A. L. CAPPS.

SINGLE BOLT DOOR LOCK.

APPLICATION FILED SEPT. 9, 1912.

1,069,317. Patented Aug. 5, 1913.

Fig. 1

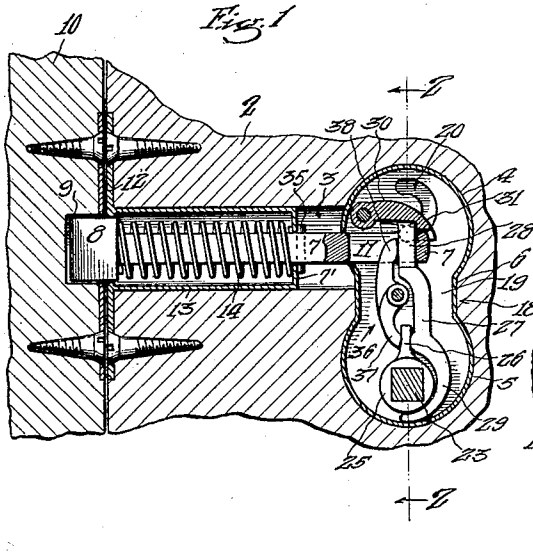


Fig. 2

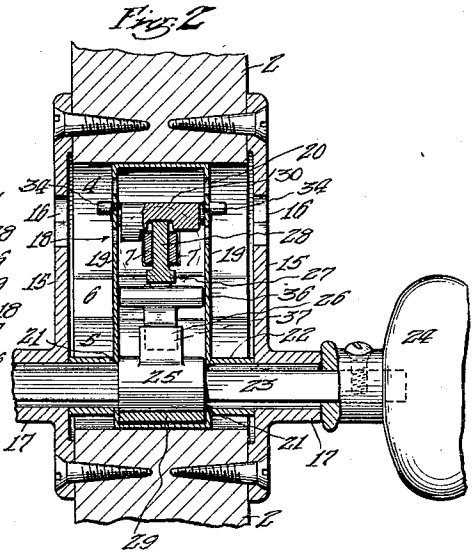


Fig. 3

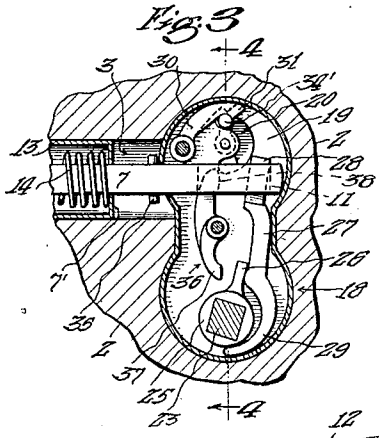


Fig. 4

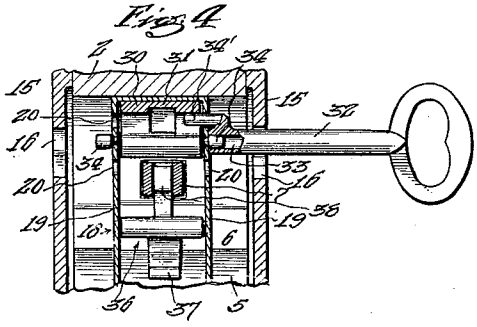


Fig. 5

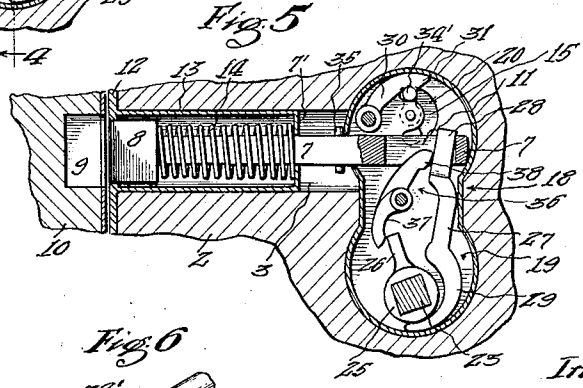
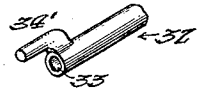


Fig. 6



Witnesses:

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UNITED STATES PATENT OFFICE.

ARCHIE L. CAPPS, OF LOS ANGELES, CALIFORNIA.

SINGLE-BOLT DOOR-LOCK.

1,069,317. Specification of Letters Patent. Patented Aug. 5, 1913.

Application filed September 9, 1912. Serial No. 719,435.

To all whom it may concern:

Be it known that I, ARCHIE L. CAPPS, a citizen of the United States of America, residing at Los Angeles, in the county of Los Angeles, State of California, have invented a certain new and useful Single-Bolt Door-Lock; 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.

This invention relates to single bolt door lock, and it may be said to consist in the provision of the novel features and in the novel and improved construction, arrangement and combination of parts as will be apparent from the description and claim which follow hereinafter.

Objects of the invention are to provide a lock which is simple and compact in construction, economical to manufacture, easy to assemble and install, strong and durable, and effective in action.

Other objects and the advantages of the invention will be apparent to those skilled in the art from a consideration of the following description of the preferred form of construction embodying it, taken in connection with the accompanying drawings in which—

Figure 1 is a broken and sectional view of the lock fitted in a door; Fig. 2 is a broken and sectional view taken on the line 2—2 of Fig. 1; Fig. 3 is a fragmentary view showing parts of the lock in changed position from that in Fig. 1; Fig. 4 is a fragmentary view taken on the line 4—4 of Fig. 3; Fig. 5 is a partly broken and sectional view showing the position of the parts of the lock when the knob is turned in a direction opposite to that in Fig. 3, and Fig. 6 is a perspective detail of a portion of the key.

As shown, the lock is fitted in the stile 2 of a door having therein an opening 3 extending inwardly from the edge of the stile, openings 4 and 5 passing through the stile at the inner end of and at right angles to the opening 3, and opening 6 joining the openings 4 and 5. The openings 3, 4 and 5 may be quickly made with augers of suitable diameter, and the opening 6 is easily and quickly cut with a chisel.

The bolt 7 passes through guide plate 7′ in the opening 3 and it may be provided on one end thereof with a suitable head 8 adapted to fit into the socket 9 in the jamb 10, and it has its other end provided with a longitudinal slot 11 and extending into the opening 4. A guideplate 12 for the head 8 is suitably affixed on the edge of the stile 2, and it is connected by cylindrical casing 13 with the guideplate 7′. A suitable spring 14 is arranged in the casing 13 with one end thereof pressing against the guideplate 7′ and the other end thereof bearing against the head 8 of the bolt 7. Plates 15 are suitably affixed to the stile 2 at each end of the openings 4, 5 and 6, and they are formed to provide keyholes 16 in the upper part thereof and open extensions 17 on the lower part thereof.

A casing 18 is disposed between the plates 15 and adapted to fit close to the wall of the openings 4, 5 and 6, and it is formed to provide in the sides 19 thereof upper arc-shaped slots 20 and lower openings 21. Tubular parts 22 are interposed between the open extensions 17 and the casing 18. The spindle 23 passes through the open extensions 17, tubular parts 22, and through the casing 18 by way of openings 21, and it has suitably affixed on the ends thereof knobs 24 for turning the spindle. On the spindle in the casing 18 is rigidly connected a sleeve 25 having thereon an upwardly projecting part 26. A lever 27 is formed and arranged in the casing 18 to have the upper end portion 28 thereof extending through the slot 11 in the bolt 7 and to have the lower end portion 29 adapted to fit movably between the sleeve 25 and the lower part of the casing 18. A gravity latch 30 is pivotally mounted between the sides 19 of the casing and it may have on the free end thereof a projection or shoulder 31 adapted to engage with the upper end portion 28 of the lever 27. The key 32 is provided with a socket 33 in the end of the shank thereof, whereby the key is fitted over and easily turned on pin 34 disposed on the sides 19 of the casing oppositely to the keyholes 16 in the plates 15. The key 32 is also provided with an extension 34′ which is offset from the shank of the key and adapted to pass through the slots 20 in the casing and engage with the latch 30 to permit of raising the latter out of engagement with the lever 27 when the key is fitted through the keyholes 16 and turned on the pins 34. When the latch 30 is raised out of engagement with the lever 27, the spindle 23 may be turned by knobs 24 to move the projecting

part 26 against the lever 27 to cause the latter to move the bolt 7 rearwardly to withdraw the head 8 from the socket 9 to permit of opening the door, see Figs. 1 and 3. The pin 35 on the bolt 7 is adapted to engage with the guideplate 7′ to limit the forward movement of the bolt 7, and it is adapted to engage with the casing 18 to limit the rearward movement of the bolt.

In order that the bolt 7 may be moved rearwardly by turning the spindle 23 in either direction, a lever 36 is pivotally mounted between the sides 19 of the casing and has the lower end portion 37 thereof adapted to be moved by the projecting part 26 to move the upper end portion 38 thereof against the lever 27 to have the latter move the bolt 7 rearwardly as shown in Fig. 5.

It will be understood that when the latch 30 is in raised position and the knobs 24 are released, the spring 14 acts to move the bolt 7 forwardly and the latter moves the lever 27 and consequently the projecting part 26 to the position shown in Fig. 1, and, the key 32 being withdrawn from engagement with the latch 30 the latter drops into engagement with the lever 27 and locks the parts in position as seen in Fig. 1.

I claim:

In a door lock, the combination of a spring-pressed bolt provided with a slot, a casing, a spindle passing through the casing, a sleeve fast on the spindle, a lever arranged in the casing and having the upper end portion thereof extending through said slot and having the lower end portion thereof adapted to move freely between said spindle and the lower part of the casing, a gravity latch pivotally mounted in the casing and having the free end thereof adapted to engage with the upper end portion of said lever, a projecting part on the spindle adapted to move said lever and consequently said bolt when the spindle is turned in one direction, a lever pivotally mounted in the casing and adapted to be moved by said projecting part to move the first lever and consequently the bolt when the spindle is turned in the other direction, and a key provided with an extension adapted to be moved through a slot in the casing to raise the latch out of engagement with the first lever.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses at Los Angeles, county of Los Angeles, State of California, this 3rd day of September A. D. 1912.

ARCHIE L. CAPPS.

Witnesses:

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A. H. LIDDERS.