

No. 790,247.

PATENTED MAY 16, 1905.

A. G. BAKER.

LOCK.

APPLICATION FILED SEPT. 6, 1904.

FIG. 3

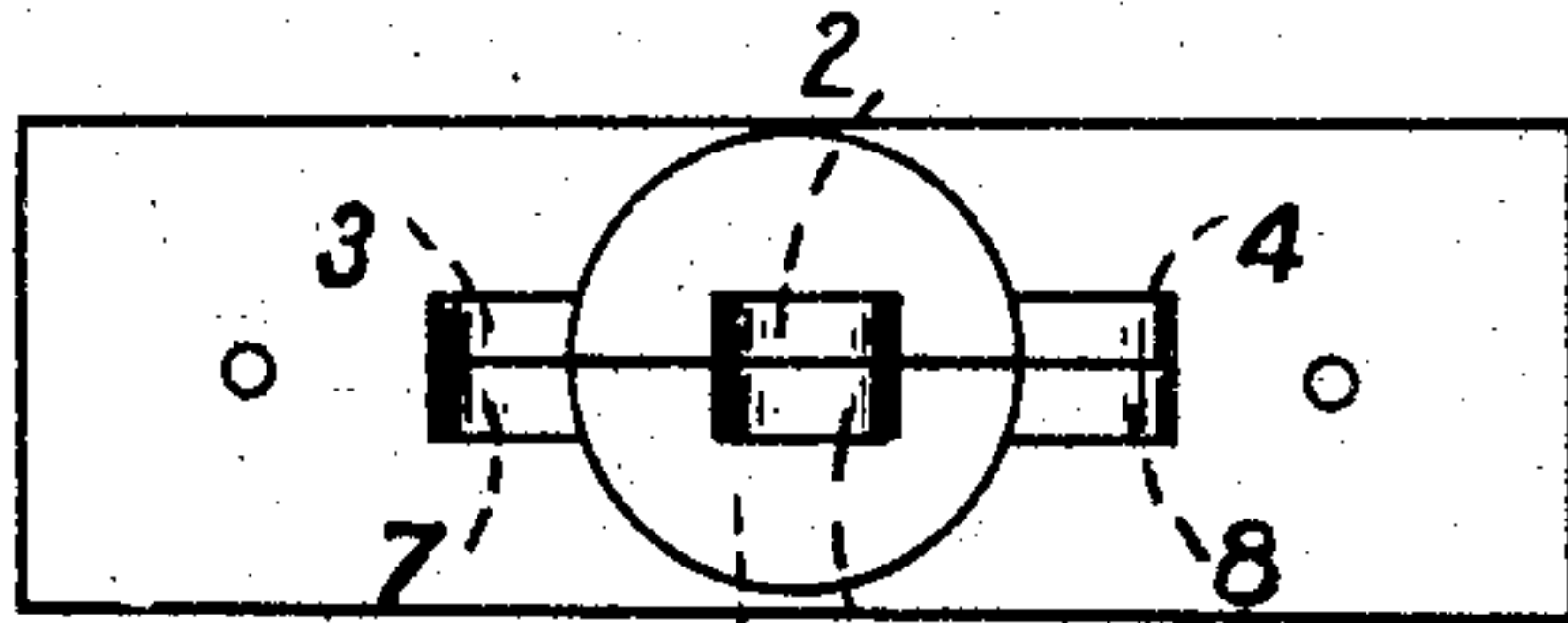


FIG. 1

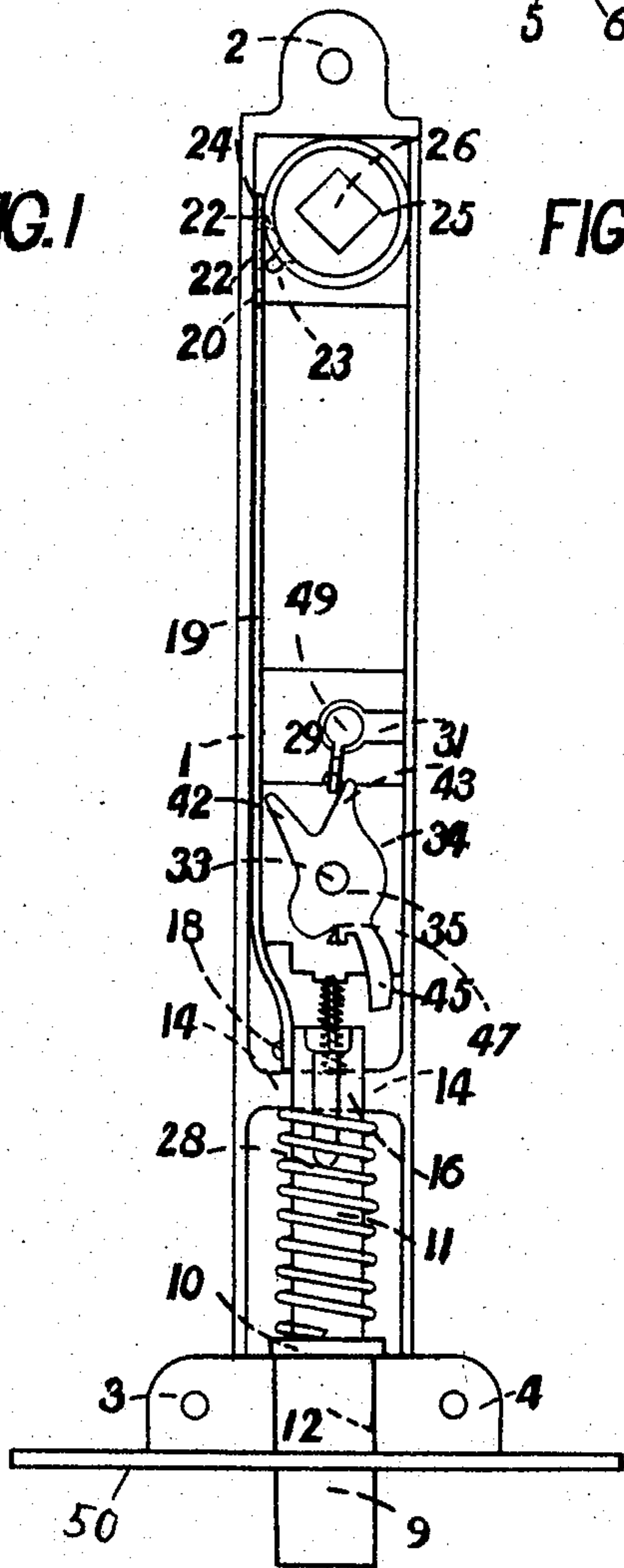


FIG. 2

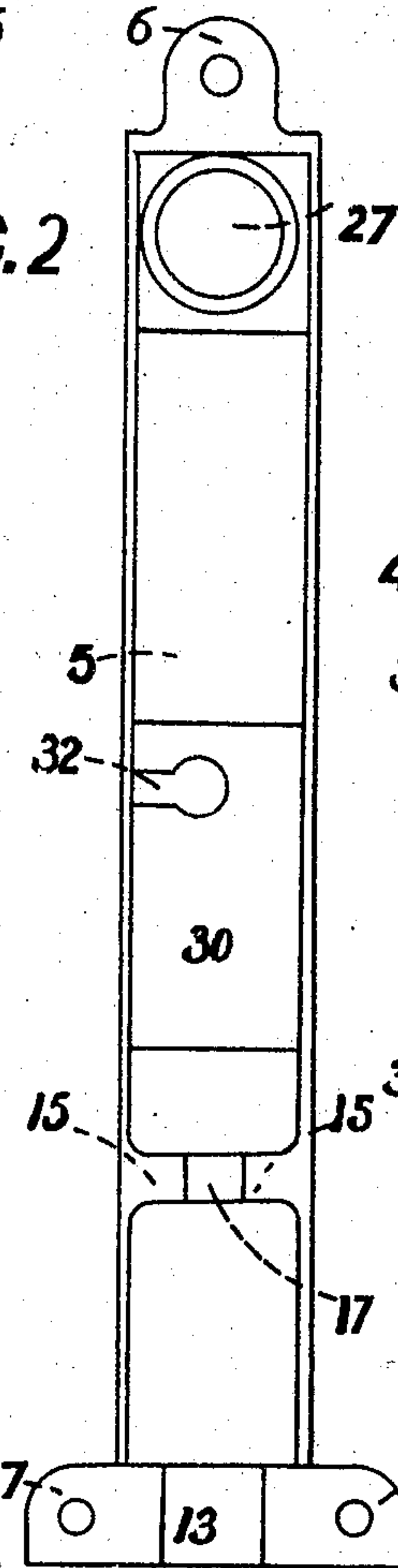


FIG. 5

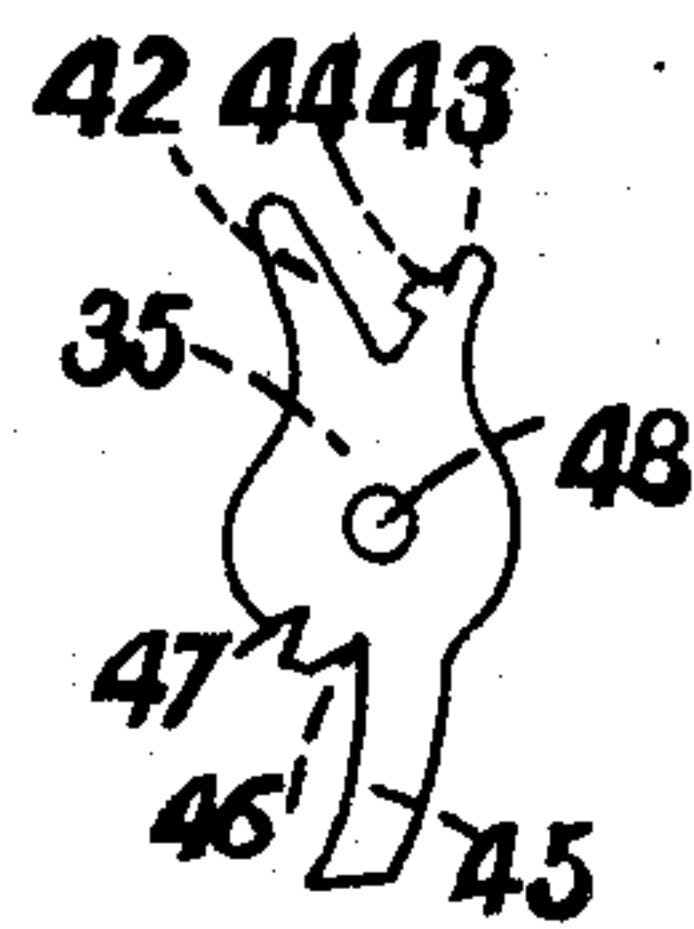
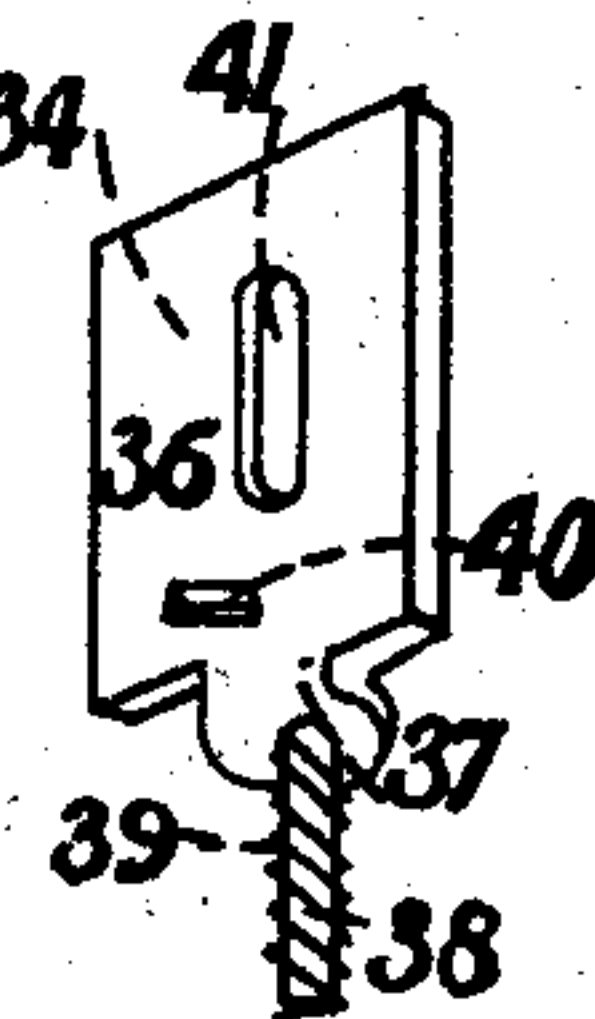


FIG. 4



Witnesses

N. M. Kuehn

J. P. Newman

Inventor
Alfred George Baker

Richardson

ATTORNEYS

UNITED STATES PATENT OFFICE.

ALFRED GEORGE BAKER, OF DUNEDIN, NEW ZEALAND.

LOCK.

SPECIFICATION forming part of Letters Patent No. 790,247, dated May 16, 1905.

Application filed September 6, 1904. Serial No. 223,432.

To all whom it may concern:

Be it known that I, ALFRED GEORGE BAKER, of 5 Commercial Chambers, 24 Manse street, Dunedin, New Zealand, have invented certain new and useful Improvements in Locks, of which the following is a specification.

This invention relates to cylindrical mortise-locks. Its object is to provide an improved cylindrical mortise-lock that will be of small cost and that may be inserted easily in a cylindrical mortise made in a door with an auger or the like.

The invention consists of the features and combination and arrangement of parts herein-
after described, with reference to the accom-
panying drawings, in which—

Figure 1 is a view of the lock with one half removed. Fig. 2 is a view of the inside of the half that is removed. Fig. 3 is a back view of the invention. Fig. 4 is an enlarged view of the sliding piece. Fig. 5 is an enlarged view of the tumbler.

The lock consists of a half-cylinder 1, Fig. 1, provided with lugs 2, 3, and 4, and a face-plate 50, all integral with the half-cylinder, which is also formed, as hereinafter described, to contain the working parts of the lock. There is another half-cylinder 5, Fig. 2, also provided with lugs 6 7 8, corresponding, respectively, to the lugs 2, 3, and 4 on the half-cylinder 1 and adapted to be secured thereto with screws or the like, so as to form when secured together a complete cylinder. A bolt 9, adapted to slide through the face-plate, has a circular flange 10, which lies against the lugs 3 4 7 8 when the bolt is in its farthest extended position. The front part of this bolt beyond the circular flange 10 is preferably oblong in cross-section, and the back portion 11 is cylindrical and preferably of less diameter than the circular flange. The bolt slides in a channel 12, cut between the lugs 3 and 4, and a channel 13, cut between the lugs 7 and 8, and the back portion 11 slides in pieces 14 15, cast integral with the half-cylinders 1 and 5, respectively, said pieces having, respectively, a semicircular channel 16 17 cut in them for the purpose. At the inner end of the bolt there is a pin 18, by which is pivotally secured to the bolt the connecting-link 19, which ex-

tends along the side of the half-cylinder 1 to near the innermost end thereof. The free end of this link 19 has three holes 20 21 22 in it adapted to be engaged by pins 23 24 on a handle-piece 25, which is adapted to rotate in the circular apertures 26 27 in the half-cylinders 1 and 5, respectively. A coiled spring 28 embraces the portion 11 of the bolt and lies between the circular flange 10 and the piece 14, so as to keep the bolt normally protruded to its full extent. An ordinary handle operates the handle-piece 25 to retract the bolt when desired. In each half-cylinder there are pieces 29 30, respectively, between which the tumbler and locking devices are mounted and in which keyhole-slots 31 32 are cut, respectively. The piece 29 has a pin 33 thereon, upon which slides a sliding piece 34. (Illustrated in Fig. 4 and more particularly hereinafter described.) Above said sliding piece the tumbler 35 is mounted on said pin 33. This tumbler is of peculiar shape and is illustrated in Fig. 5 and is hereinafter more particularly described. The sliding piece 34, Fig. 4, consists of a flat portion 36, having a small portion 37 bent downward at one end. This bent portion 37 has a horizontal pin 38 secured to it, round which a spiral spring 39 is coiled. A small pin 40 projects vertically from the flat portion of the sliding piece near the bent-down portion and a slot 41 is cut in the flat piece on the other side of the pin 40 from the bent-down portion. The sliding piece 34 is placed on the piece 29 within the half-cylinder with the pin 33 projecting through the slot 41 and with the bent-down portion 37 resting against the edge of the piece 29 and the coiled spring 39 compressed between the edge of the piece 14 and the edge of the piece 29 and lying in the bottom of the half-cylinder 1. The tumbler 35 is illustrated in Fig. 5 and has two horns 42 43, with a V-shaped space between them, one horn, 43, being also provided with a horizontal ward 44. The other end of the tumbler is provided with a shank 45, and the body portion of the tumbler has two notches 46 47 near said shank. The tumbler has a hole 48 adapted to fit the tumbler onto the pin 33, as shown in Fig. 1, in the unlocked position, the forward end of

the shank 45 being clear of the path of the rear end 11 of the bolt and the pin 40 of one sliding piece being engaged in the notch 47 of the tumbler.

5 It will be seen that when the handle turns the handle-piece 25, one of the pins on the handle being engaged in one of the holes in the connecting-link 19, the bolt 9 may be retracted and released independently of the key and
10 tumbler-locking apparatus. When it is desired to lock the bolt, the key 49 is inserted in the keyhole 32 and is turned to engage the horn 43, passing the horn 42, which is so arranged in relation to the horn 43 to permit of this being
15 done. The key 49 has a ward which embraces the ward 44 of the tumbler and being turned still further pushes the horn 43, rotating the tumbler and bringing the shank 45 behind the rear end of the bolt 9, preventing it from
20 moving. The key also on being turned engages the edge of the sliding piece 34 and forces it toward the bolt, compressing the coiled spring 39, moving the pin 40 toward the bolt and so out of the notch 47, said pin
25 thereupon under the influence of coiled spring 39 entering notch 46. The unlocking operation is effected by a reverse movement of the key, which engages horn 42 of the tumbler.

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

1. In a lock of the class described tumbler mechanism, consisting of a pin in one of the half-cylinders, a spring-actuated sliding piece
35 adapted to slide on said pin and provided with a pin, a tumbler provided with two horns and a shank and two notches adapted to engage said pin alternately, whereby under the influence of a key said shank may prevent the
40 bolt from retracting substantially as described.

2. A cylindrical mortise-lock comprising

two semicylinders, corresponding securing-lugs thereon respectively, a spring-actuated bolt adapted to slide between the cylinders at one end thereof, a handle-piece rotatable at 45 the other end thereof, connecting means between the handle-piece and the rear end of the bolt whereby rotation of the handle-piece retracts the bolt, and tumbler mechanism consisting of a pin in one of the half-cylinders, a
50 spring-actuated sliding piece adapted to slide on said pin and provided with a pin, a tumbler provided with two horns and a shank and two notches adapted to engage said pin alternately whereby under the influence of a
55 key said shank may prevent the bolt from retracting substantially as described.

3. A cylindrical mortise-lock comprising two semicylinders, corresponding securing-lugs thereon respectively, a spring-actuated 60 bolt adapted to slide between the cylinders at one end thereof, a circular handle-piece provided with pins on its periphery rotatable at the other end thereof, a link having one end pivoted to the rear end of the bolt and the 65 other end perforated with a series of holes adapted to engage one of said pins, and tumbler mechanism consisting of a pin in one of the half-cylinders, a spring-actuated sliding piece adapted to slide on said pin and pro- 70 vided with a pin, a tumbler provided with two horns and a shank and two notches adapted to engage said pin alternately, whereby under the influence of a key said shank may prevent the bolt from retracting substantially 75 as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ALFRED GEORGE BAKER.

Witnesses:

A. J. PARK,

EDITH WALCOTT BOTHAMLEY.