A. M. JOHNSON.

SECRET DOOR LOCK.

APPLICATION FILED SEPT. 10, 1915.

1,183,464. Patented May 16, 1916.

Fig. 1.

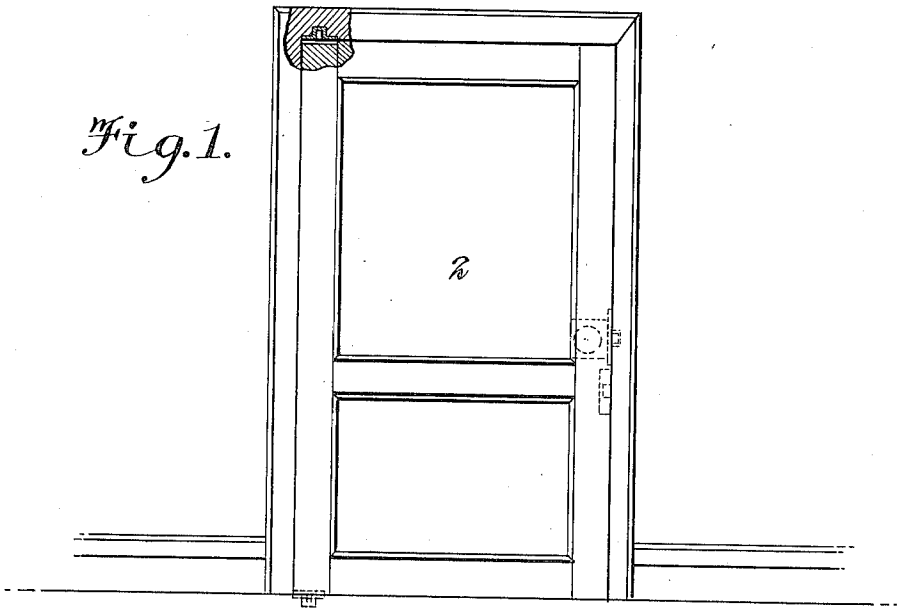


Fig. 2.

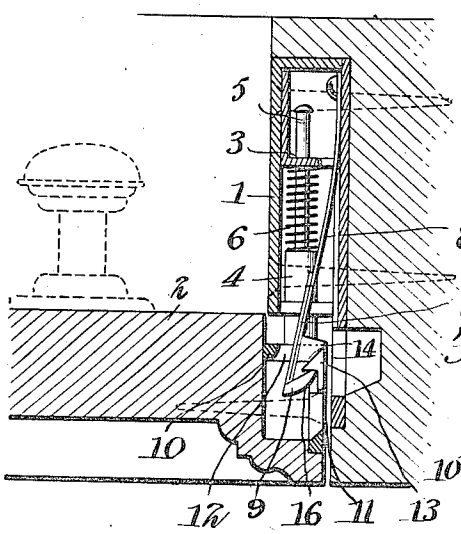


Fig. 6.

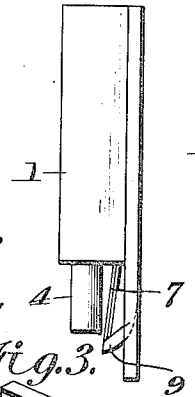


Fig. 3.

Fig. 5.

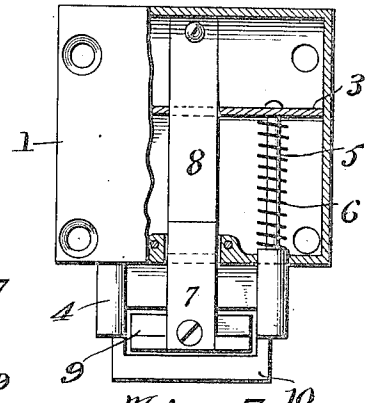
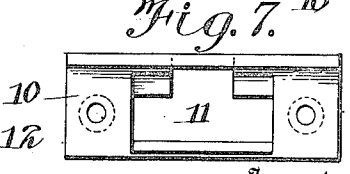


Fig. 7.



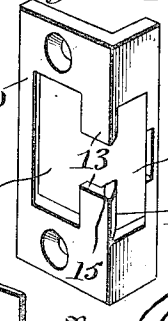
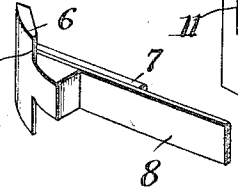


Fig. 4.



Witness
Ch. E. Laughlin

Inventor
Amasa M. Johnson.

By Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

AMASA M. JOHNSON, OF NEW YORK, N. Y.

SECRET-DOOR LOCK.

1,183,464. Specification of Letters Patent. Patented May 16, 1916.

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To all whom it may concern:

Be it known that I, AMASA M. JOHNSON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Secret-Door Locks, of which the following is a specification.

This invention relates to locks especially adapted to be used in conjunction with secret panels or doors and it consists in the novel features hereinafter described and claimed.

An object of the invention is to provide a lock of simple structure adapted to be used in combination with a panel or door positioned in a frame in the wall of a building, the parts of the lock being so arranged that they will hold the panel secure in a closed position and at the same time there are no parts visible at the exterior of the panel or door to indicate that the same is hingedly mounted in the wall.

A further object of the invention is to provide a lock of the character described which may be manipulated without the use of a key or other implement for the purpose of releasing the panel or door in order that it may be swung to an open position.

With the above objects in view the lock comprises a casing which is attached to the side of the frame in which the panel or door is pivotally or hingedly mounted. Spring pressed bolts are carried by the frame and a resilient catch is mounted in the frame. A keeper is attached to the edge portion of the panel or door in a manner whereby the said keeper is concealed when the panel or door is closed. The catch enters the keeper and engages heads provided thereon whereby the panel or door is held in a closed position in the frame of the wall. The spring pressed bolts bear at their outer ends against the keeper and normally hold the catch in an engagement with the heads.

In order to open the panel or door it is necessary only to swing the same slightly in an inward direction whereby the bolts are retracted against their springs and the catch moves out of engagement with the heads and passes through a slot provided in the side of the keeper under the influence of the resilient shank of the catch whereby the keeper is released from the casing of the lock and the panel or door is forced open by springs in the casing.

In the accompanying drawing: Figure 1 is a side elevation of a door or panel provided with a lock. Fig. 2 is horizontal sectional view of the lock. Fig. 3 is a perspective view of the keeper of the lock. Fig. 4 is a perspective view of the spring catch provided in the lock casing. Fig. 5 is a detail sectional view of the lock casing showing parts in elevation. Fig. 6 is an edge view of the lock casing. Fig. 7 is a side elevation of the keeper.

The lock comprises a casing 1 adapted to be applied to the inner surface of the sides of the frame of the door or panel 2. A partition 3 is located in the casing 1 and bolts 4 are slidably mounted in the said casing. The bolts 4 are provided with shanks 5 which pass through the partition 3. Springs 6 bear at one end against the partition 3 and at their other end against the inner ends of the bolts 4 and are under tension with a tendency to hold the bolts 4 in projected position with relation to the casing 1.

A catch 7 is mounted in the casing 1 and one end of the said catch projects beyond the end of the casing. The catch 7 is mounted upon a resilient shank 8, one end of which is secured to the side of the casing and the said catch is provided at its outer end with lugs 9 adapted to engage the heads provided in a keeper hereinafter to be explained.

The keeper 10 is in the form of a plate which is angular in transverse section and which is provided at its sides with openings 11 and 12. Heads 13 are provided upon the keeper 10 between the openings 11 and 12 and the inner ends of the said heads are spaced from each other for a distance sufficient to permit the shank 8 of the catch 7 to pass between them. The heads 13 are provided with beveled sides 14 and inner sides 15 which are disposed at right angles to that side portion of the keeper 10 which is provided with the opening 11. The outer surfaces of the lugs 9 are beveled as at 16.

Assuming that the parts are in position shown in Fig. 2 of the drawing and it is desired to swing the panel 2 to an open position, the operator swings the free end of the panel in an inward direction whereby the bolts 4 are moved by the side of the keeper 10 in an inward direction with relation to the casing 1 and against the tension of the springs 6. At the same time the heads 13 move in an inward direction away

from the lugs 9 and when the edges of the said lugs arrive at the opening 11 in the keeper 10, the tension of the resilient shank 8 comes into play and the lugs 9 are carried through the opening 11 and the free end of the catch 7 is moved so that the keeper 10 may slide past the same. Thus the panel 2 is released and under the tension of the springs 6 which operate the bolts 4, the panel is swung to an open position when pressure is removed from the free edge portion thereof. Thus the said panel or door 2 is opened. When it is desired to close the panel and secure the same in the closed position the free edge portion thereof is swung toward the casing 1 and the beveled surfaces 14 of the heads 13 engage the beveled surfaces 16 of the lugs 9 and the lugs are carried into the keeper 10 and when their edges pass beyond the walls 15 of the heads 13 the spring shank 8 moves the lugs 9 in an outward direction whereby they engage the surfaces 15 of the heads 13 and the panel or door 2 is secured in a closed position in the frame in which it is hingedly or pivotally mounted. By reference to Fig. 2 of the drawing it will be seen that the inner or rear surfaces of the lugs 9 are chamfered or beveled, also the heads 13 are provided with beveled surfaces 14. When the door 2 is moved in an inward direction the resiliency of the shank 8 causes the end portions of the lugs 9 to pass through the opening 11, consequently as the door is swung to an open position the edges of the heads 13 at the sides of the opening 11 are scraped by the beveled surfaces of the lugs 9. But as soon as the beveled surfaces 14 of the heads 13 are moved beyond the lugs 9 the tension of the spring shank 8 moves the lugs 9 back into the path of movement of the beveled surfaces 14 of the heads 13, consequently when the door is moved to a closed position the beveled surfaces 14 of the said heads 13 encounter the lugs 9 and the catch is forced through the opening 12 and engages the heads 13 in a manner as shown in Fig. 2. When the door is to be opened from the opposite side or what is known as a communicating door, a knob is attached to the stile as on an ordinary door. By slightly pulling on the knob the catch is released the same as when one would push on the door from the other side and the door is then swung into the room by the action of the spring.

From the above description taken in conjunction with the accompanying drawing, it will be seen that a secret lock of simple and durable structure is provided and that the same may be manipulated without the use of a key or other implement to release the panel or door to which it is applied or to secure the same in a closed position in the frame in which it is mounted.

Having described the invention what is claimed is:—

1. A lock of the character indicated comprising a casing, a resiliently supported catch mounted in the casing, a keeper angular in transverse section and provided at its sides with openings and having heads located between the openings, the said heads being spaced from each other at their inner ends, said catch having lugs, the keeper adapted to receive the lugs of the catch through the opening at one side, and the lugs of the catch adapted to pass through the opening at the other side to disengage the keeper.

2. A lock of the character indicated comprising a casing, a catch resiliently supported therein and provided with lugs, spring pressed bolts carried by the casing, a keeper angular in transverse section provided at its sides with openings, said keeper also having heads located between the openings, the inner ends of the heads being spaced from each other for a distance to permit the shank of the keeper to pass between them, the lugs of the catch adapted to enter the keeper and engage the heads thereof.

3. A lock of the character indicated comprising a casing, a catch resiliently supported therein and provided with lugs having beveled faces, spring pressed bolts movably mounted in the casing, a keeper angular in transverse section and provided with openings at its side, said keeper having heads located between the openings, said heads being provided with beveled sides, the inner ends of the heads being spaced from each other for a distance sufficient to permit the shank of the catch to pass between them, the lugs of the catch adapted to enter the keeper and engage the heads thereof.

In testimony whereof I affix my signature in presence of two witnesses.

AMASA M. JOHNSON.

Witnesses:

MAMIE E. LONG,

MARIE WASSERMAN.