(No Model.)

J. T. PEDERSEN.

CYLINDER LOCK.

No. 524,648. Patented Aug. 14, 1894.

Fig. 1.

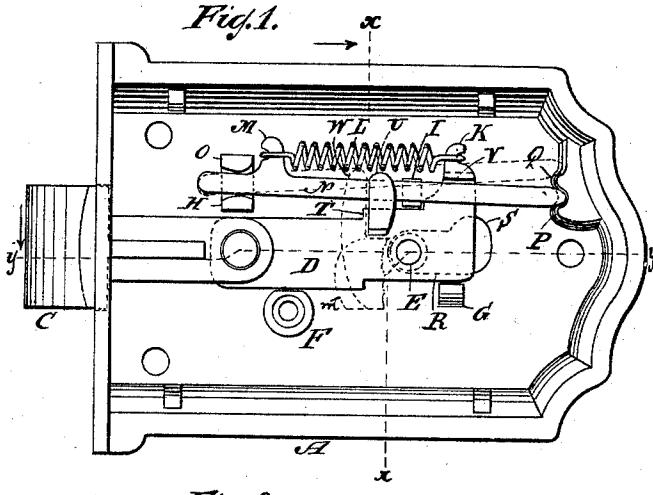


Fig. 3.

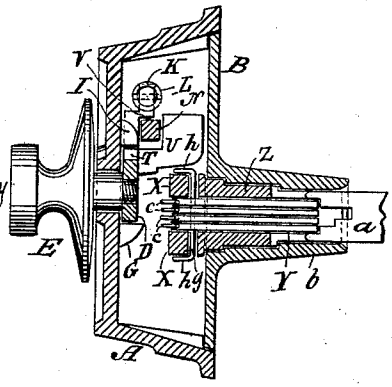


Fig. 2.

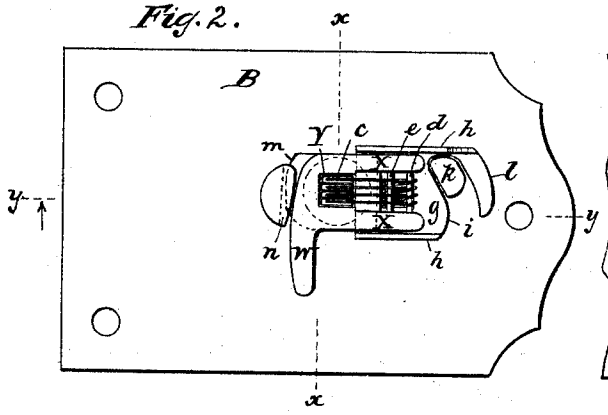


Fig. 6.

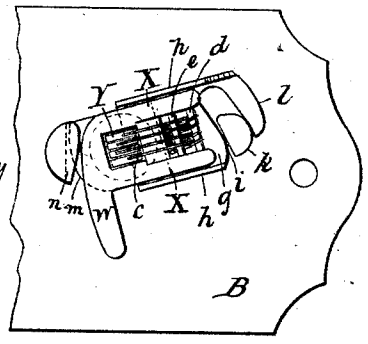


Fig. 4.

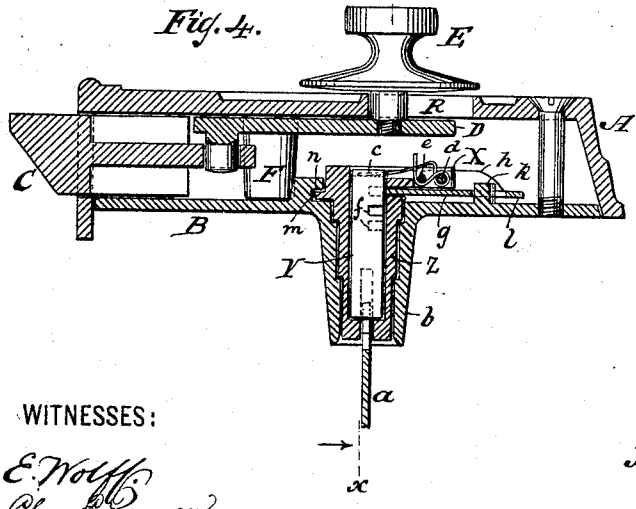
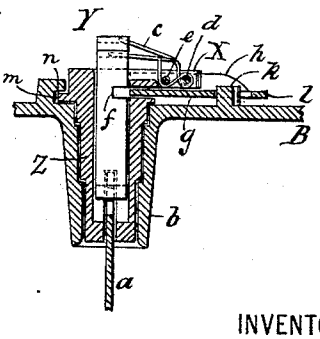


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHANNES TH. PEDERSEN, OF NEW YORK, N. Y., ASSIGNOR TO BRUNO STEINEL, OF SAME PLACE.

CYLINDER-LOCK.

SPECIFICATION forming part of Letters Patent No. 524,648, dated August 14, 1894.

Application filed February 15, 1894. Serial No. 500,270. (No model.)

To all whom it may concern:

Be it known that I, JOHANNES TH. PEDERSEN, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Latches or Locks, of which the following is a specification.

This invention relates to certain improvements in locks or latches and the invention consists 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 an interior view of the lock case, the cover plate being removed. Fig. 2 is an inverted plan view of the cover plate. Fig. 3 is a section along *x x* Figs. 1 and 2. Fig. 4 is a section along *y y* Figs. 1 and 2. Fig. 5 is a detail view of parts of Fig. 4 in a different position. Fig. 6 is a view similar to Fig. 2 with parts in a different position than in Fig. 2.

In the drawings the letter A indicates a case to which cover plate B can be screwed or secured in any well known way and in which plays bolt C to which is pivoted or jointed the usual tail piece D. A knob or handle E can be used to withdraw or unlock bolt C. The tail piece D plays or slides between the posts or lugs F G H I in case A.

The tail piece D has a horn or arm K engaged by a spring L tending to move tail D and bolt C to the locking position. The spring L is braced or held by shoulder or hook M on rod N, the front end of which is slipped in or held between lugs H O in case A, and the rear end of rod N is held or braced at shoulders P Q in case A. The spring L tending to throw bolt C forward, at the same time holds rod N back, so that the rear end of rod N rests at the shoulders P Q.

The handle E or the stem of said handle plays in slot R in case A, said slot having a branch or recess S into which the handle can be moved laterally when it is desired to lock the withdrawn bolt in its open or withdrawn position. The lateral motion of handle E into the recess S will swing the tail D so as to carry its shoulder T behind lug I, the engagement of shoulder T and lug I tending to hold the tail D and bolt C in the open or withdrawn position.

The tail D has a shoulder U and on the horn K said tail D has a shoulder V, said shoulders U and V lying respectively on opposite sides of rod N. When the tail D is swung laterally by the movement of handle E when pressed into recess S, the hook U pressing on a side of rod N will cause the rear end of said rod to snap out from between shoulders P Q and to come against the outer side of shoulder Q as indicated by dotted lines in Fig. 1. The rod N being held in this last named position by the pressure of spring L, said rod will hold the tail D in the lateral position with handle E in recess S. Sufficient pressure being applied to move handle E out of recess S back into slot R, the shoulder V of tail D pressing on the side of rod N opposite to that pressed by shoulder U will cause said rod N to snap its rear end back to the position between shoulders P Q and the shoulder T on tail D now clearing lug I the spring L can draw bolt C back to its locking position. The shoulder U is also adapted for the engagement of the lever or arm W which can be rotated or swung against shoulder U so as to withdraw bolt C. The arrangement for rotating lever W will be presently described. Said lever W forms the head of a fork X X between the branches of which project the tumblers Y housed in a cylinder Z adapted to be rotated by key *a*, said cylinder being set into casing *b* projecting from cover plate B. The tumblers Y are pressed into cylinder Z by springs *c* braced at the pins *d e* in fork X. The tumblers Y have slots *f* which when the tumblers have been housed by the pressure of spring *c* are out of alignment or in cylinder Z as seen in Fig. 4. When the tumblers have been projected by key *a* as seen in Fig. 5 the slots *f* are in alignment at the rear edge of slide or plate *g* guided by flanges *h* projecting from said plate *g* alongside fork X X. This plate *g* has a shoulder or projecting part *i* and from plate B rises a stud *k*. When the parts are in the position shown in Figs. 2 and 4 with the tumblers Y or some one or more of them having their unbroken or unslotted portions at the rear edge of slide *g*, and it is attempted to swing lever W to the position shown in Fig. 6, the shoulder *i* will strike or jam against stud *k* as the slide *g* is prevented by one or

more of the tumblers Y from yielding or sliding backward so as to allow shoulder *i* to clear stud *k*. When however the tumbler slots *f* are in alignment at the rear edge of the locking slide *g* (Fig. 5) and the key *a* is turned to swing cylinder Z with lever W and fork X to the position shown in Fig. 6, the impact of shoulder *i* at the front of slide *g* with stud *k* will force the back edge of the slide into the tumbler slots *f* as required for the shoulder *i* to clear or slip past stud *k*.

The front part of locking slide *g* may be provided with an arm *l* adapted to slide along stud *k* as seen. The lever W may also have a tongue or flange *m* guided in a suitable groove or way in stud *n* on plate B. The swinging of lever W from the position in Fig. 2 to the position in Fig. 6 will withdraw bolt C.

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

1. The combination with a lock case having a bolt, of a rocking forked lever for actuating the bolt, a locking plate having a sliding movement on the forked lever, a rotatable cylinder, lengthwise movable notched tumblers mounted in the said cylinder and extending between the forks of the said rocking lever, and a stud on the lock case for sliding the locking plate into the notches of the tumblers when the latter are moved inward by the proper key, substantially as described.

2. A lock case having a bolt, combined with a lever for actuating the bolt and provided with tumblers, a locking slide engaged by the tumblers and provided with a shoulder, and a stud on the case adapted for the engagement of the shoulder on the slide substantially as described.

3. A lock case having a bolt and a recess S, combined with a handle for the bolt adapted to enter the recess, an actuating spring for the bolt, and an arm against which the spring is braced, said lock case having shoulders against which said arm is braced and with which said arm is alternately engaged as the handle is moved into and out of the recess substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHANNES TH. PEDERSEN.

Witnesses:
WILLIAM MILLER,
E. F. KASTENHUBER.