No. 644,255. Patented Feb. 27, 1900.

J. C. MEYER.

LOCK.

(Application filed June 26, 1899.)

(No Model.)

Fig. 1.

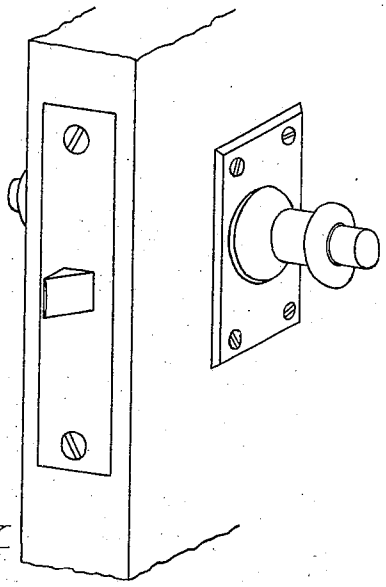
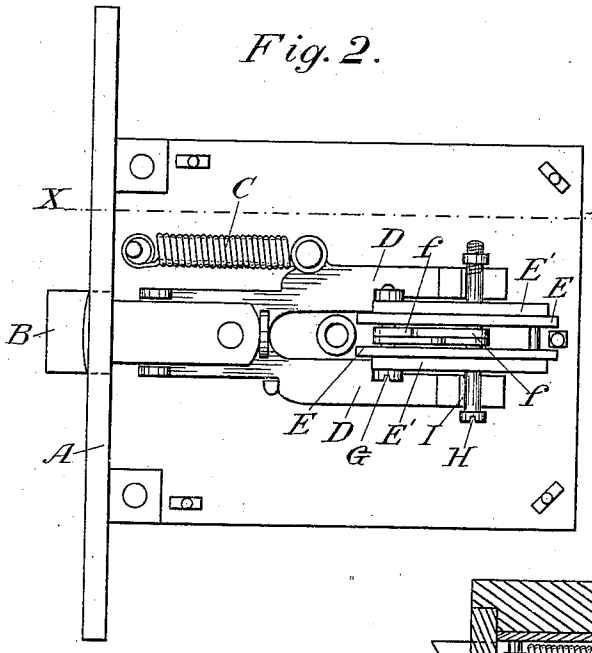


Fig. 2.



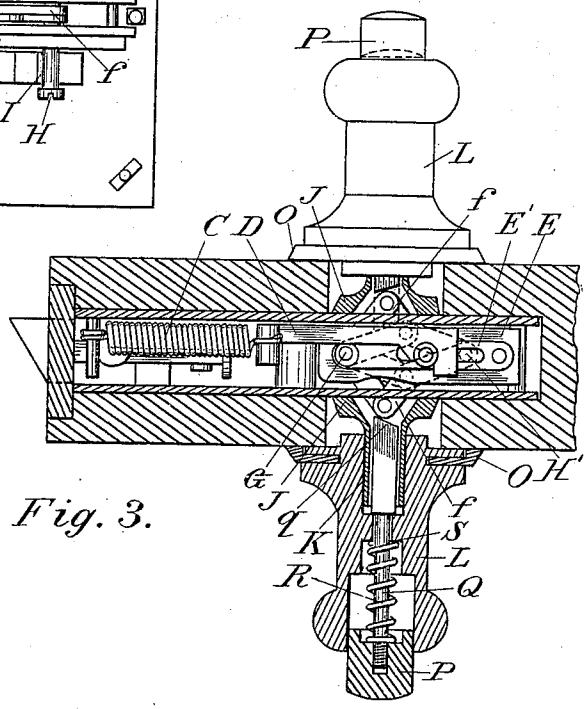


Fig. 3.

Witnesses,
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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LOCK.

SPECIFICATION forming part of Letters Patent No. 644,255, dated February 27, 1900.

Application filed June 26, 1899. Serial No. 721,864. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. MEYER, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Latches; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to improvements in door-locks. It is designed to provide an improved means for operating the latch by which the door is held in a closed position.

The invention consists of the parts and the constructions and combinations of parts hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 is a perspective exterior view. Fig. 2 is a side elevation with one side plate removed to show the interior parts. Fig. 3 is a horizontal sectional elevation on line *x x* of Fig. 2, showing one knob in elevation.

A is a mortise-lock of any usual or suitable construction.

B is the latch-bolt, guided and slidable within the lock-case, and C represents any suitable form of spring by which the latch is normally forced out of its case, so as to engage the keeper, which is fixed in the door-jamb.

D D are two parallel extensions from the inner end of the part which carries the latch-bolt, having an open space between them. Into this open space fits a frame composed of brass and chilled-steel plates E E', having lugs by which they are connected with one side of the lock and held in position. There is a space between the two interior plates, and within this space are fitted the toggle-levers *f f*. One pair of these toggle-levers is pivoted and loosely turnable upon a bolt G, which unites the front end of the frame-plates, and the rear links or lever-arms are correspondingly connected with a pin H, which extends far enough outside of the plates between which the levers are hinged so that the projecting ends will drop into slots or channels I, made in the bars D. The parts being in their normal position, with the latch-bolt projected by the action of the spring C, these toggle-levers would be drawn forward so that their meeting pivoted angles project on each side through the sides of the lock.

J J are socket-pieces held to the lock-plate by pins or otherwise, and the meeting angles of the toggle-levers project into the hollow spaces within these sockets. Tubular shanks K extend outwardly from these socket-pieces and enter into the hollow knob-shanks L, which are fixed to the plates O, and these plates are secured upon the opposite sides of the door with the knob-shanks projecting in the usual manner of such locks, with the exception that there are no knobs or handles upon the shanks and the shanks are fixed to the plates and are not turnable.

In the outer ends of the shanks L are fitted the slidable press-buttons P, and Q are stems the outer ends of which are fixed to the inner ends of the press-buttons, and they extend down through the interior of the shanks L, having the projecting inner ends beveled, as shown at *q*.

Springs R surround the stems Q within the shanks L, and the outer ends of the springs press against the interior of the buttons P to force them outward, the interior ends of the springs abutting against shoulders S, so that the action of the springs will be to normally force the buttons P outwardly.

When the buttons P are pressed inwardly, the springs yielding to allow this action, the beveled inner ends *q* of the shanks Q press against the meeting angles of the toggle-levers which are in line therewith, and this pressure forces the levers inwardly.

As the pin H which connects the slidable ends of the levers with the yoke D is movable in open slots or channels in the frame within which the levers are pivoted, it will be guided thereby, and as the levers are pressed toward each other transversely they will be correspondingly extended in the line of the latch-bolt, and this extension taking place toward the rear or inner end of the lock acts to draw the latch back and disengage it from the keeper.

As soon as pressure upon the press-buttons P is relieved the spring C acts to return the latch to its normal position, and the press-buttons are similarly forced outward by their springs R, and the parts all resume their normal position.

As there are press-buttons upon each side of the door and as the toggle-levers when shortening up longitudinally are correspondingly extended transversely, it will be seen

that the transverse meeting angles are normally projected so as to be engaged by the beveled ends *q* of the pins Q, so that pressure upon either of the press-buttons will retract the latch.

The toggle-levers being made of chilled steel and movable, as shown, there is very little friction developed, and the latch is withdrawn much more easily than by the usual turning of a knob. The wear upon the parts is also very small, and they will remain in good condition for a long time.

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

1. In a latch, a slidable spring-pressed latching-bolt, a stationary framework fixed between the rearwardly-extending parallel arms of the latch, toggle-levers arranged in pairs and fulcrumed in said framework, the forward ends pivoted to the framework and the rear ends connecting with the rear portion of a latch with the transverse pivoted angles of said levers projecting through the sides of the lock-plate, hollow knob-shanks in line with said angles, push-buttons movable within said knob-shanks, pins connected therewith having their inner ends disconnected from and adapted to engage the transverse meeting angles of the levers and force them inwardly whereby the levers are correspondingly extended in the line of movement of the latch to retract the latter.

2. In a latch, a slidable spring-pressed latching-bolt having rearwardly-extending parallel bars, a frame fixed between said bars, toggle-levers having the front ends pivoted to the stationary frame, a pin projecting through slots in the rear portion of said frame and connecting with the parallel bars of the slidable latch, pivots by which the transverse angles of the levers are united so that said angles project through the lock-plate, hollow knob-shanks fixed upon opposite sides of the door in line with the projecting lever-angles, spring-pressed push-buttons slidable in the outer ends of said shanks, pins connecting with said buttons extending inwardly through guiding-tubes and having the inner ends beveled and contacting with the transverse angles of the toggle-levers whereby a pressure upon the push-buttons acts to compress the levers transversely and extend them in the line of movement of the latch to withdraw the latter.

In witness whereof I have hereunto set my hand.

JOHN C. MEYER.

Witnesses:
S. H. NOURSE,
GEO. H. STRONG.