

(No Model.)

C. D. WILLIAMS.
CYLINDER LOCK.

No. 477,036.

Patented June 14, 1892.

Fig. 1.

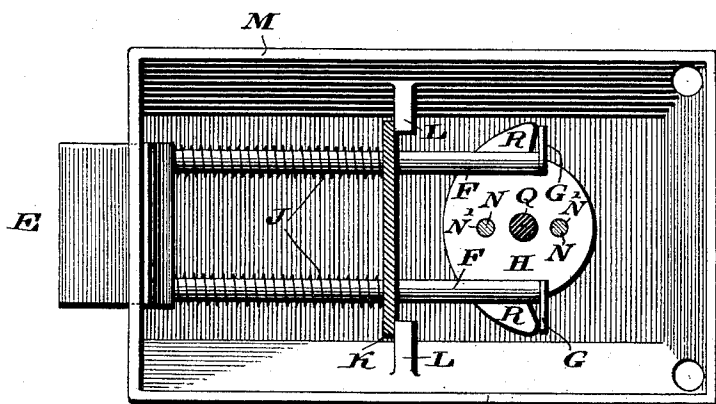
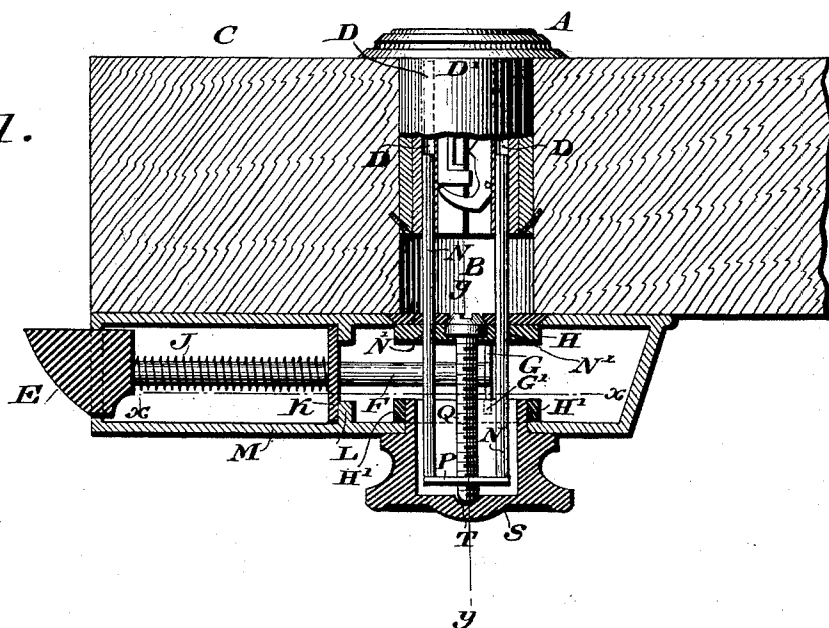


Fig. 2.

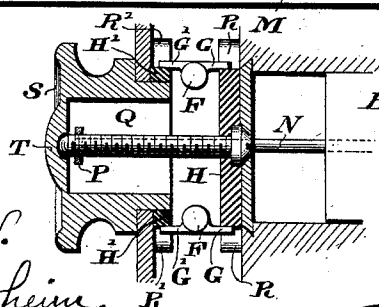


Fig. 3.

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CYLINDER-LOCK.

SPECIFICATION forming part of Letters Patent No. 477,036, dated June 14, 1892.

Application filed October 31, 1891. Serial No. 410,433. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. WILLIAMS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Adjustable Connections for Door Latches and Locks, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of means for connecting a lock with the operating mechanism of a door-latch, adapted to be adjusted to different thicknesses of doors, it being also applicable to locking-bolts, said means consisting of a rotatable plate mounted on the casing, a plate secured to the knob of the latch, a frame which passes freely through said rotatable plate into the lock, and a screw which works in the cross-bar of said frame, said parts being combined, as will be hereinafter more fully set forth, and pointed out in the claims that follow this specification.

Figure 1 represents a longitudinal section of a door-latch and partial side elevation and partial section of a lock or escutcheon together with an adjustable connection of said latch and lock, embodying my invention. Fig. 2 represents a section on line *xx*, Fig. 1. Fig. 3 represents a section of a portion on line *yy*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a rotary lock or escutcheon fitted in an opening B of the door C and having openings D in its cylinder D'.

E designates a door-latch, whose rods F are provided with toes G for engagement with the plate H, the latter being rotatably mounted on the inner wall of the casing M of the latch.

J designates coiled springs on the rods F, the same bearing against the latch E and the plate K, the latter resting on the lugs L of the casing M, whereby the latch is held in locking position.

In the openings D of the cylinder D' and openings N' of the plate H are freely fitted the rods N, which also pass through the latch-casing and enter the hollow knob S of the latch, the ends of the rods within said knob being connected by a cross-piece P, and also pass-

ing freely through an annular plate H', which encircles the inner end of the knob S and is secured thereto so as to rotate therewith. The rods N and cross-piece P may be integral and substituted by bars, and they form together a frame which extends at an angle from the latch and is adapted for adjustably connecting the lock with said latch. The plates H have shoulders R, with which the toes G engage, and the rods F are provided with additional toes G', with which shoulders R' on the plate H' engage.

Q designates a screw, whose head is swiveled centrally in the plate H, and whose threaded part engages with the cross-piece P of the rods N, by which provision the rods may be moved in opposite directions, so that said rods may be adjusted relatively to the thickness of the door and at all times sufficiently enter the openings D of the cylinder D'. When the lock is located in the opening B and secured therein, the rods are adjusted relatively thereto. Then the latch is screwed to the door, it being seen that when the lock mechanism is operated the rods communicate the motion thereof to the plate H, and the proper shoulder R thereof engages with the adjacent toe G, whereby the latch is drawn back. When the knob S is rotated, motion thereof is communicated to the plate H', and the proper shoulder R' thereof engages with the adjacent toe G', whereby the latch is drawn back, it being noticed that the latch is adapted for right or left, as required. It will be seen that as the rods N are adjustable to and from the lock I avoid the necessity of cutting off the ends of said rods in order to obtain the proper length of the same relatively to the thickness of the door to which the latch and bolt are applied. On the inner face of the head of the knob S is a recess T, which forms a bearing for the end of a screw and assists in steadying the same.

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

1. A rotatable plate mounted in a casing and having shoulders thereon, a latch adapted to engage with said shoulders, movable rods passing through said plate, a cross-bar connecting the inner ends of said rods, a screw swiveled in said casing and engaging said

cross-piece, and a lock having openings to freely receive the ends of the rods opposite from the cross-bar, said parts being combined substantially as described.

5 2. A latch having a rotatable plate mounted on the casing thereof, an annular plate secured to the knob of said latch, a frame which passes freely through the first-named plate into said knob, a lock in which said frame is
10 adjustably fitted, and toes on the connecting-rods of the latch, said toes being in pairs which engage independently with shoulders on the said rotatable plates, whereby the latch
15 may be operated by said knob or lock and the lock and latch adjustably connected relatively to the thickness of a door to which they

are applied, the parts named being combined substantially as described.

3. A latch with an operating-knob, a plate within the casing, a rotatable lock, a frame 20 passing through said plate and casing into the lock, a screw swiveled in said plate and working in the cross-bar of said frame, and a plate connected with the knob and having shoulders thereon, said latch having toes for 25 engaging said first-mentioned plate and said knob-plate, said parts being combined substantially as described.

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Witnesses:

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