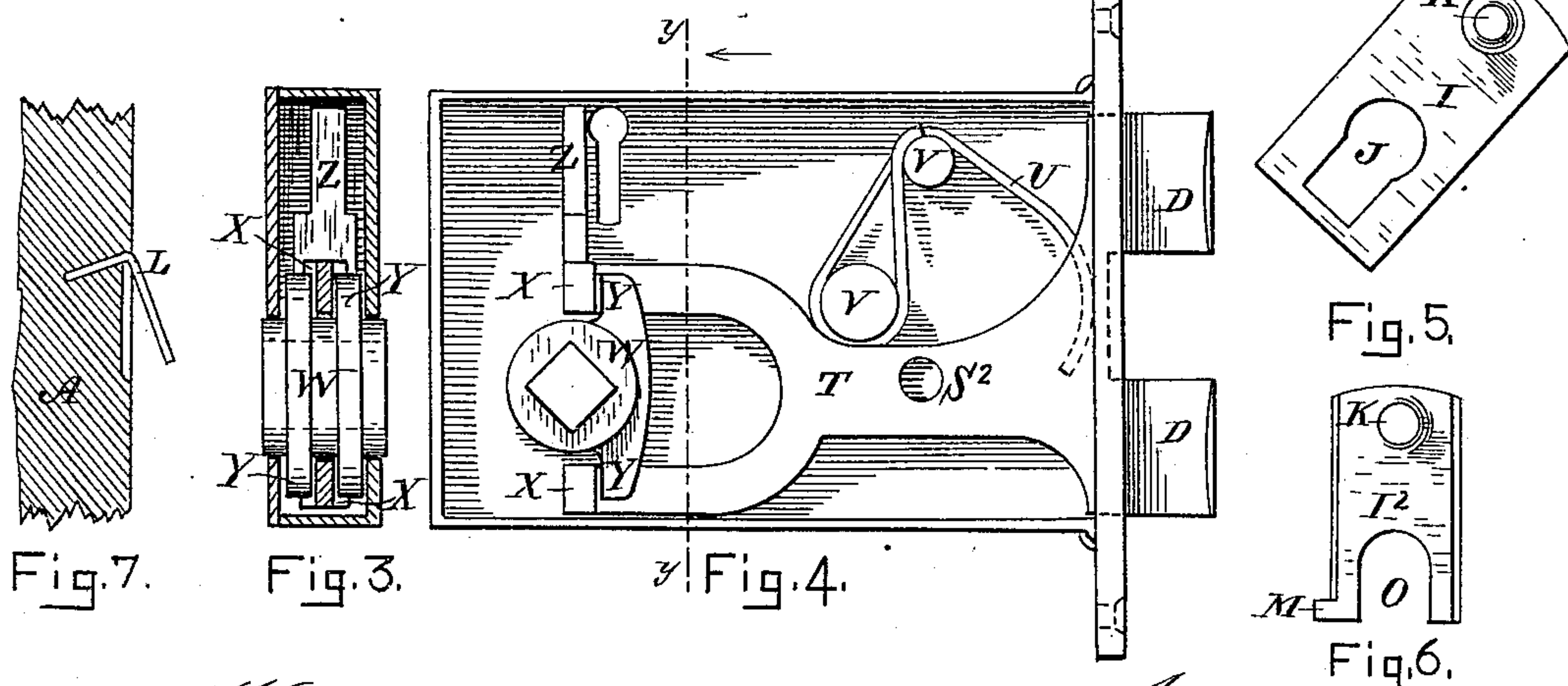
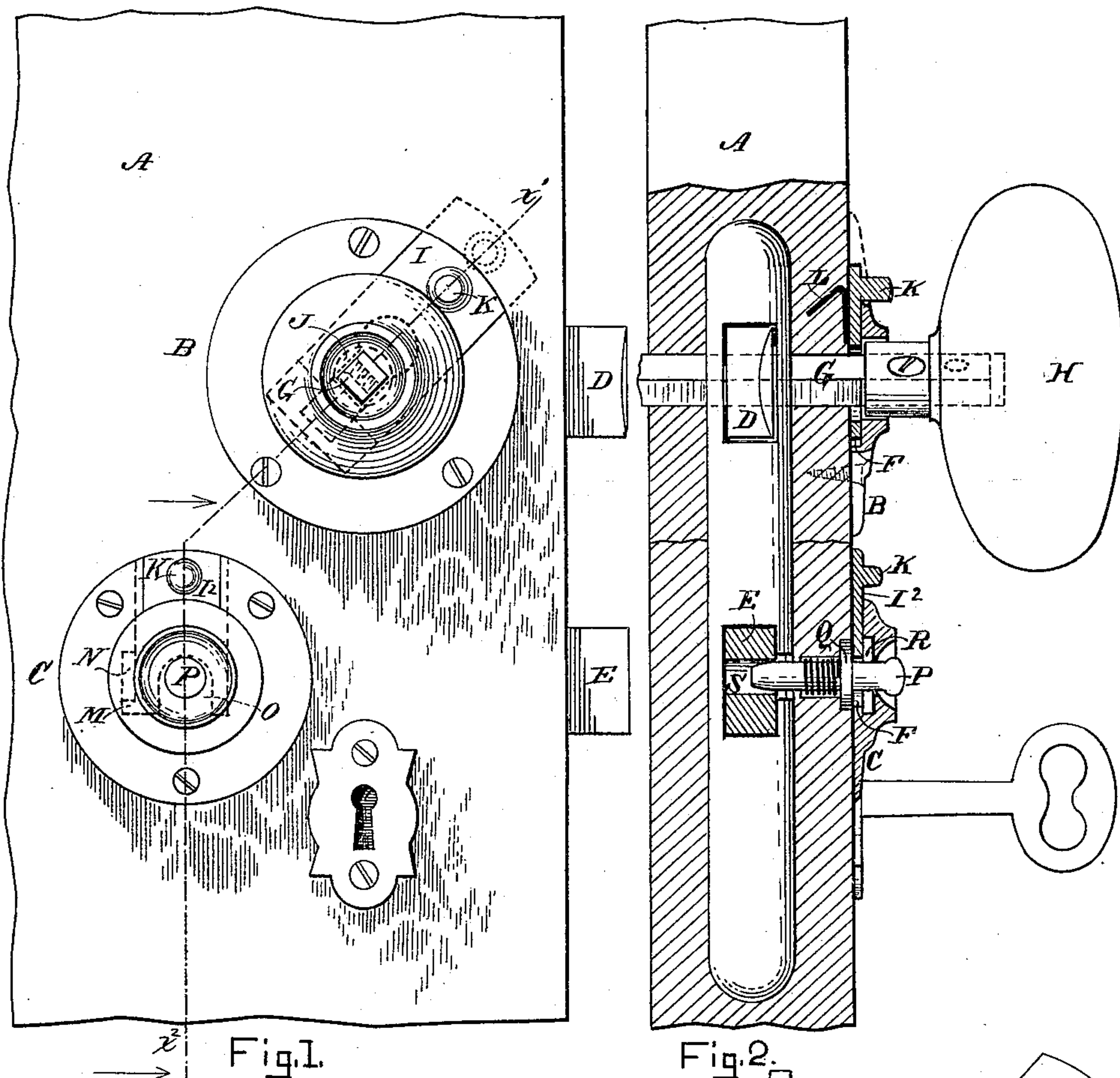


(No Model.)

T. KIRWAN.
COMBINED LOCK AND LATCH.

No. 353,492.

Patented Nov. 30, 1886.



Witnesses.
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H. E. Kewick

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UNITED STATES PATENT OFFICE.

THOMAS KIRWAN, OF BOSTON, MASSACHUSETTS.

COMBINED LOCK AND LATCH.

SPECIFICATION forming part of Letters Patent No. 353,492, dated November 30, 1886.

Application filed March 22, 1886. Serial No. 196,178. (No model.)

To all whom it may concern:

Be it known that I, THOMAS KIRWAN, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Combined Locks and Latches, of which the following is a specification.

My invention relates to improvements in combined locks and latches, whereby the same may be effectually secured from the interior by co-operative attached devices, so as to render it impossible to operate the latch in any manner to obtain entrance from the exterior, and in the novel construction of the duplex operating the latch. Said features I consider as improvements on my invention embodied in Letters Patent No. 317,547, issued to me May 12, 1885.

The object of my present invention is to secure an efficient, inexpensive, and durable construction of assembled devices for the purpose above mentioned, the utility of which and the functions of the various parts being further exemplified in the annexed drawings, forming a part of this specification, in which—

Figure 1 illustrates in side elevation that portion of a door bearing my improved escutcheons on its inner side, the knob removed, the bolt and latch thrown, and the locking parts exhibited in dotted lines. Fig. 2 combines an oblique and vertical transverse section of the preceding view on the lines $x' x^2$. Fig. 3 is a vertical transverse section of my improved latch on the line $y y$, Fig. 4. Fig. 4 designates a plan of the same with the cover removed to expose the interior mechanism. Figs. 5 and 6 are front elevations of the locking-plates. Fig. 7 exhibits a section in a modified form of the door receiving the reflexed spring, to show its position when released from the locking-plate.

Similar letters indicate like parts throughout the several views thereof, referring to which—

A designates the part of a door upholding my escutcheons B and C, the former controlling the latch D, while the latter secures the bolt E. In the construction of said escutcheon B a groove, F, is formed of sufficient width to encompass the spindle G, actuated by the knob H, and is in depth sufficient to receive the sliding locking-plate I, ordinarily of rectilin-

ear form, and preferably placed at the angle illustrated. Said locking-plate has centrally with its diameter a circular opening terminating in a slotted way, as at J, to admit and to embrace the spindle G when the latch D is thrown and said locking-plate is moved outward, as indicated in dotted lines, Fig. 1.

K indicates the projecting finger-stud by which said plate is manipulated, while L, Fig. 2, shows the form and position of the reflexed spring, one arm of which is driven obliquely into the door beneath the locking-plate, so as to form an acute angle, with its free end pressing said plate against its bed with sufficient pressure to retain it in any desired position, its unconfined position being illustrated in Fig. 7.

In the escutcheon C, controlling the lock-bolt, the difference of construction consists in the addition of a projecting lug or gib, M, on the locking-plate, and a groove, N, for its reception in the escutcheon, to prevent its entire withdrawal after the parts are assembled. The inner part of the locking-plate I^2 also differs in form, having a semicircular bifurcated end, O, which embraces the thumb-bolt P, to retain the latter in a secure position. (Observed in Fig. 2.) Said bolt P is provided with a circumferential bearing, Q, seating a spring of helicoidal form surrounding said bolt P, and maintaining a pressure in the direction of its length against said bearing Q and sliding plate I^2 when the lock-bolt E is secured, as illustrated. The chamber R receives the flange Q when its bolt is withdrawn from the perforation S in said lock-bolt E, which is situated opposite the foot of the thumb-bolt P, when said bolt is thrown outward and it is not desired to lock the parts. To render the thumb-bolt inoperative in dogging the bolt E, the locking-plate I^2 is drawn away from the flange Q, when the action of the spring forces said thumb-bolt into its chamber R and clear from the perforation S, permitting an unobstructed movement of the locking-bolt by the key.

Obviously my escutcheon C is applicable to secure the latch illustrated in Fig. 4, wherein I pierce the arm T, as at S^2 , the escutcheon C being secured above this perforation, when the latches D D are thrown by the action of the reflexed resisting-spring U, secured within the case by studs V V. Said latches are actu-

ated by the duple rocker-cam W, having its bearing on the knob-spindle G, said arm T being forked to surround the cam, with offsets X X, which alternately receive the pressure of the extended faces Y Y as the same are oscillated. Z is the projecting lever of said forked arm, against which the key impinges when said latches D D are retracted.

Having explained the construction and operation of my improved invention, what I desire to secure by Letters Patent, and claim, is—

1. In a combined lock and latch, the recessed escutcheon C, provided with a gibway, N, and the bifurcated locking-plate I², bearing the projecting gib M, in combination with a perforated lock-bolt, E, and spring-actuated thumb-

bolt P, bearing a circumferential flange, Q, as illustrated, and for the purpose described.

2. In a combined lock and latch for doors, rocker-cam W, having duplex extended faces Y, in combination with the quadruple offsets X, the lever Z, perforated arm T, perforation S², thumb-bolt P, locking-plate I², and escutcheon C, substantially as and for the purpose specified.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOMAS KIRWAN.

Witnesses:

WM. H. MILLER,
H. E. REMICK.