

No. 622,676.

Patented Apr. 11, 1899.

J. M. FORNEY.
COMBINED BOLT AND LOCK.

(Application filed Nov. 22, 1898.)

(No Model.)

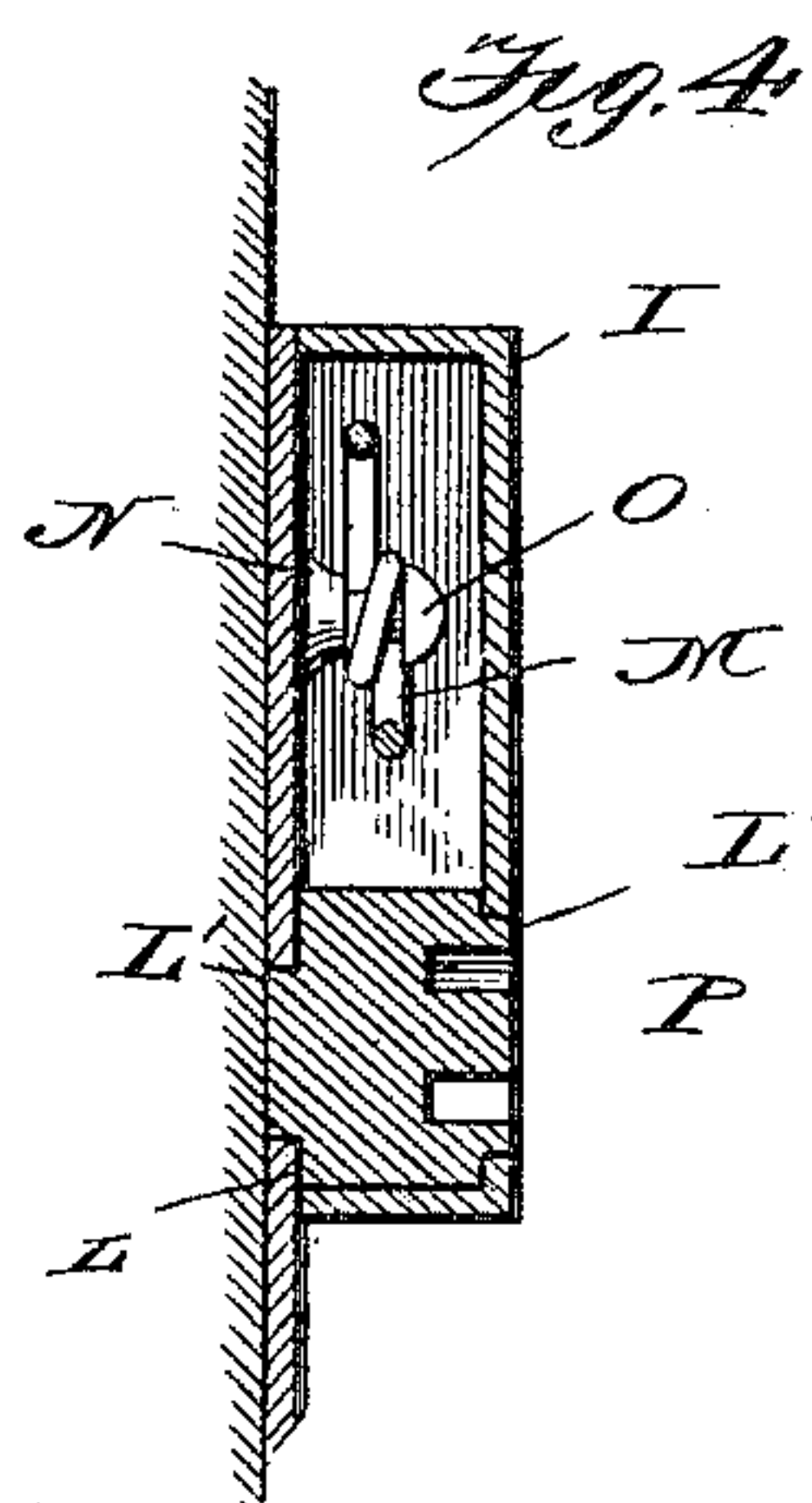
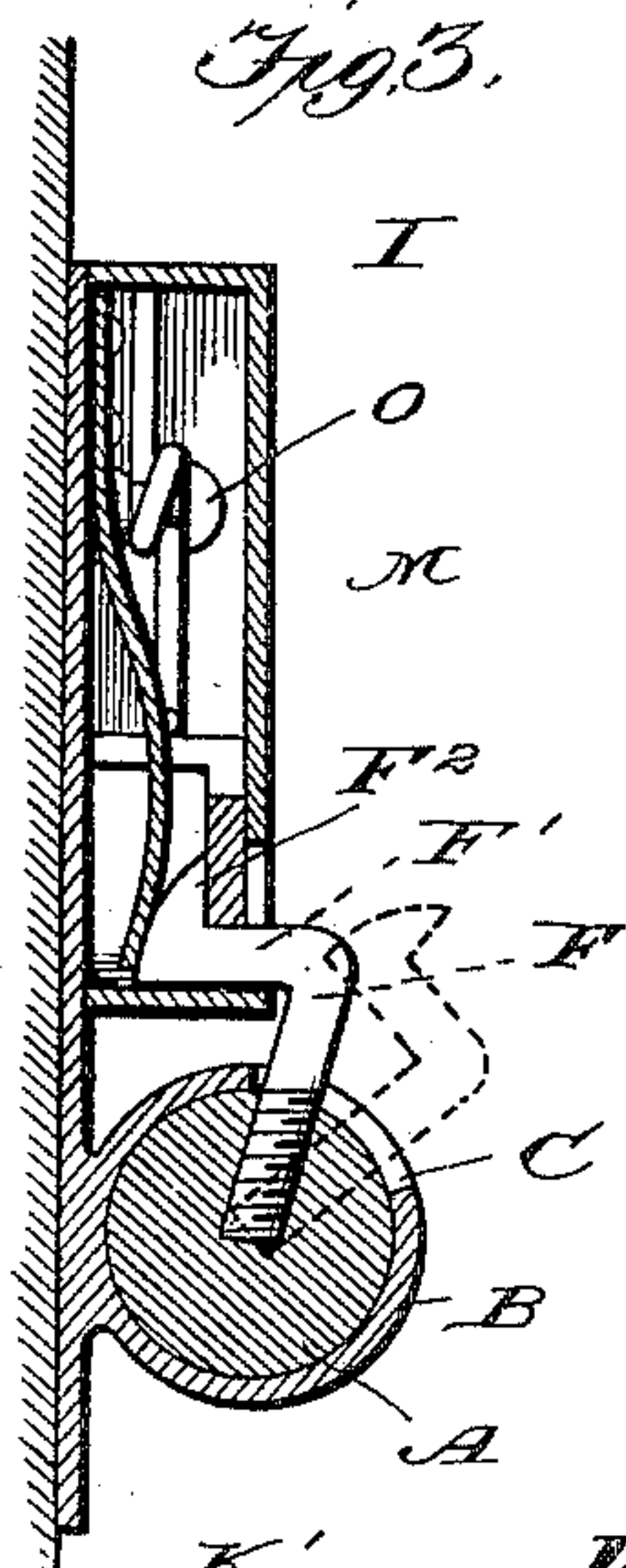
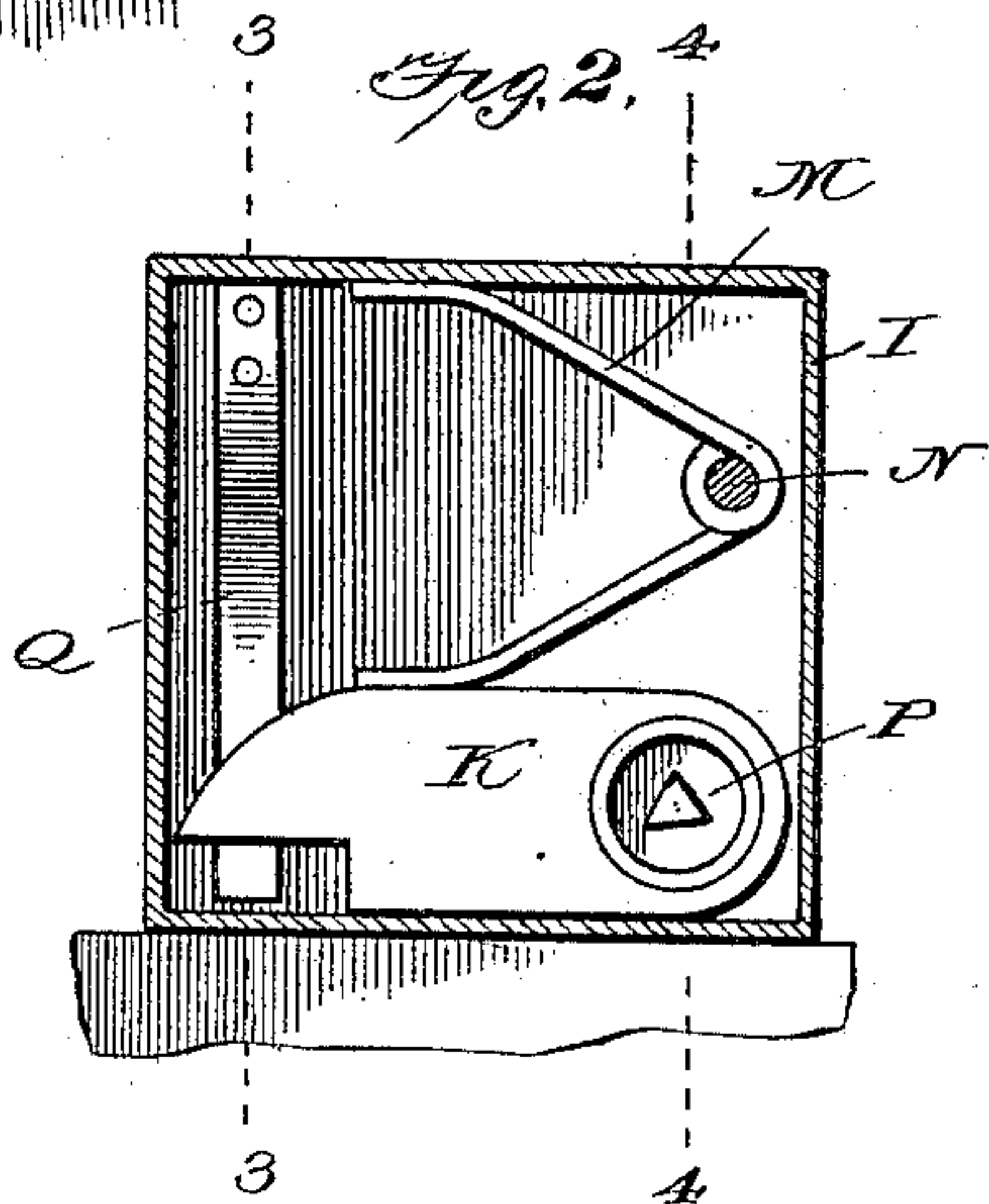
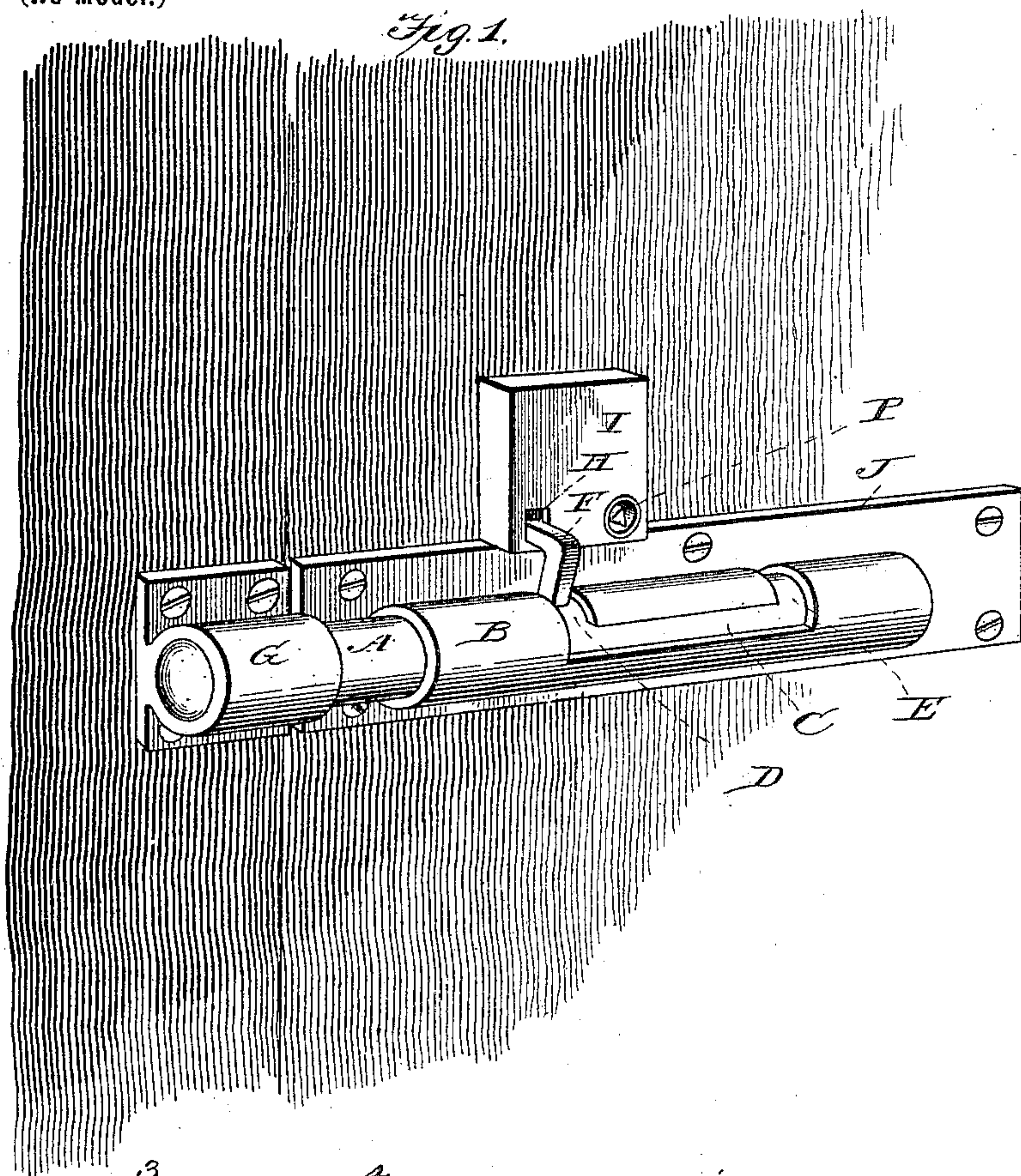
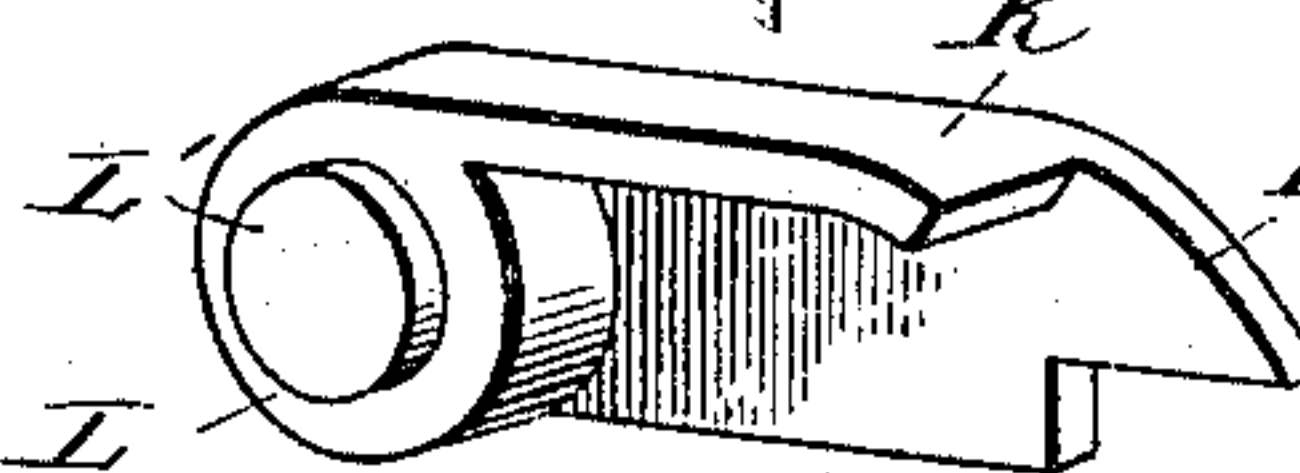


Fig. 5.



Witnesses

John Shaw
Charles Brock

Inventor

John M. Forney,

by *Amara Lee*
Attorneys

UNITED STATES PATENT OFFICE.

JOHN M. FORNEY, OF NISBET, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO
JAMES R. HANNA, OF SPRING MILLS, PENNSYLVANIA.

COMBINED BOLT AND LOCK.

SPECIFICATION forming part of Letters Patent No. 622,676, dated April 11, 1899.

Application filed November 22, 1898. Serial No. 697,209. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. FORNEY, a citizen of the United States, residing at Nisbet, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Combined Bolt and Lock, of which the following is a specification.

My invention relates to bolts for securing doors, and more especially to an improved arrangement of a bolt of this class and means for locking it in its forward or closed position.

The object of the invention is to provide means whereby the ordinary bolt may be used for its usual purpose and operated by hand to either lock or unlock it and by which when desired the bolt may be locked with a key.

My invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described and afterward specifically pointed out in the appended claims.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view illustrating a combined bolt and lock constructed in accordance with my invention in practical use. Fig. 2 is an interior view of the lock-case, looking from the front, with the front plate removed. Fig. 3 is a vertical section on the line 3 3 of Fig. 2. Fig. 4 is a similar section on the line 4 4 of Fig. 2. Fig. 5 is a detail perspective view of the locking tumbler or latch detached.

Like letters of reference mark the same parts wherever they occur in the various figures of the drawings.

Referring to the drawings by letters, A indicates a round bolt of ordinary construction, mounted in a barrel B, the barrel being provided with the usual longitudinal slot C, with end branches D and E at right angles thereto, extending partially around the barrel, through which slot the laterally-projecting handle-bar F of the bolt extends and by which the bolt may be operated by hand, as is usual.

The laterally-extending arm or handle F in this instance is provided with an angular arm F' at its outer end, formed into a catch F², adapted when the handle-bar is turned into the branch slot D to retain the bolt in its locked position in the keeper G to enter an opening H in a lock-case I, mounted upon the same plate J which supports the bolt-barrel.

Within the lock-case is located a pivoted tumbler or latch K, a circular lug in the rear of which enters a corresponding opening in the plate J, the latch being provided with a hub L and a similar circular end lug L' on its outer end to enter an opening in the front plate of the lock-case, whereby the two end lugs form trunnions, upon which the latch may be turned. The latch when in operative position to receive the catch F² rests and is held normally upon the bottom plate of the lock-casing by means of a spring M, consisting of two arms joined by a central coil, which coil is mounted upon a stem N, projecting inwardly from the back plate of the lock-casing, and held in position thereon by a screw O, the upper arm of the spring resting against the under side of the top plate of the lock-casing and the lower arm resting upon the upper edge K' of the latch, which is widened to provide a proper seat therefor, as shown most clearly in Fig. 5.

The hub L of the latch K is hollow at its front end and is provided with an angular-shaped pintle or lug P to receive a key, by which it may be turned, and the outer lower edge of the latch is cut away to permit of the entrance of the catch F² into the lock-case. A flat spring Q, secured to the rear plate of the lock-case, projects downward in line with the cut-away portion of the latch K, and when the catch F² is within the lock-case the normal tendency of this spring pressing against the inner face of the latch is to throw the latch out of the case.

With a bolt and lock constructed as hereinbefore described the bolt may be operated in the usual manner by using the bar F as a handle to press the bolt forward and backward, the handle moving in the slot C and its branches D and E; but when it is desired to lock the bolt so that it cannot be removed

from the keeper G without the key the bar F is pressed inward in the branch slot D until the catch F^2 enters the opening H in the lock-case and wedges its way under the latch K, which by virtue of the tendency of the spring N will immediately drop behind the point of the latch F^2 and securely hold the latch and handle-bar against being withdrawn from the casing. To unlock the bolt, a key provided with a bore corresponding in contour with the pintle P is inserted in the hub of the latch over said pintle and turned, raising the latch K out of engagement with the point of the catch F^2 , which, being then free, will be pushed out of the casing by means of the spring Q.

The advantages attending the use of my invention will be obvious from the foregoing description, and while I have illustrated and described the best means now known to me for carrying out my invention I do not wish to be understood as restricting myself to the exact details of construction shown, but hold that any slight changes, such as might suggest themselves to the ordinary mechanic, would properly fall within the limit and scope of my invention.

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

1. The combination with a bolt mounted to rotate and slide in a barrel or casing and provided with a lateral handle-bar projecting through a slot therein, said handle-bar being

bent inward toward the back plate and formed at its end into a latch, of a spring-actuated latch or tumbler, a casing in which said latch is pivoted, provided with an opening to permit the catch to enter and engage under the spring-latch, and a spring, secured within the casing and bearing against the inner end of the catch to push it out of the casing when released from engagement with the latch, substantially as described.

2. The combination with the back plate, J, of the lock-casing and bolt-barrel mounted thereon, the latter being provided with the longitudinal and branch slots, the bolt, mounted in the casing, the laterally-projecting handle-bar, F, of the bolt, adapted to move in said slots and having its outer end bent to form the catch, F^2 , the latch, K, pivotally mounted in the lock-casing and adapted to be turned with a key, its lower, outer corner being cut away to admit of the entrance of the catch into the casing, the spring, M, coiled around the stem, N, inside the casing, having one of its arms bearing upward against the top of the casing and the other downward against the top of the latch, and the flat spring, Q, secured to the back plate, J, and bearing outward against the inner end of the catch, substantially as described.

JOHN M. FORNEY.

Witnesses:

CHAS. H. SALLADE,
THOS. SALLADE.