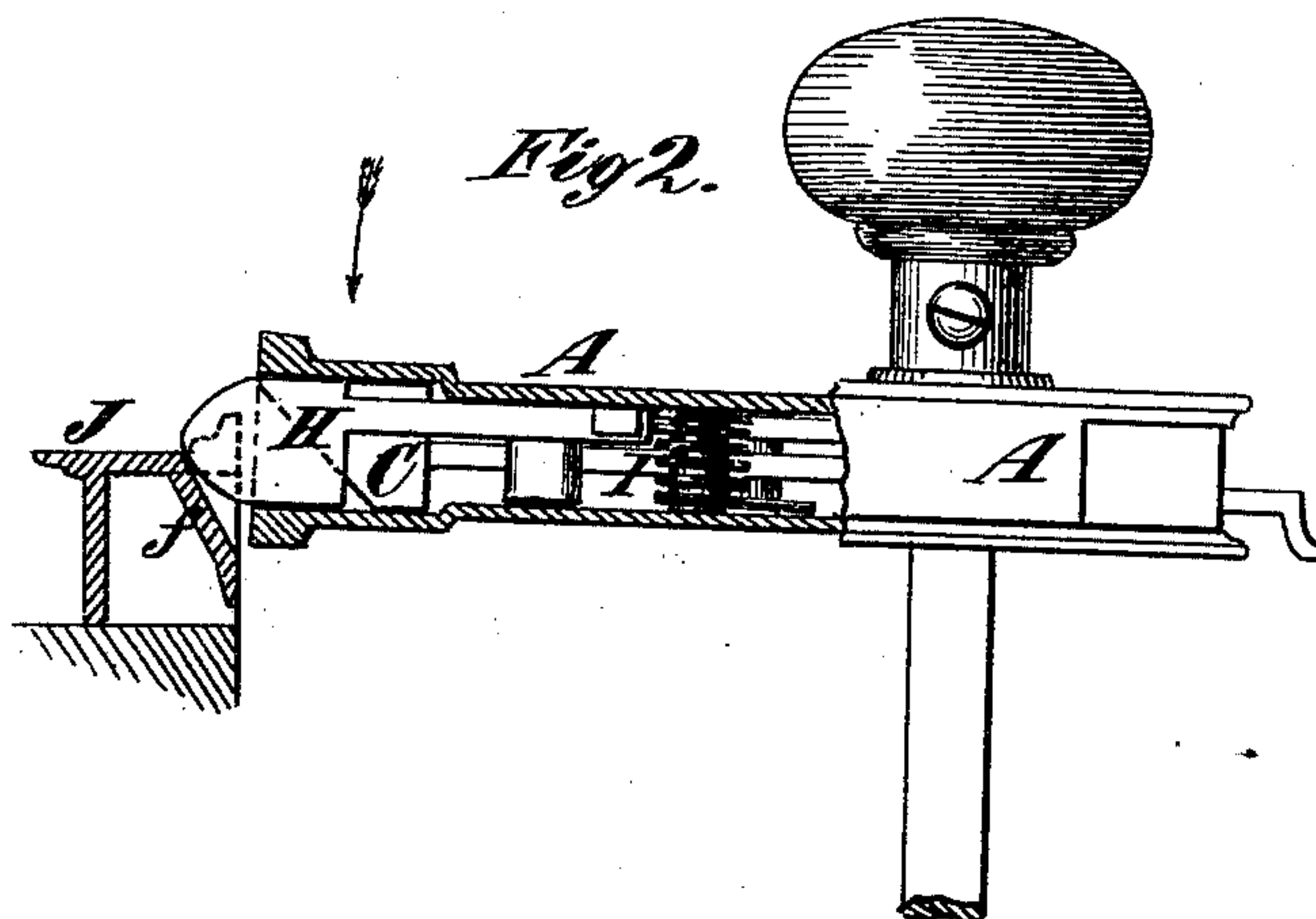
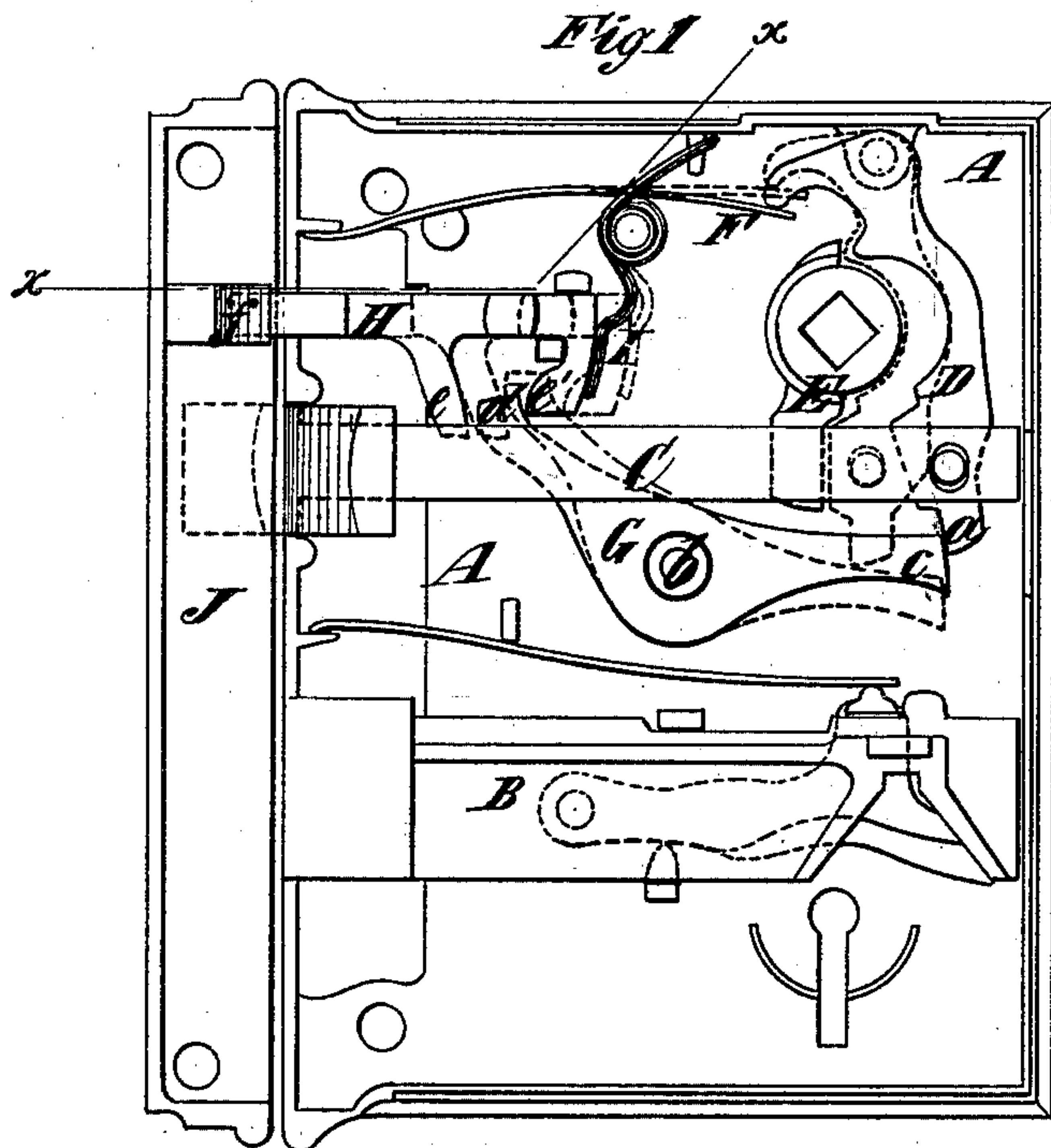


C. C. COLEMAN.
Latch.

No. 223,113.

Patented Dec. 30, 1879.



Witnesses
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UNITED STATES PATENT OFFICE.

CORNELIUS C. COLEMAN, OF BRANFORD, CONNECTICUT, ASSIGNOR TO
BRANFORD LOCK WORKS, OF SAME PLACE.

IMPROVEMENT IN LATCHES.

Specification forming part of Letters Patent No. **223,113**, dated December 30, 1879; application filed
October 15, 1879.

To all whom it may concern:

Be it known that I, CORNELIUS C. COLEMAN, of Branford, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Anti-Friction Latches, of which the following is a specification.

My invention relates to latches for doors in which the latch-bolt is or may be held in a retracted position while the door remains open, and which are provided with an anti-friction piece which is moved inward by the closing of the door, to release said latch and permit the same to be projected.

My invention consists in the combination, with a latch-bolt and a spring which always acts upon said bolt with a tendency to project the same outward, of a stop-piece for holding said bolt in a retracted position against the force of said spring, and an anti-friction piece acting on said stop-piece for releasing said latch-bolt when the said anti-friction piece is moved inward.

It also consists in the combination, with such latch-bolt and spring, of a stop-piece for holding said bolt in a retracted position, an anti-friction piece acting on said stop-piece for releasing the bolt, and a spring for moving said stop-piece to hold the bolt in its retracted position.

It also consists in various details and combinations of parts hereinafter to be described.

In the accompanying drawings, Figure 1 represents a face view of a lock and latch embodying my invention, one of the lock-plates being removed to expose the operating mechanism to view; and Fig. 2 represents a partial edge view and transverse section thereof on the dotted line *x x*, Fig. 1.

Similar letters of reference designate corresponding parts in both figures.

Although here represented as embodied in a combined latch and lock, my invention is equally applicable to latches alone.

A designates the case, and B designates the bolt-work, of the lock, which may be of any construction. C designates a sliding latch-bolt; D, an oscillating lever adapted to be acted upon by the hub E for retracting said latch-bolt, and F designates a spring for pro-

jecting said bolt. No special description of the operation of these parts is necessary, as their construction and arrangement is similar to the latches heretofore in use, except that the lever D has at its lower end a lug or projection, *a*.

G designates a stop-piece, here shown as consisting of a lever pivoted at *b* to the lock-case, and the end *c* of which obtrudes itself in the way of the lug or projection *a* when the bolt C is drawn back, and holds it in its retracted position.

H designates an anti-friction piece, here shown as consisting of a sliding bolt provided with two toes, *e e'*, between which is arranged the end *d* of said stop-piece G.

I designates a spring for moving the stop-piece G to hold the bolt in its retracted position, and here represented as acting on the anti-friction piece H to project it.

J designates the striker-plate or keeper, which is provided with an inclined or cam face, *f*, (clearly represented in Fig. 2,) which serves to push back the anti-friction piece H when the door is closed. As here represented, the anti-friction piece H has its end inclined on opposite sides, or wedge-shaped, so that it may be used with a right or left hand door.

The operation of my latch is as follows: When the door is opened the lever D is swung to the right by the hub E, and draws back or retracts the latch-bolt C. When the lug or projection *a* in the end of the lever D passes the end *c* of the stop-piece G the latter is caused by the action of the spring I to obtrude itself in the way of the said lug or projection, and thereby holds the bolt in its retracted position. When the door is closed the anti-friction piece H is pushed in by the inclined or cam face *f* of the striker-plate or keeper J, and the toe *e*, acting on the end *d* of said stop-piece, oscillates the latter and disengages its end *c* from the lug or projection *a*, thereby permitting the latch-bolt C to be projected under the striker-plate J by the action of the spring F.

Though the stop-piece G is here represented as engaging with the lug or projection *a* on the lever D, it might instead engage with

a similar lug on the latch-bolt C, and the spring I, though here shown as acting on the anti-friction piece H, might be arranged to push the end *d* of the stop-piece G down or its end *e* up, for the purpose of blocking the bolt C.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a latch-bolt and a spring which always acts upon said bolt with a tendency to project the same outward, of a stop-piece for holding said bolt in a retracted position against the force of said spring, and an anti-friction piece acting on said stop-piece for releasing the latch-bolt when the said anti-friction piece is moved inward, substantially as specified.

2. The combination, with a latch-bolt and a spring which always acts upon said bolt with a tendency to project the same outward, of a

stop-piece for holding said bolt in a retracted position, an anti-friction piece acting on said stop-piece for releasing the bolt, and a spring for moving said stop-piece to hold the bolt in its retracted position, substantially as specified.

3. The combination, with the latch-bolt C and the oscillating lever D, for actuating the same, of the stop-piece G, one end of which engages with the lug *a* upon the lever D, the anti-friction piece H, engaging with the other end thereof, and the spring I, for projecting said anti-friction piece, and through it said bolt, substantially as specified.

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Witnesses:

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