(No Model.)

E. I. ANDERSON & O. M. MORRILL.

LOCK.

No. 604,951. Patent May 31, 1898.

Fig. 4.

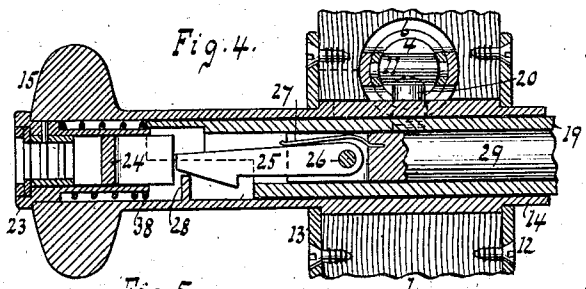


Fig. 1.

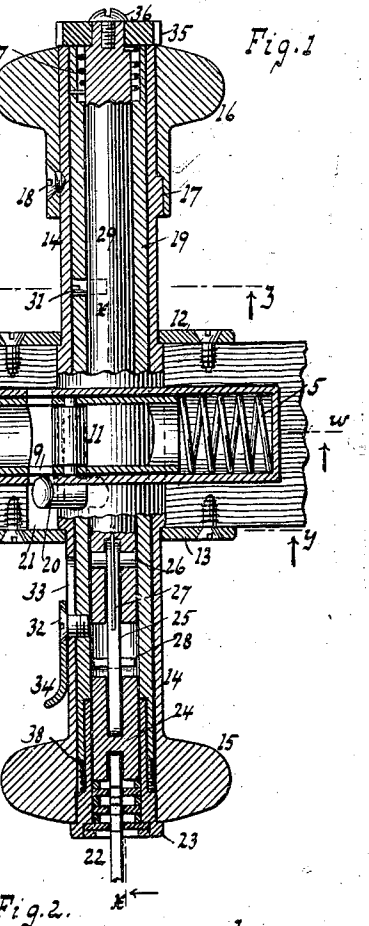


Fig. 5.

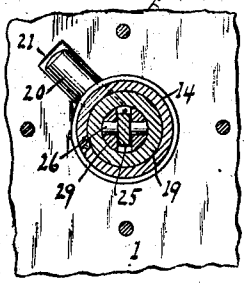


Fig. 3.

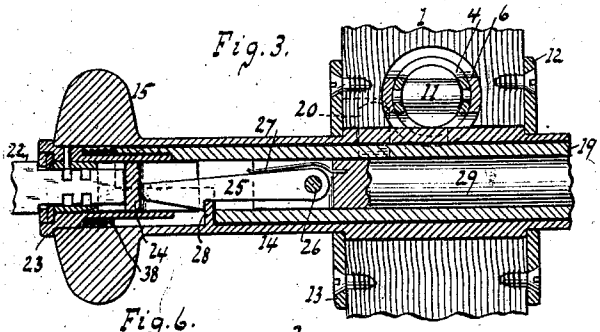


Fig. 6.

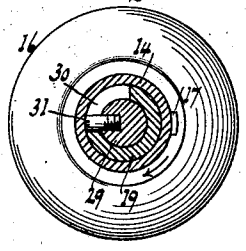


Fig. 2.

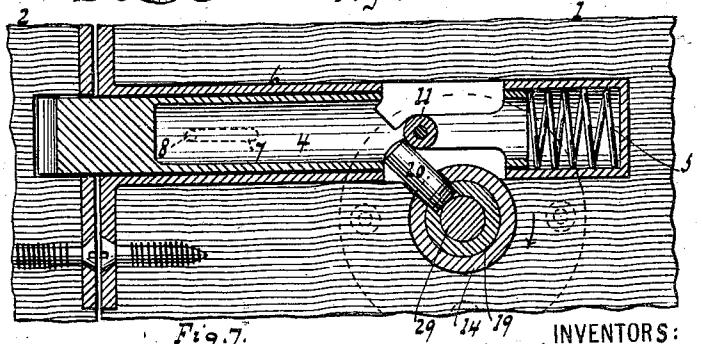
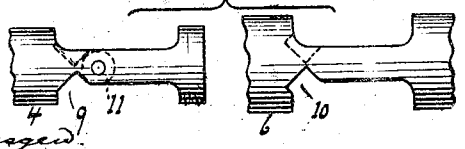


Fig. 7.



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UNITED STATES PATENT OFFICE.

ELLERY I. ANDERSON AND OSCAR M. MORRILL, OF CHARLESTON, SOUTH CAROLINA.

LOCK.

SPECIFICATION forming part of Letters Patent No. 604,951, dated May 31, 1898.

Application filed January 6, 1898. Serial No. 665,809. (No model.)

To all whom it may concern:

Be it known that we, ELLERY I. ANDERSON and OSCAR M. MORRILL, citizens of the United States, residing at Charleston, in the county of Charleston and State of South Carolina, have invented new and useful Improvements in Locks, of which the following is a specification.

This invention resides in the novel features of construction set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is a sectional plan view of the lock. Fig. 2 is a section along *w w*, Fig. 1. Fig. 3 is a section along *x x*, Fig. 1, the parts being in locking position. Fig. 4 is a view like Fig. 3, the parts being moved to position for unlocking. Fig. 5 is a section along *y y*, Fig. 1. Fig. 6 is a section along *z z*, Fig. 1. Fig. 7 are detail views of the bolt, tailpiece, and lining.

The door 1 is adapted to be held shut or to the jamb 2 by bolt 3, having a hollow or tubular tailpiece 4, and normally held or moved to locking position by spring 5. The door is mortised to receive a lining or tube 6, in which the bolt can play. A slot-and-pin connection 7 and 8 can be made to suitably limit the play of the bolt.

The tailpiece 4 and lining 6, as seen in Fig. 7, have cuts or passages 9 and 10 for a purpose presently explained, and said tailpiece 4 also has a cross-piece 11, in form of a rod, extended across the chamber or interior of this hollow tailpiece.

The door at its inner side is shown with escutcheon 12 and at its outer side with escutcheon 13, suitably fastened or screwed in place in any suitable manner. Through the door extends a tube or housing 14, shown with the outer knob 15 fixed or cast thereto. The inner or removable knob 16 can be secured in suitable way, as by shoulder 17 and screw 18, holding the knob fixed on tube 14. In the tube 14 is a spindle 19. This spindle is also shown in tubular form and carries a lug 20. The spindle is longitudinally movable in tube 14, and when shifted to carry or slide lug 20 through the passages 9 and 10, Fig. 7, so that the lug rests in the hollow tail 4, Fig. 4, the spindle when rotated to carry lug 20 against cross-piece 11 will withdraw or open the bolt 3. The piece 11 can be provided with an anti-friction-roller to ease movement. When the spindle is shifted to carry lug 20 out of the tail 4 or clear of the bolt, as seen in Fig. 1, the device is locked, or, in other words, the spindle, if rotated, would not affect the bolt 3. Moreover, when its lug is clear of the bolt the spindle can be held against rotation by such lug 20 entering or being held in a suitable slot or seat 21, Fig. 5, in the door 1. The arrangement is such that when the spindle 19 is in locking position, Figs. 1 and 3, it cannot be moved to unlocking position, Fig. 4, from the outside without aid of a key. (Indicated at 22.) The tube 14 or knob 15 is shown with a suitable keyhole-casing 23, secured therein, and the key 22 when inserted engages a rotary block 24, Fig. 1, suitably forked or provided with recesses, into one of which slips or engages the key 22. The other fork or slot of block 24 engages a catch or swinging hook 25, pivoted at 26 and pressed by spring 27, so that this hook will snap or catch over a lip or short rib 28 when the parts are in the position shown in Fig. 3. This pivot 26 or catch 25 is carried by a block or stem 29, rotary in the spindle 19, and when the key 22, with block 24, is turned to rotate hook 25, so that the latter turns to one side or clear of lip 28, the spindle 19 is freed, so that it can slip inward along tube 14 to bring lug 20 to cross-piece 11.

The block or stem 29, while rotary in spindle 19, cannot move longitudinally independently of said spindle, a suitable slot-and-pin connection 30 and 31, Fig. 6, being made to connect the parts 29 and 19. The spindle 19 is longitudinally movable in tube 14; but said tube and spindle rotate together.

The spindle is shown with a screw or fastening 32, Fig. 1, extended through a slot 33 in tube 14, and by which screw the handle or loop 34 is secured to the spindle. This handle or trigger 34 affords means for sliding the spindle back and forth to locking and unlocking position.

At the inner end or at knob 16 the stem 29 has a button or handle 35 suitably secured, as by screw 36, and which enables the stem 29 to be rotated to free catch 25 from lip 28. This handle 35 also enables the freed spindle 19 to

be moved longitudinally, or, in other words, the handle 35 at the inside replaces the key 22 and trigger 34, which come into use at the outside. The spring 37, Fig. 1, is applied to normally rotate stem 29 to position for the catch 25 to engage lip 28 when the stem 19 slides outward. The spring 38 tends to move the spindle 19 inward or into active position. The tube 14 is of course suitably slotted to allow the lug 20 to move back and forth with the spindle 19. The tube 14, while rotary, has no longitudinal movement. The lip 28 is fixed or cast in the tube 14.

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

1. The combination with a bolt having a transversely-arranged passage, of a longitudinally-movable spring-pressed spindle having a lateral rigidly-attached lug for entering said passage to actuate the bolt, a device for holding the spindle with its lug out of engagement with the bolt, and means for releasing said holding device to permit the spring acting on the spindle to actuate the latter and move the lug into engagement with the bolt, substantially as described.

2. The combination with a bolt having a transversely-arranged passage, of a knob-carrying tube, a tubular spindle arranged in the knob-carrying tube, rotating therewith and movable longitudinally independent thereof, a lug rigidly secured to and projecting laterally from the tubular spindle to enter the said passage of the bolt, a spring for moving the spindle in one direction, a device for holding the spindle against the tension of the spring, and means for operating said device to release the spindle and permit its spring to operate and cause the lug to enter the said passage, substantially as described.

3. A tube or housing having a lip, a spindle having a catch for engaging the lip, a lug on the spindle, and a bolt, said spindle being made longitudinally movable to carry the lug into and out of engagement with the bolt and said catch being made rotatable to clear or move to one side of the lip substantially as described.

4. A tube or housing having a lip, a longitudinally-movable spindle having a catch for engaging the lip, a lug on the spindle, a bolt adapted to be engaged by the lug, a rotary stem in the spindle and to which the catch is connected, and a button or handle at one end of the spindle for rotating said stem, the other end of the spindle being adapted for the insertion of a key substantially as described.

5. A tube or housing having a lip, a longitudinally-movable spindle having a catch for engaging the lip, a lug on the spindle, a bolt adapted to be engaged by the lug, a rotary stem in the spindle for supporting the catch, a button or handle for the stem, and a key-block forked for the respective engagement of the catch and of a key substantially as described.

6. A tube or housing having a lip, a spindle having a catch for engaging the lip, a lug on the spindle, and a bolt adapted to be engaged by the lug, said tube being slotted and said spindle having a handle or trigger extended through the slot substantially as described.

7. A door having a mortise, a bolt in the mortise, a spindle, and a lug on the spindle adapted to engage the bolt, said door having a slot or seat for the lug and said spindle being longitudinally movable to carry the lug from the slot to the bolt substantially as described.

In testimony whereof we have hereunto set our hands ~~in~~ the presence of two subscribing witnesses.

ELLERY I. ANDERSON.
OSCAR M. MORRILL.

Witnesses:
A. H. BREEDIN,
THOS. J. ELLIS.