

(No Model.)

P. J. CONROY.
LOCK AND LATCH.

No. 564,915.

Patented July 28, 1896.

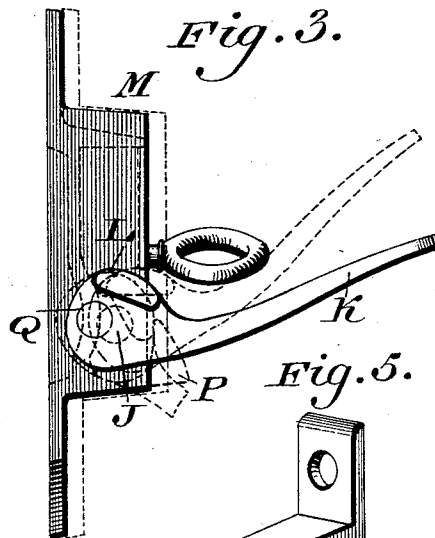
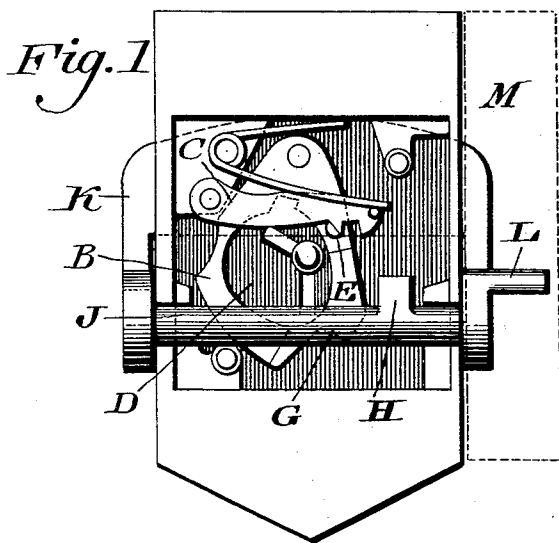
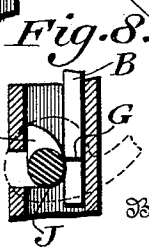
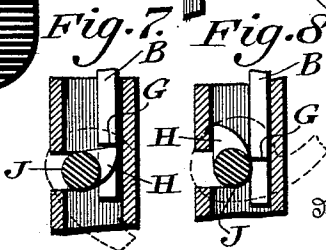
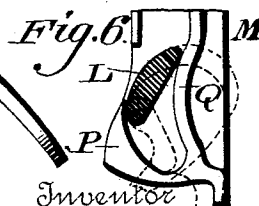
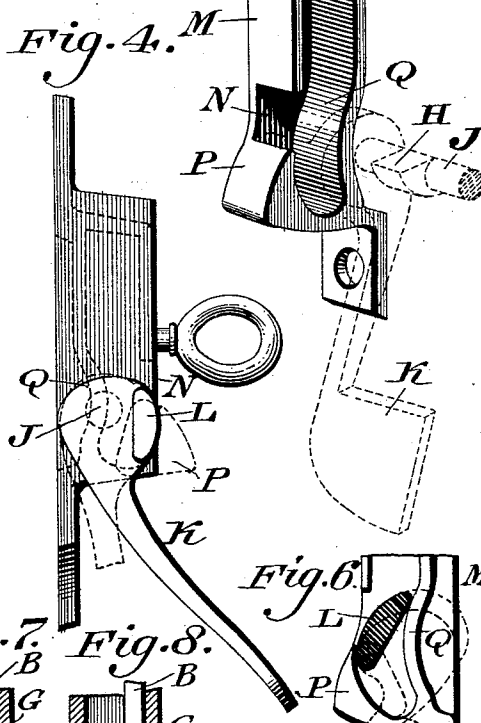
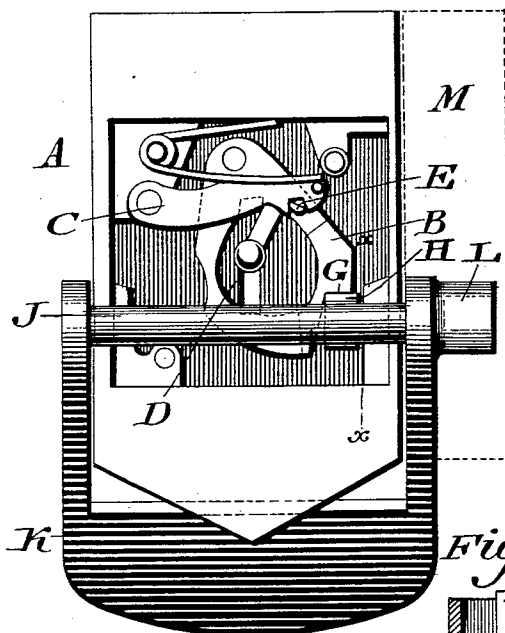


Fig. 2.



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UNITED STATES PATENT OFFICE.

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LOCK AND LATCH.

SPECIFICATION forming part of Letters Patent No. 564,915, dated July 28, 1896.

Application filed November 16, 1894. Serial No. 528,961. (No model.)

To all whom it may concern:

Be it known that I, PATRICK J. CONROY, 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 Door and other Bolts and Locks, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a novel lock having a tumbler with a stud thereon engaged by a dog and a shoulder engaged by a lug on a rocking shaft, so that a nose on said shaft cannot be removed from the keeper thereof until a handle on said shaft is unlocked.

It further consists in the construction of the nose of the rock-shaft of the lock of elliptical form, and providing the keeper with a throat, as hereinafter described, so that when said nose enters said keeper it is automatically seated in locked position.

It also consists of the combination and arrangement of parts hereinafter set forth.

Figures 1 and 2 represent rear views of a bolt and lock embodying my invention. Figs. 3 and 4 represent side elevations thereof. Fig. 5 represents a perspective view of the keeper and adjacent portions of the bolt in dotted lines. Fig. 6 represents a section of detached portions of the nose and keeper on a different scale. Figs. 7 and 8 represent sections of detached portions on line *xx*, Fig. 2, showing the parts in different positions.

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

Referring to the drawings, A designates a lock-casing within which is pivoted an oscillating tumbler B and a dog C, said tumbler having an opening D, whose walls are adapted to be engaged by a key, which is also adapted to operate the dog C, and thus throw said tumbler in opposite directions, when it will be controlled by said dog, owing to locking action of the latter with the stud E on said tumbler. At the side of the tumbler is a shoulder G, which is adapted to be engaged by a lug H on the bolt or rock-shaft J, whose bearings are on the sides of the casing A. Connected with said shaft is a handle K, whereby said shaft may be rotated from without. Projecting laterally from one end of the shaft, or the adjacent side piece of the han-

dle K, is a nose L, which is eccentric to said shaft, and adapted to engage with the keeper M, as will be hereinafter described.

It will be seen that when the nose L is properly within the keeper M the tumbler will be locked, the shoulder G being in the path of or adjacent to the lug H. Consequently, if attempts are made to raise the handle K, the rock-shaft J may receive a slight rotary motion, but the lug H contacts or engages with said shoulder G, and thus prevents further rotation of said shaft and the elevation of the handle, by which provision the nose L is retained in secured position in the keeper, so that opening of the door to which the casing A is attached is prevented. When, however, the tumbler is properly unlocked, the shoulder G is removed from the lug H, whereby said lug is uncontrolled by said shoulder. The handle K may now be raised to an extent sufficient to permit the nose L to emerge from the keeper, so that the door may be opened, it being noticed that the said nose is somewhat elliptical in form, and said keeper has a throat N, which is wider than the narrow diameter of said nose, but of less width than the greater diameter of the same. Consequently, when the narrow diameter registers with said throat, the nose may be withdrawn from the keeper through the throat. When, however, the handle is lowered, the wide diameter of said nose is behind the lower wall P of said throat, (shown more particularly in Fig. 4,) and thus the nose is locked within the keeper.

On the rear wall of the keeper, behind the throat N, is a swell Q, which is adapted to be engaged by the narrow end of the nose L after the latter has entered the keeper through the throat by the closing of the door, the handle having been sufficiently raised. (See Fig. 4.) This causes the nose to ride upwardly into the keeper and receive a partial rotation, so that it enters the keeper partly behind the throat, and then, owing to its eccentric nature, bears against the lower wall of the latter. (See Fig. 6.) The rock-shaft will also rotate and the nose is carried downwardly, and its widest diameter is seated behind said wall, as seen in dotted lines in Fig. 4. The tumbler may now be locked, so that the elevation of the handle and withdrawal

of the nose from the keeper are prevented, owing to the action of the shoulder G on the lug H, it being evident that the nose is controlled by the wall P of the throat of the keeper, so that said nose is prevented from being withdrawn from the keeper, the door thus remaining locked, as previously stated.

When the door is to be opened, the handle is raised, the nose or lug contacts with the swell Q, and rides on the same, thus imparting a forward motion to the door, and starting the opening of the same, a feature of importance should the door stick, after which the nose or lug is in line with the throat N, and may then be entirely withdrawn from the keeper.

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

1. A casing, an oscillating tumbler, with an opening therein, a dog engaging a stud on said tumbler, a rocking shaft with a lug engaging a shoulder on said tumbler, a nose on the end of said shaft and a keeper with a throat therein, said parts being combined substantially as described.

2. A casing, an oscillating tumbler with a shoulder thereon, a rock-shaft with a lug adapted to engage said shoulder, and elliptical-shaped nose at one end, and a keeper

having a throat wider than the narrow diameter of the nose but of less width than the greater diameter thereof, said parts being combined substantially as described.

3. A casing, a rock-shaft having at one end an elliptical-shaped nose, in combination with a keeper having a throat wider than the narrow diameter of the nose, but of less width than the greater diameter thereof, said keeper having its rear wall, provided on the front thereof, with the swell Q which is opposite to said throat and joins the inner wall of the recess in the bottom part P, of the keeper, below said throat, said parts being combined substantially as described.

4. A bolt and lock consisting of a casing, an oscillating tumbler having a shoulder thereon, a spring-controlled dog engaging a stud on said tumbler, a rocking shaft with a lug engaging said shoulder and an elliptically-shaped nose at one end, a keeper having a throat wider than the narrow diameter of the nose, but of less width than the greater diameter thereof, and provided with a swell on its rear wall, said parts being combined substantially as described.

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Witnesses:

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