

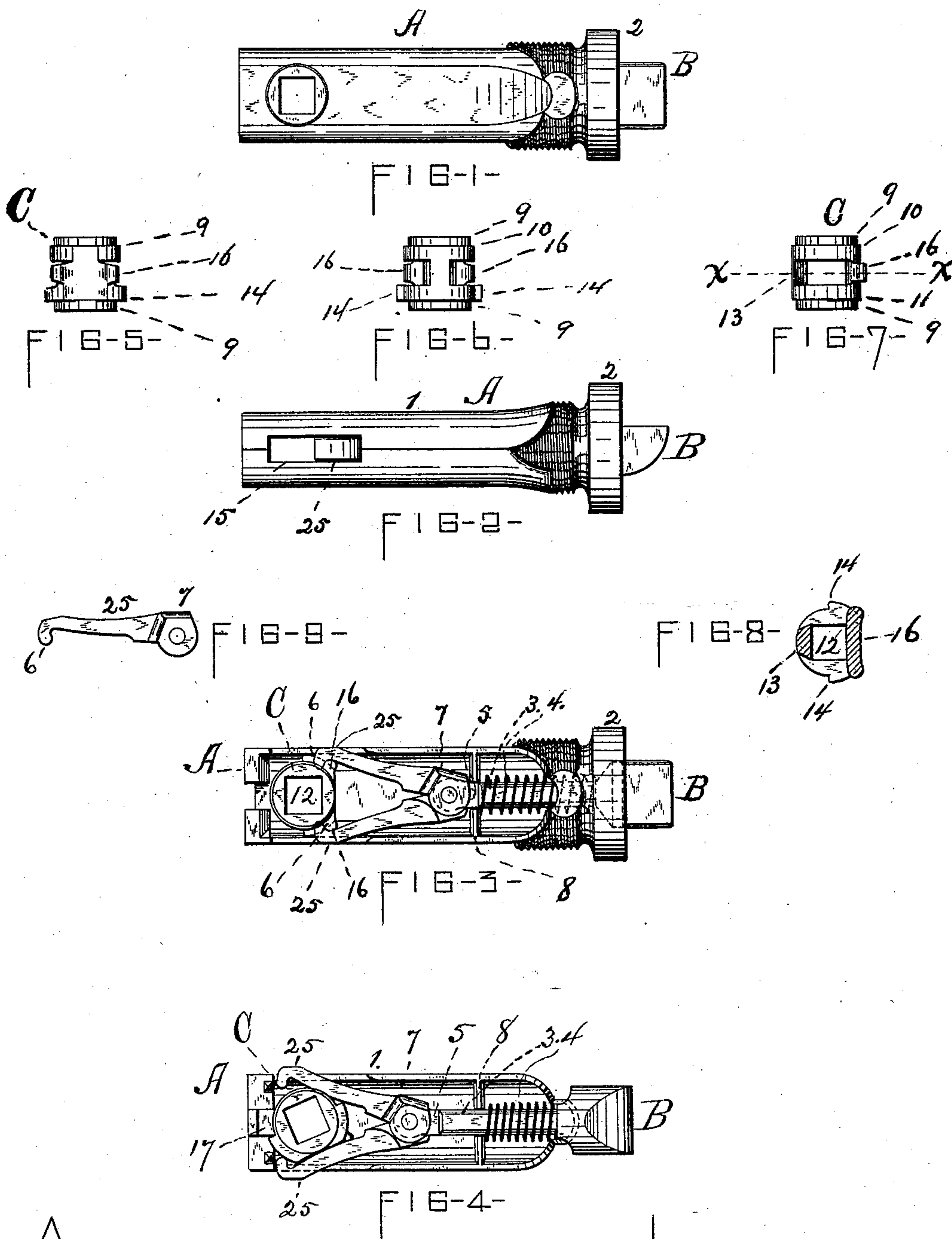
(Model.)

F. A. HOLLENBECK.

SPRING MORTISE LATCH.

No. 357,084.

Patented Feb. 1, 1887.



ATTEST-

Wm. C. Raymond

E. S. Crocker

INVENTOR-

Frank A. Hollenbeck

# UNITED STATES PATENT OFFICE.

FRANK A. HOLLENBECK, OF SYRACUSE, NEW YORK.

## SPRING MORTISE-LATCH.

SPECIFICATION forming part of Letters Patent No. 357,084, dated February 1, 1887.

Application filed June 19, 1886. Serial No. 205,603. (Model.)

*To all whom it may concern:*

Be it known that I, FRANK A. HOLLENBECK, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Spring Mortise-Latches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

In the accompanying drawings, Figure 1 is a front elevation of a latch embodying my invention. Fig. 2 is a top view thereof. Fig. 3 is an elevation of the interior of the same latched. Fig. 4 is a like view when unlatched, except that the parts lie upon the cover. Fig. 5 is a front elevation of tumbler. Fig. 6 is an elevation of same from the opposite side; Fig. 7, an edge elevation. Fig. 8 is a transverse section on line *xx* in Fig. 7; Fig. 9, a detail of one of the arms.

This invention relates to that class of mortise-latches constructed with a cylindrical or tubular body, which are fitted into a door by boring the mortise with a bit.

My object is to simplify the construction, improve the durability and effectiveness, and cheapen the cost.

It is constructed as follows: A is the tubular body, constructed in two parts, one of which—the cover 1—is removable, and extends only up to the shoulder or neck of the other part, which is screw-threaded.

B is the bolt fitting through the face 2 of the latch in the usual manner. This bolt is constructed with an ordinary beveled head, mounted upon a stem, 3, and upon this bolt I place a coiled spring, 4. The inner end of this stem is flattened, as at 5, and upon this part I pivotally mount two arms, 25, in such a manner that their pivotal axes will be in the same horizontal plane. These are alike, each being constructed of a body provided with a hook, 6, at one end, and with a head, 7, at the other end, which is offset from the body 25 of the arm, so that the head and body stand in different but parallel vertical planes, the offset in each being about equal to the thickness of the part 5 of the bolt B, so that when the

arms are mounted upon the bolt their bodies and hooks are in the same vertical plane.

Across the interior of the parts of the body I make in each a wall or web, 8, in which I cut a slot about one-half of the size of the stem 3 of the bolt, and when the two parts are placed together these walls or webs with their slots will coincide, and will loosely inclose and guide the said stem in its movements forward and back.

C is a tumbler consisting of a cylindrical metal construction, which is reduced at each end to form trunnions, and which has a polygonal aperture, 12, extending longitudinally through the same. This tumbler is provided on its periphery midway of its length with projections 16 16, as shown, which engage with the hooks of arms 25. At one end of the tumbler I place projections 14 14 upon the shoulder adjacent to the trunnion. A projection, 17, is provided within the case A in the path of projections 14 14, so that when the tumbler is turned in either direction its movement is arrested, as soon as the end of the bolt B is withdrawn even with the face of the latch, by one end of the shoulders 14 coming in contact with one of the sides of the projection 17. I have shown the tumbler made in a hollow or skeleton form, which is my preferred construction.

I provide the body of the lock with slots 15 on opposite sides, one half of each slot being in the main body and one half in the cover. By employing these slots I am permitted to make the body of my lock of a very small size, as the recess in which it is located can be and is usually enlarged about the axis of rotation of the tumbler or spindle.

The operation of the latch will be clearly understood from the foregoing description.

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

1. The combination, with the tumbler having a projection on the opposite sides, of a latch-bolt provided with hook-arms extending on opposite sides of the tumbler, said arms being pivoted to the latch-bolt, the pivots of said arms being both in the same horizontal and vertical planes, substantially as described.

2. The combination, with a tumbler having



projections on opposite sides, of a latch-bolt provided with hook-arms extending on opposite sides of the tumbler, said arms being pivoted to the latch-bolt upon a single pivot, substantially as described.

3. The combination, with a tubular latch-body provided with projection 17, of a tumbler having shoulders 14 14 and projections 16 16, and a bolt having arms extending on each side of the tumbler and engaging the projections 16 16, whereby the movement of the bolt is arrested when its outer end is drawn even with the face of the lock, substantially as described.

4. The combination, with a tubular latch-body provided with slots 15 15, of a tumbler having projections 16 16 and a bolt provided

with arms 25 25, pivoted to the latch and extending on opposite sides of the tumbler and in the path of the projections 16 16 and within slots 15 15, substantially as described.

5. The combination, with a tumbler having projections on opposite sides, of a latch-bolt provided with hook-arms extending on opposite sides of the tumbler, said arms extending in the same plane and pivoted to the latch-bolt by a single pivot, substantially as described.

In witness whereof I have hereunto set my hand this 23d day of February, 1886.

FRANK A. HOLLENBECK.

In presence of—

C. W. SMITH,

E. S. COOKER.