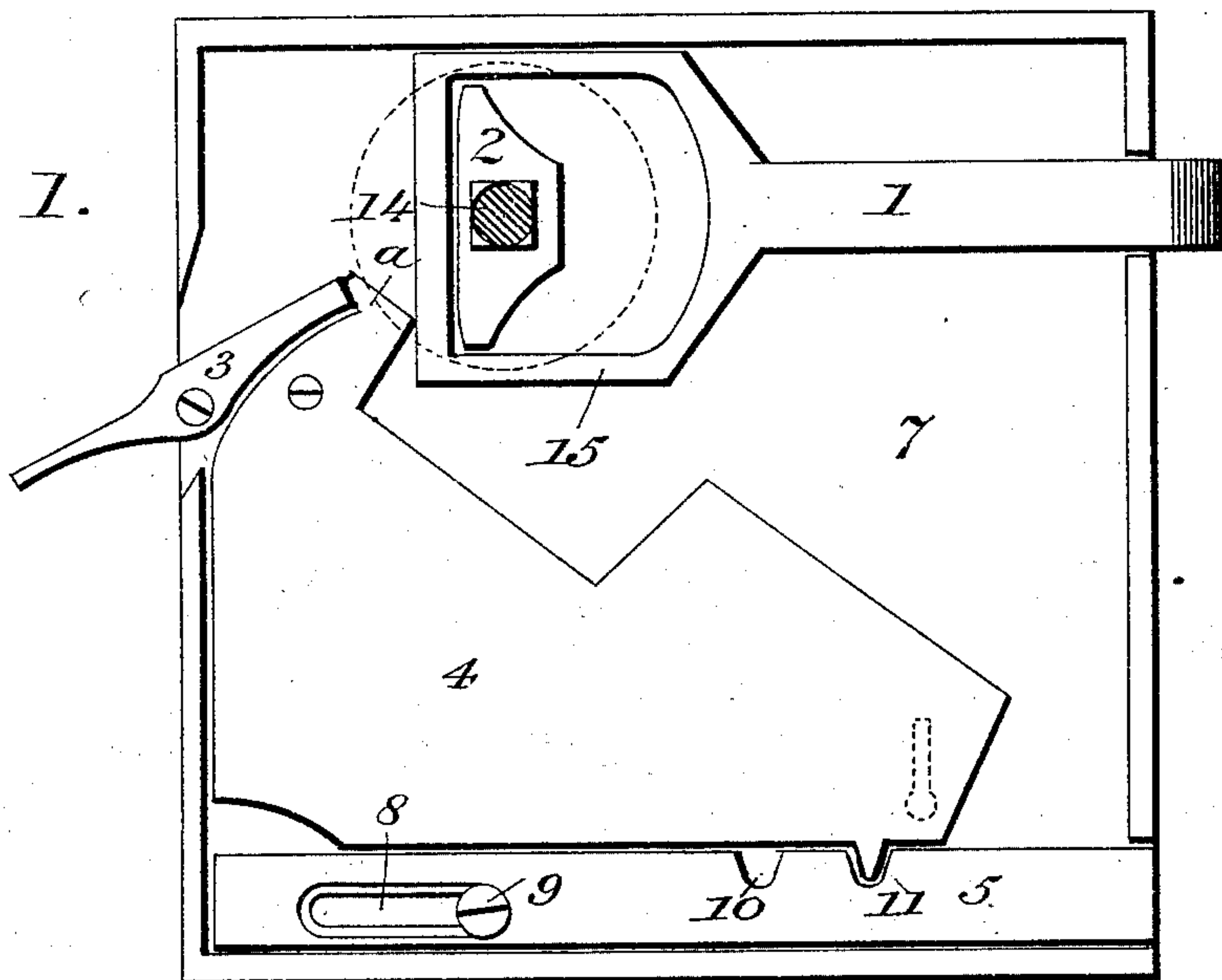
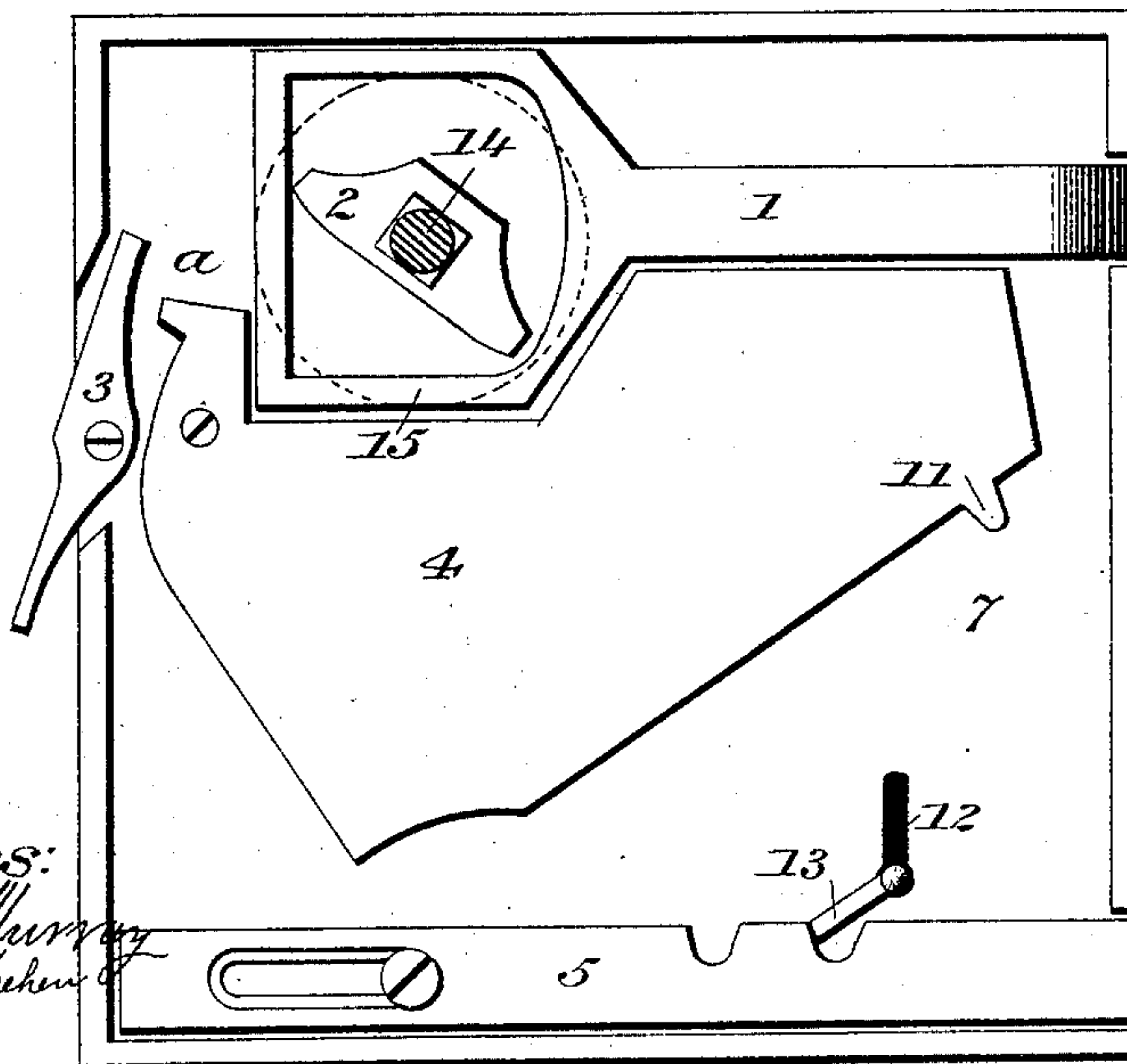


Fig. 2.



Witnesses:

Chas. D. Murray
James M. Keenan

Inventor:

Joseph R. Ames

UNITED STATES PATENT OFFICE.

JOSEPH R. AMES, OF CLEARFIELD COUNTY, PENNSYLVANIA.

LOCK.

SPECIFICATION forming part of Letters Patent No. 327,053, dated September 29, 1885.

Application filed April 16, 1885. (Model.)

To all whom it may concern:

Be it known that I, JOSEPH R. AMES, of the county of Clearfield, and State of Pennsylvania, have invented certain new and useful Improvements in Locks, of which the following is a specification.

My invention relates especially to that class of locks in which a pivoted weight or tumbler is substituted for the coil-spring in common use; and it consists in certain novel features, hereinafter fully described and specifically pointed out in the claims.

In the drawings I have shown my lock with the side of the casing removed, the several parts being shown in different positions in Figures 1 and 2 in order that the operation of my invention may be readily understood.

Referring to the drawings, 7 represents the lock-casing, which is of the ordinary shape.

The knob-shaft 14 is inserted through the casing in the ordinary manner. That portion of the knob-shaft which comes between the two sides of the casing and coinciding with the latch-operating tumbler or cam 2, I make angular, as shown, and upon this angular portion I fit said latch-operating tumbler 2, which latter is made of the peculiar shape shown, having a central body fitting around the angular portion of the knob-shaft and provided with two arms, one on each side of the knob-shaft, which bear upon the enlarged portion of the latch-bolt in the operation of the same. The ends of these arms are slightly rounded, as shown, so as to work more easily against the end of the latch-bolt.

1 is the latch-bolt. It is constructed, as shown, with a yoke, 15, on its inner end to extend around the knob-shaft and the operating-lug, as shown. The inner end of the yoke bears directly against a shoulder on the upper edge of the tumbler, as shown in Fig. 1.

The gravity-tumbler 4 is pivoted at a point nearly on a line with the bottom edge of the yoke 15 and about midway the end of the yoke and edge of the casing. By pivoting the tumbler at this point I secure the necessary result of having the tumbler so arranged that its weight will cause it to drop automatically in the operation of the lock. The top edge of the tumbler is made to correspond to the contour

of the latch-bolt and its yoke, so that the two parts will readily engage, as will be understood on reference to Fig. 2. The general shape of the tumbler is triangular, the pivot being placed in its apex or upper corner. Near its lower outer corner, on its bottom edge, I form a lug, 11, which engages the notches 10 in the upper edge of the locking-bolt. The lower outer corner of the tumbler entirely covers the key-hole when the lock is closed and prevents the insertion of a key. The side edge of the tumbler is curved part way around the pivot, as shown, and is provided with a lug, *a*, which is engaged by a dead-latch, 3.

The dead-latch 3 is pivoted at or about its middle to the casing, and one end extends outside the same. The other or inner end of the dead-latch is cast heavier than the outer end, said latch thereby having a continual tendency to engage the tumbler. It will be understood that when it is desired that the dead-latch should not engage the gravity-tumbler—as, for instance, when the door is locked from the outside, or when used in a door which closes a way through which there is considerable passing—any suitable device or means which will readily suggest itself may be employed to hold said latch out of the path of the lug *a*, thereby avoiding any serious inconvenience which would otherwise result if the latch were to engage the tumbler at such times. When the dead-latch is in engagement with the tumbler, the lock is burglar-proof.

5 is the locking-bolt, placed in the casing at or near the bottom thereof.

Near the inner end of the bolt 5, I provide a slot, 8, through which is inserted a pin, 9, the play of the bolt being limited thereby.

12 is the key-hole, and 13 the key.

The operation of my device is simple, and and will be readily understood on reference to the drawings. The latch-bolt 1 is retracted by turning the knob, thereby causing the tumbler or cam 2 to bear against the inner end of the yoke 15. As the bolt is turned in the tumbler will be caused to swing upward by the yoke 15, and the key may then be inserted and the locking-bolt turned in or out. When the key is withdrawn, the knob is turned

back and the tumbler will drop to its original position, covering the key-hole, and the lug 11 will engage one of the notches 10 and hold the locking-bolt in its position.

5 It will be understood that the dead-latch 3 must be disengaged from the tumbler by hand before the latch-bolt can be operated, and that it will automatically fall into re-engagement with the same, when the operation is completed.

10 The operations of locking and unlocking differ only in the direction given the locking-bolt by the key 13.

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

20 1. The combination of the latch-bolt, the locking-bolt, a gravity-tumbler for actuating the latch-bolt, said tumbler interlocking with the latch and locking bolts when in a normal position, and means for holding said tumbler

in its normal position, as and for the purposes set forth.

2. The combination, with the latch and locking bolts, of a gravity-tumbler for projecting the latch-bolt and interlocking with the latch and locking bolts when in a normal position, and a gravity dead-latch to engage and hold said tumbler in a normal position, as and for the purposes set forth.

3. The combination of the latch and locking bolts, a gravity-tumbler interlocking with said bolts when in a normal position, said tumbler serving to project the latch-bolt and close the key-opening to the locking-bolt, and a gravity-latch to engage the tumbler and hold it securely in place, as and for the purposes set forth.

JOSEPH R. AMES.

Witnesses:

W. A. CHASE,
ISAAC LLOYD.