

A. WELLARD.

LOCK.

No. 343,290.

Patented June 8, 1886.

Fig. 2.

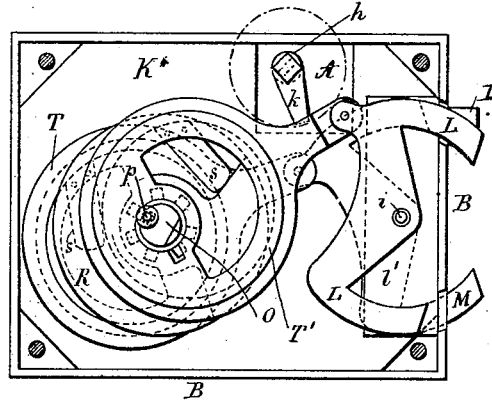


Fig. 3.

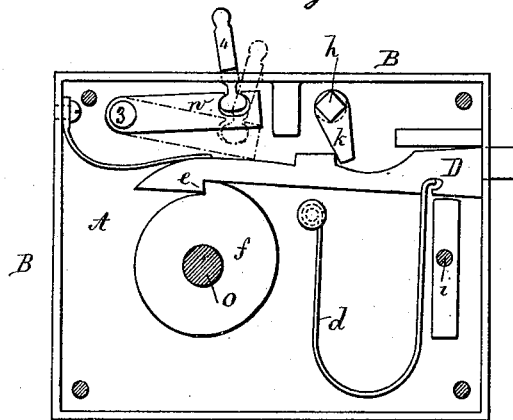


Fig. 12.

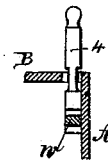
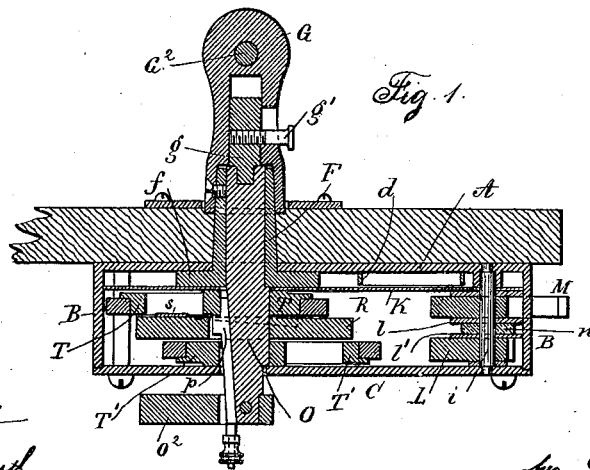


Fig. 1.



Witnesses:
I Staib
Chas H. Smith

Inventor:
Andrew Holland
per L. W. Perrell atty

(Model.)

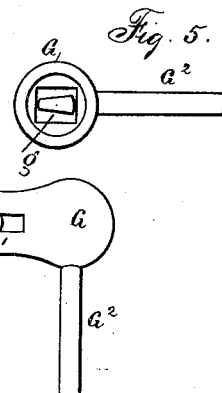
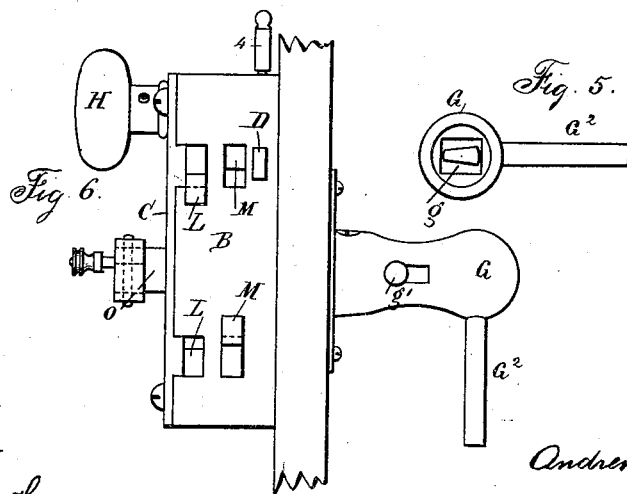
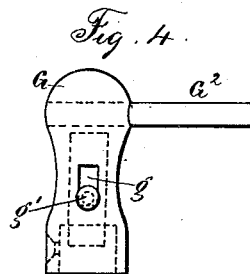
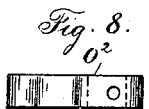
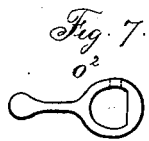
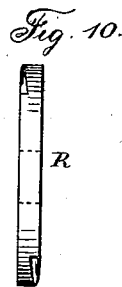
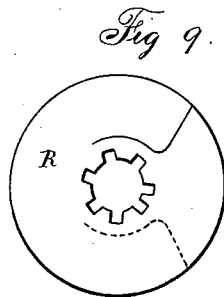
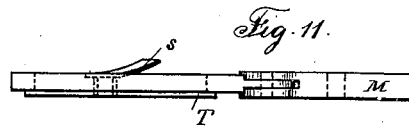
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

ANDREW WELLARD, OF BROOKLYN, NEW YORK.

LOCK.

SPECIFICATION forming part of Letters Patent No. 343,290, dated June 8, 1886.

Application filed May 11, 1885. Serial No. 165,009. (Model.)

To all whom it may concern:

Be it known that I, ANDREW WELLARD, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in
5 Locks, of which the following is a specification.

This lock is especially intended for store-doors, and it contains a sliding spring-latch, which can be operated from either the outside
10 or inside of the door, and two or more oscillating bolts and eccentrics, by means of which the bolts can be projected or retracted. The eccentrics are loose upon the spindle, but are rotated by an intermediate disk with offsets,
15 and upon the eccentrics are spring-pawls. By turning the spindle in first one direction and then the other the bolts are projected to lock the door, and they so remain until they are moved by a further revolution of the spindle,
20 which causes the eccentrics to swing the rocking bolts and withdraw them into the lock-case and allow the door to be opened.

In the drawings, Figure 1 is a horizontal section through the spindle and bolts. Fig.
25 2 is a rear view with the cap-plate removed. Fig. 3 is a similar view with the rocking bolts and eccentrics removed from the case. Fig. 4 is an elevation of the outer handle detached from the spindle. Fig. 5 is an end view of the
30 same. Fig. 6 is an end view of the lock and case. Fig. 7 is a view of the inside handle on the spindle. Fig. 8 is a plan view of the same. Fig. 9 is a separate view of the intermediate disk. Fig. 10 is an edge view of the same.
35 Fig. 11 is a separate edge view of one of the eccentrics and its connection to the rocking bolt, and Fig. 12 is a sectional view showing the swinging stop and notched lifter.

The lock-case is made in the shape of a box,
40 with a plate, A, rim B, and removable cap-plate C. The sliding spring-latch D passes at one end through the rim B, and it is guided by suitable studs inside the lock-case. *d* is the spring by which this latch is projected,
45 and *e* is a hook on the latch, by which the same is withdrawn.

F is a tubular spindle passing through the lock-case, and having within the case a disk,
50 *f*, with a claw or notch acting against the hook *e*; and G is a knob screwed onto the spindle F, by means of which this tubular

spindle and disk are turned in drawing back the spring-latch.

H is a knob at the inner side of the door upon the spindle *h*, and *k* is a projecting arm
55 acting within a notch in the spring-latch D, so that said latch may be withdrawn by turning either the knob G on the outside of the door or the knob H on the inside of the door.

The movable separating-plate K is intro-
60 duced into the lock-case, and aids in holding in place the parts described. Within the case is a pivot-pin, *i*, upon which is placed the rocking bolts L M, which bolts are formed similar to anchors, and the ends project
65 through mortises in the rim of the lock. When the bolts are out of use, their ends are flush, or nearly so, with the surface of the rim. When the door is locked, one end of each rocking bolt is projected into a mortise in the
70 door-frame or nosing. Between these rocking bolts there are metallic guide-plates *l l'*, and a spring of india-rubber or other suitable material at *n* to apply by the plates *l l'* to the
75 surfaces of the rocking bolt sufficient pressure and friction to retain the rocking bolts in any position to which they may be moved.

Within the tubular spindle there is a solid spindle, O, and within the knob G is a sliding
80 coupler, *g*, having at its end a sectoral lug that engages a notch similarly shaped in the end of the spindle O, and there is a slot at one side of the knob G, and a pin and head *g'* passing through this slot into the coupler *g*.
85 When this pin and coupler are moved endwise and the spindle passes into the sectoral mortise in the coupler *g*, the spindle will be moved by the handle, and the reverse.

Within a longitudinal groove in the spindle
90 is the key *p*, and this is made with a projecting block at one place, and the end of the key projects from the inner end of the spindle, so that such key and its block can be slipped
95 backward and forward. The block of the key, projecting above the surface of the spindle, connects to said spindle the intermediate disk, R, which disk R surrounds the solid spindle, and
its central opening or eye is notched to receive the block of the key *p*, so that said disk
100 can be changed in its relative position to the indicator-arm G², that projects from the knob G, by drawing back the key and its block.

The disk R can either be turned upon its axis or the spindle turned within it, so as to bring the block on the key *p* into a different notch at the eye of the disk R for altering the combination on which the lock opens.

In the opposite faces of the disk R there are channels or radial grooves for the spring-pawls *s* of the respective eccentrics. These eccentrics are adapted to rotate freely around the spindle O, and between each eccentric and the rocking bolt there is a ring-strap and arm, so that when the eccentrics are rotated the bolts L M will be rocked upon the pivot *i*, to project or retract the respective rocking bolts.

Upon each eccentric there is a spring, *s*, which forms a pawl and against which the offset or shoulders upon the intermediate disk, R, operate. The operation of this lock is as follows: When the pin *g'* and coupler *g* are moved to connect the knob G and spindle O, the disk R can be rotated, and when turned in one direction the offset or shoulder upon such disk acts against the spring upon the eccentric T to turn such eccentric, and by the eccentric-ring and its arm to move the rocking bolt M, after which the spindle O and intermediate disk, R, are to be revolved in the other direction, and the offset or shoulder upon the disk acts upon the spring of the eccentric T', and partially revolves such eccentric, and by the strap and its arm the rocking bolt L is swung. If the lock is being unlocked, the movements last described will be employed to swing the rocking bolts, so as to bring their ends within the rim of the lock. If the lock is to be locked, the movements as aforesaid are given in such a manner as to project the ends of the rocking bolts.

There is to be a dial upon the door around the spindle O, and the same is to be divided with suitable marks. I prefer to use divisions similar to a compass-card, and the pointer G², that projects from the knob G, indicates by this dial to the person having a knowledge of the proper combination the place to which the spindle is to be turned in setting the eccentrics and swinging the rocking bolts to open the door.

At the inner end of the solid spindle O an arm, *o'*, should be attached, by means of which the spindle, intermediate disk, and the respective eccentrics can be turned when the door is open and the combinations of the lock are being altered, or it serves to lock or unlock the door from the inside.

I provide a swinging stop, *w*, pivoted at 3, and having a notched lifter, 4, hinged to its outer end. This stop is directly over the sliding spring-latch, and does not prevent said latch being slid back by the inside handle, H, or drawn back by the talon or projection on

the disk *f*; but when the block *w* is lowered and rests upon the latch the disk can only be partially turned back, sufficiently to withdraw the latch, but the disk cannot be rotated after the stop *w* arrests the backward movement of the spring-latch; hence the swinging bolts cannot be acted upon or moved by the outside handle until the swinging stop is raised and the sliding latch drawn back far enough to allow the disk to separate from its hold upon the spring-latch. This prevents the swinging bolts being moved accidentally while the lock is being used as a latch during the daytime.

In cases where this lock is used on warehouse-doors the spring-latch will not be required.

If my improved lock is used with trunks or boxes having a catch or nosing that goes through a mortise in the lock-case, the rocking bolts are to enter mortises or pass above offsets upon the nosing or catch that passes into the lock-case through the mortise.

I claim as my invention—

1. The combination, with the rocking bolts L M, of the eccentrics T T', the rings and arms connecting the eccentrics to the rocking bolts, the spring-pawls on the eccentrics, the spindle O, the disk R, and the movable key for connecting the disk to the spindle, substantially as specified.

2. The spindle O, the movable key within the groove in the spindle, and the intermediate disk, R, in combination with the eccentrics T T', their springs, rings, and connecting-arms, the rocking bolts L M, intervening plates, and springs to apply friction to the rocking bolts, substantially as set forth.

3. The spindle O, the movable key within the groove in the spindle, and the intermediate disk, R, in combination with the eccentrics T T', their springs, rings, and connecting-arms, the rocking bolts L M, the tubular spindle F, notched disk *f*, knob G, and spring-latch D, substantially as set forth.

4. The combination, in a lock, of the sliding spring-latch, D, the knob H, spindle and arm to operate the latch from the inside of the door, the knob G, tubular spindle F, and notched disk *f*, to operate the spring-latch from the outside of the door, the rocker-bolts L M, eccentrics and eccentric-rings for moving the rocker-bolts, the spindle O, intermediate disk, R, and spring-pawls for giving motion to the respective rocker-bolts, substantially as set forth.

Signed by me this 4th day of May, A. D. 1885.

ANDREW WELLARD.

Witnesses:

GEO. T. PINCKNEY,
WALLACE L. SERRELL.