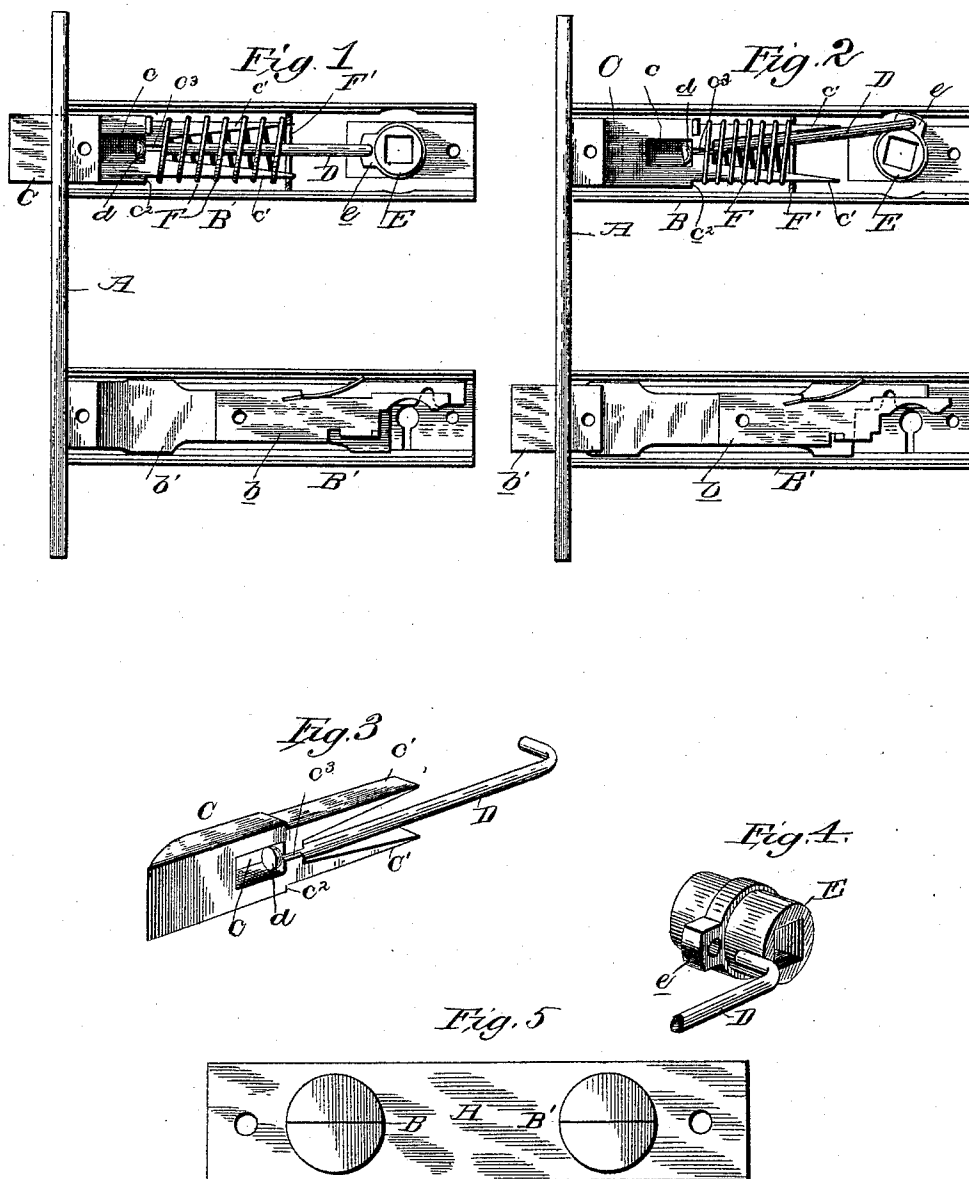


(No Model.)

P. D. & A. JOHNSON.
LATCH.

No. 460,016.

Patented Sept. 22, 1891.



Witnesses:
F. R. Cornwall
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UNITED STATES PATENT OFFICE.

PETER D. JOHNSON AND ARTHUR JOHNSON, OF WOLCOTT, INDIANA; SAID
PETER D. JOHNSON ASSIGNOR TO AMOS JOHNSON, OF SAME PLACE.

LATCH.

SPECIFICATION forming part of Letters Patent No. 460,016, dated September 22, 1891.

Application filed February 6, 1891. Serial No. 380,490. (No model.)

To all whom it may concern:

Be it known that we, PETER D. JOHNSON and ARTHUR JOHNSON, citizens of the United States, residing at Wolcott, in the county of White and State of Indiana, have invented new and useful Improvements in a Combined Lock and Latch, of which the following is a specification.

Our invention relates to an improvement in combined locks and latches; and it consists in the construction and arrangement of parts hereinafter described, and definitely pointed out in the claim.

The object of our invention is to provide a combined lock and latch which will be simple in construction, cheaply manufactured, and readily applied. This object we attain by the construction illustrated in the accompanying drawings, wherein like letters of reference represent corresponding parts in the several views, and in which—

Figure 1 represents a side elevation with the sides of the casings removed, the latch being extended and the bolt drawn back. Fig. 2 is a similar view with the parts adjusted in an opposite manner. Fig. 3 is a detail perspective view of the latch. Fig. 4 is a detail perspective view of the knob, sleeve, and end of pitman; and Fig. 5 is a rear elevation of the casing.

In the drawings, A represents the attaching plate, having apertures therein at both ends and center.

B and B' represent cylindrical casings secured to the plate, respectively, at points between the center and ends thereof. These casings are made of two parts divided centrally and united by suitable screws. In the upper casing is placed the latch C, which projects through an opening in the plate and works longitudinally in the casing. It is constructed with a recess *c* in its central portion and two rearwardly-extending arms *c'*, the upper faces of which are below the plane of the edges of the latch proper, thereby forming shoulders *c''*. These arms are beveled or inclined oppositely on their inner faces, diverging at their outer ends to narrow points. They are formed of spring metal, so that they may be forced apart. They are separated

from each other by a transverse groove *c'''*, whereby the same may be sprung up or forced apart. In adjacent walls of the groove *c'''* are formed notches, (not shown,) in which the end of a pitman D rests. The pitman D is constructed with a semicircular bearing *d* on its outer end, which works in the aperture *c* of the latch. The pitman is placed in the groove between the arms by springing the latter apart and inserting the same while they are in this position. The size of the pitman is such as to permit the same to move in the groove, if desired. The opposite end of the pitman D is curved at right angles and fitted in an apertured socket extension extending laterally from the sleeve E of the knob, so that by turning the knob from the position shown in Fig. 1 to that shown in Fig. 2 the pitman is carried up and back, thereby drawing the latch with it.

To normally hold the latch out we place around the arms *c'* a spiral spring F, one end of which abuts against the shoulders *c''*, while the other end abuts against a circular stop F', rigidly secured to the casing, near the center thereof. It will therefore be seen that a perfect longitudinal movement of the latch is obtained by the movement of the knob, the inclined sides of the arms, together with the semicircular bearing of the pitman, permitting the pitman to work up and down in the space between the arms without throwing the latch out of alignment. It will also be noticed that the circular stop F', between which the arms work, acts as a guide, in conjunction with the plate, for the latch.

The construction of the lock in the casing B' we do not deem it herein necessary to describe other than to state that the respective tumblers *b* are pivoted in the casing and the bolt *b'* arranged to operate between the tumblers, which are located on opposite sides of the casing.

In uniting the two casings to the plate A we are enabled to secure the two in the cavity formed in the door by three screws, the center screw acting to hold both casings in place, while the upper screws act, respectively, as assistants to the center screw, and also by uniting the two casings the lock and

latch are less liable to become disarranged in their seats or out of alignment with the locking-openings in the edges of the door-frame.

5 We are aware that many minor changes can be made in the arrangement and construction of our invention and substituted for those herein shown and described without in the least departing from the nature and principle of our invention.

10 Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

15 In a door-latch, the combination, with a cylindrical casing, of a longitudinally-movable latch therein, having a recess near the center thereof, two rearwardly-extending spring-arms c' integral with the latch, having oppositely-inclined inner faces, shoulders formed by the latch at the ends of the arms,

a transverse groove c^3 in the portion of the latch between the arms, notches in the walls of the groove, a pitman passing through the groove and resting in the notches, having an enlarged head resting in the recess for engaging the grooved portion of the latch, a sleeve having an extension in which the opposite end of the pitman is secured, a circular stop F' on the casing, and a spring surrounding the arms, its ends abutting against the shoulders and stop, substantially as described. 30

In testimony whereof we affix our signatures in presence of two witnesses.

PETER D. JOHNSON.
ARTHUR JOHNSON.

Witnesses:

C. E. ROGERS,
JESSE GATES.