

958,406.

J. JOHNSON.
DOOR LOCK.
APPLICATION FILED JULY 23, 1909.

Patented May 17, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

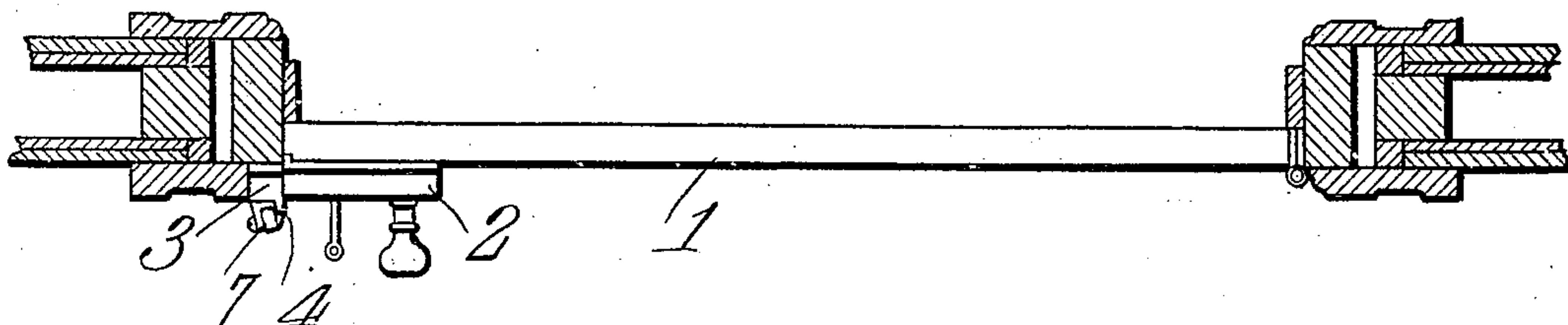


Fig. 2.

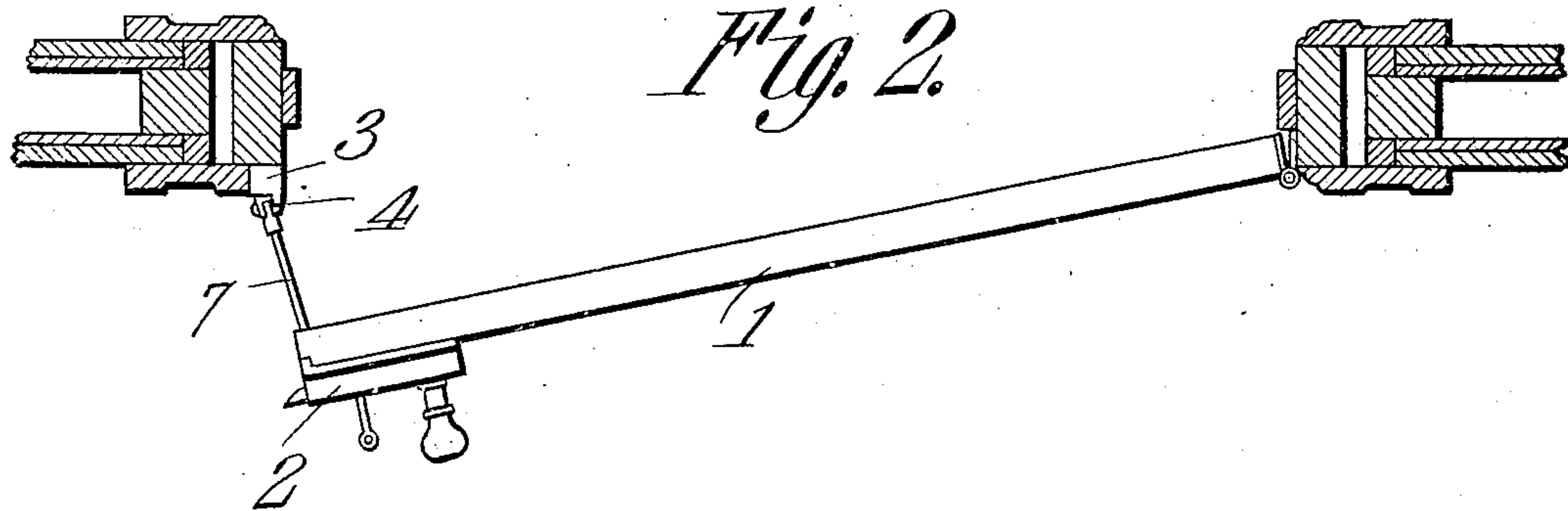
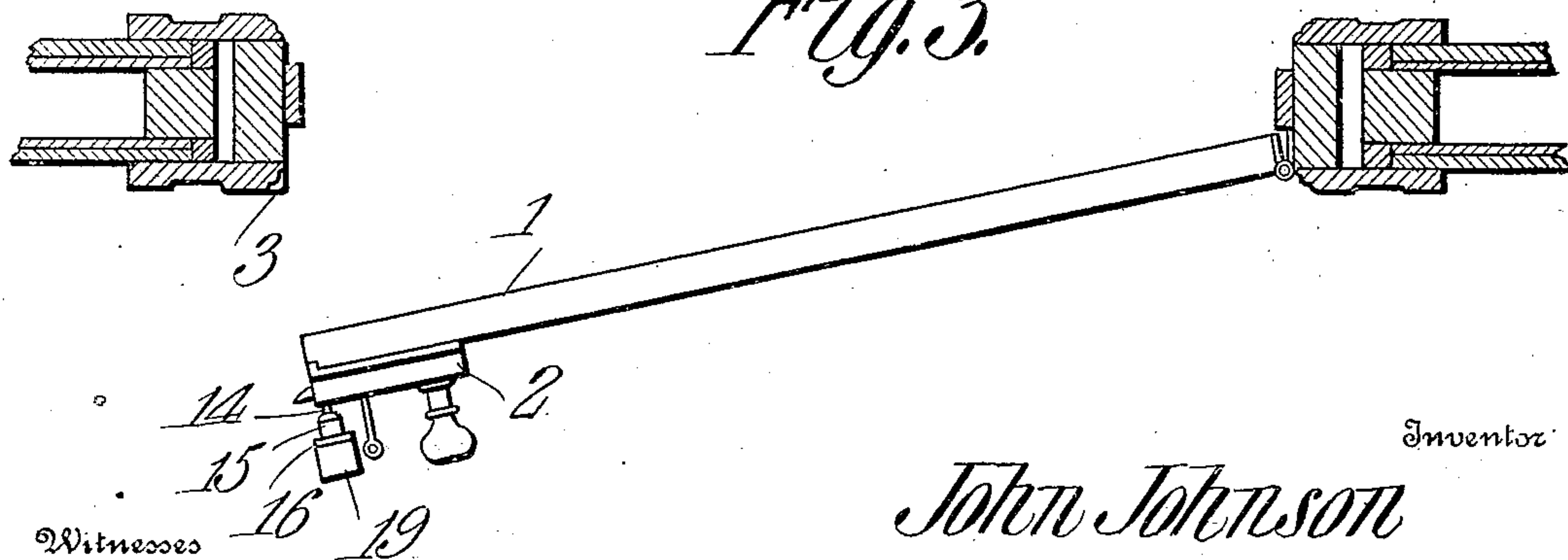


Fig. 3.



Witnesses

E. W. Hunt
Herbert D. Lawrence

Inventor

John Johnson

By

C. A. Snow & Co.
Attorneys

J. JOHNSON.

DOOR LOCK.

APPLICATION FILED JULY 23, 1909.

958,406.

Patented May 17, 1910.

2 SHEETS—SHEET 2.

Fig. 4.

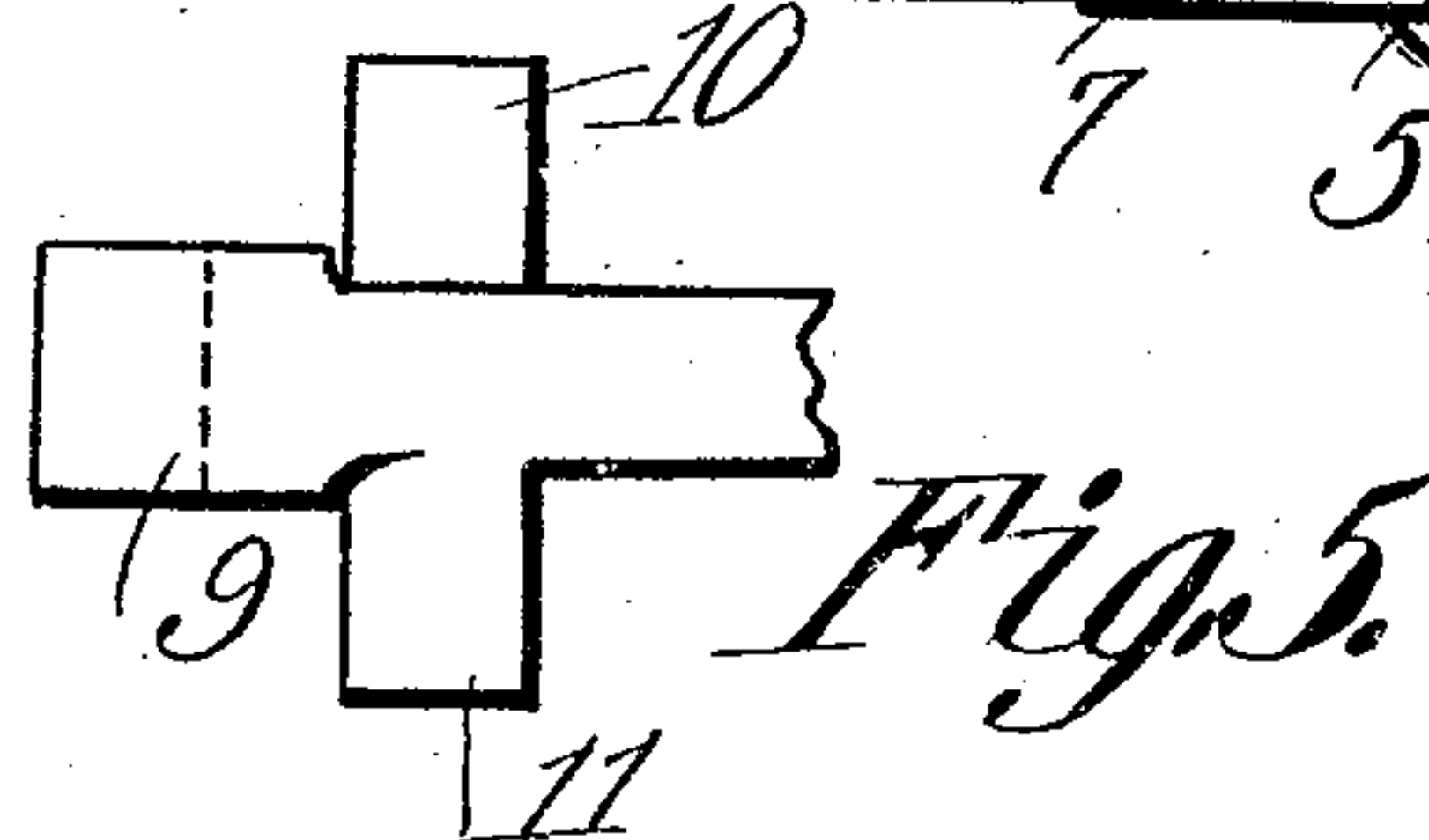
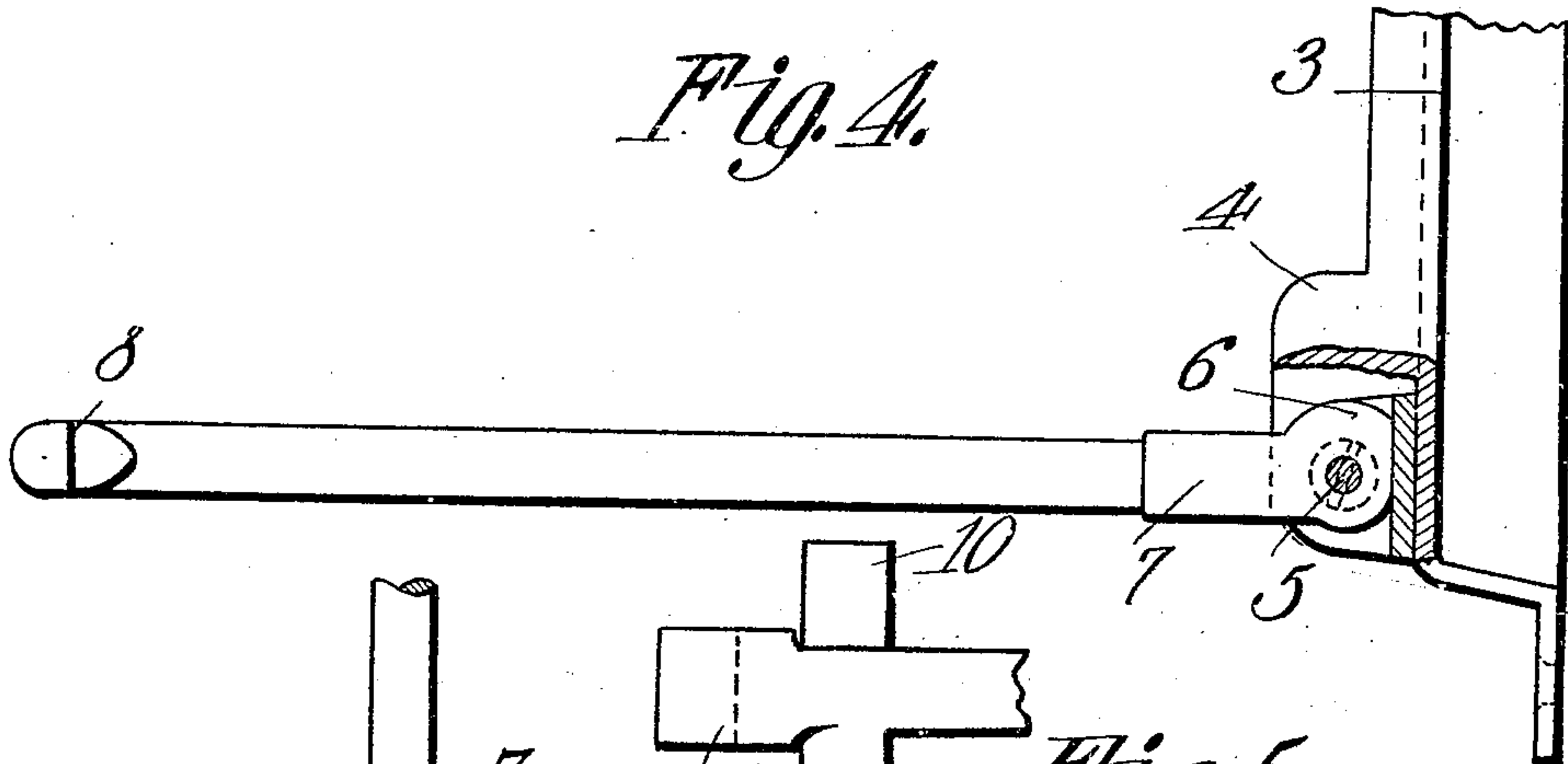


Fig. 6.

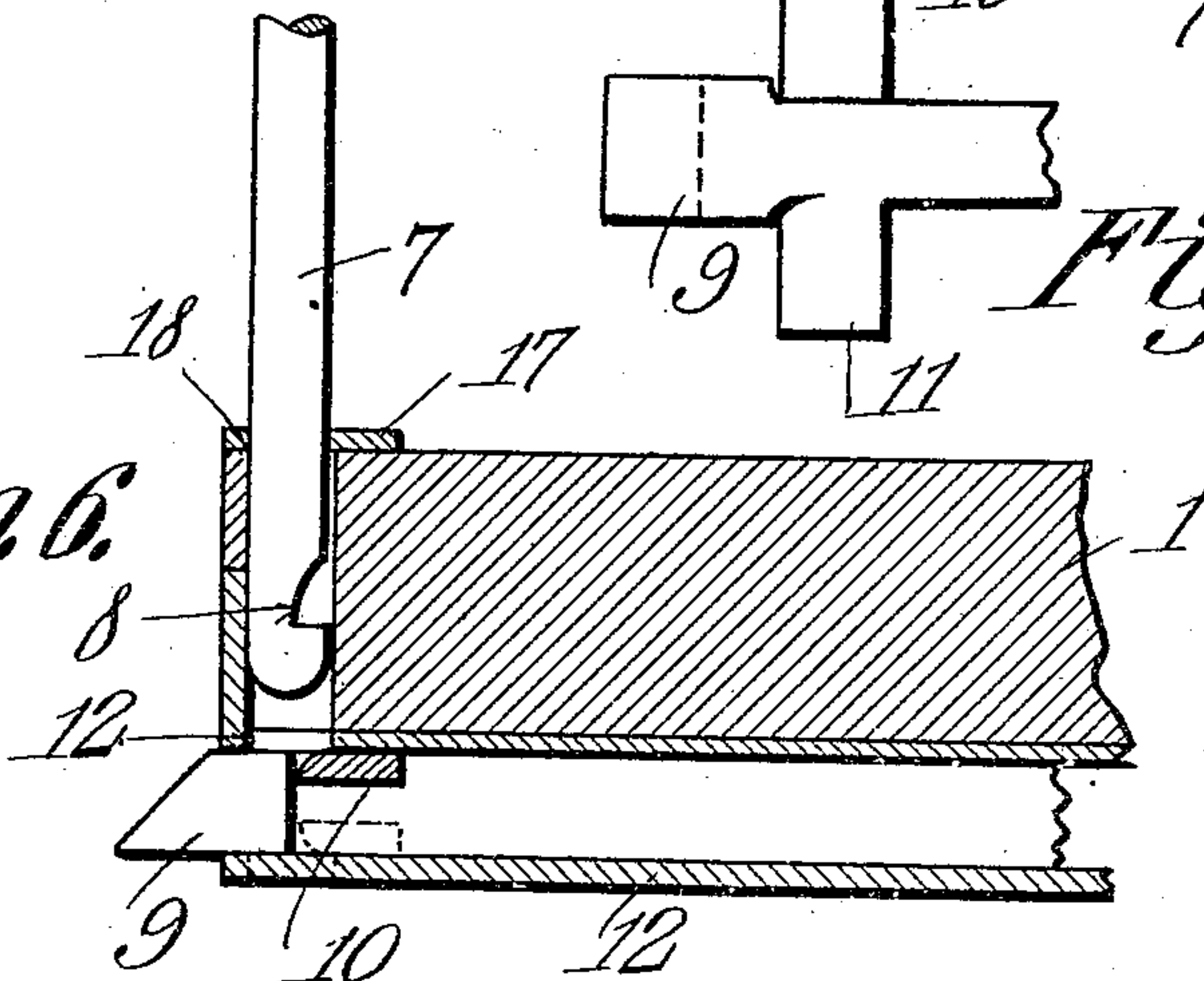


Fig. 7.

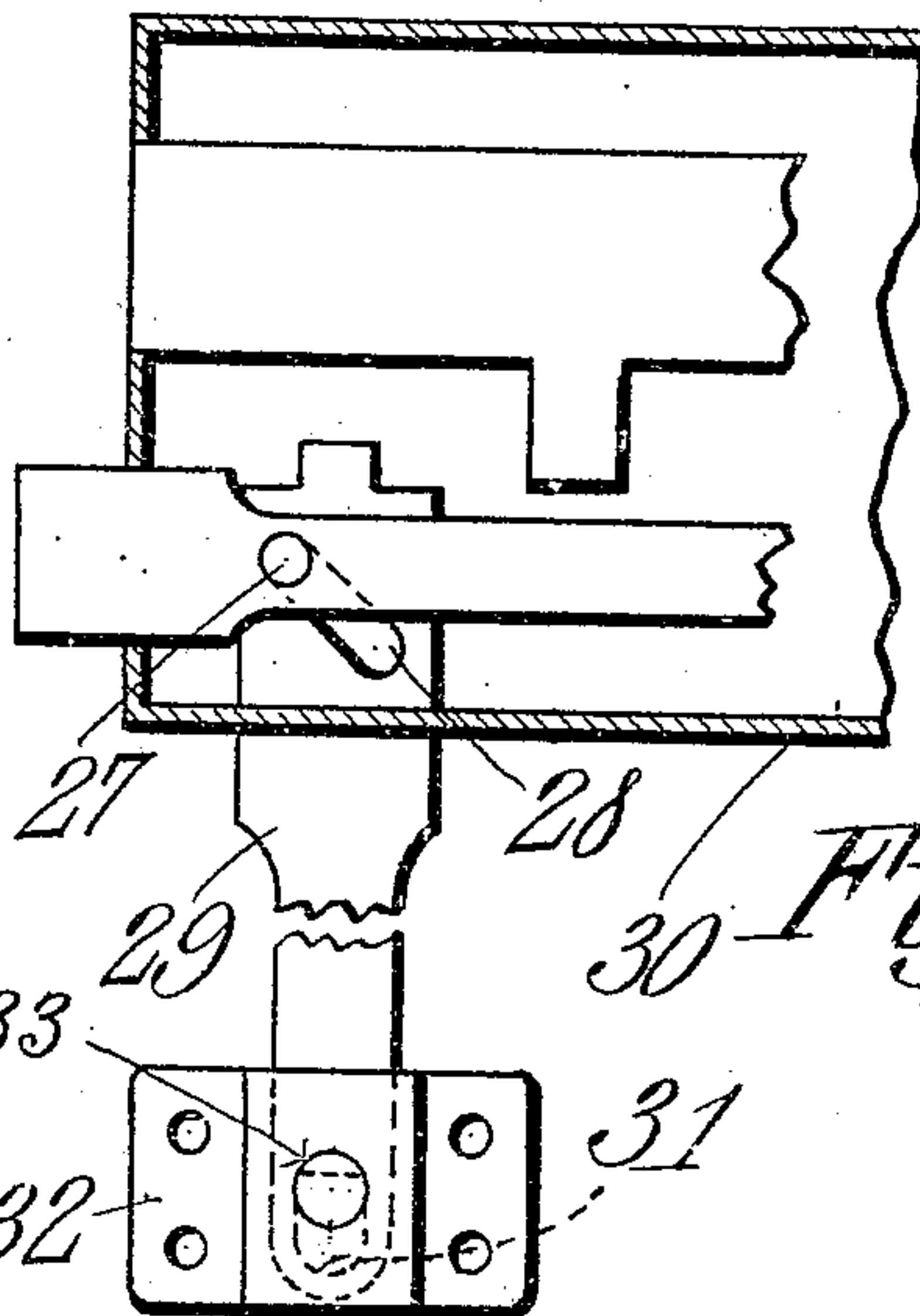
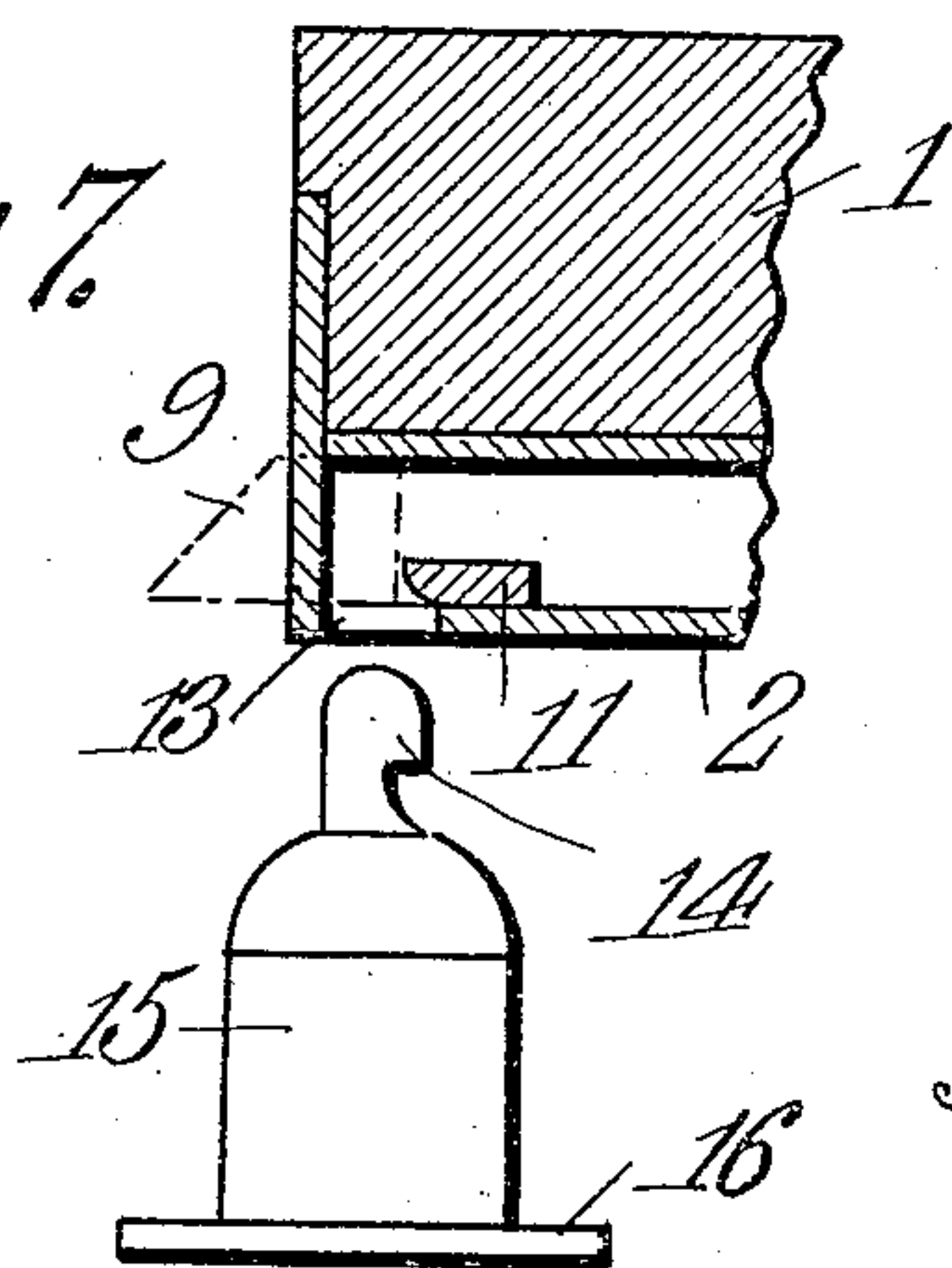
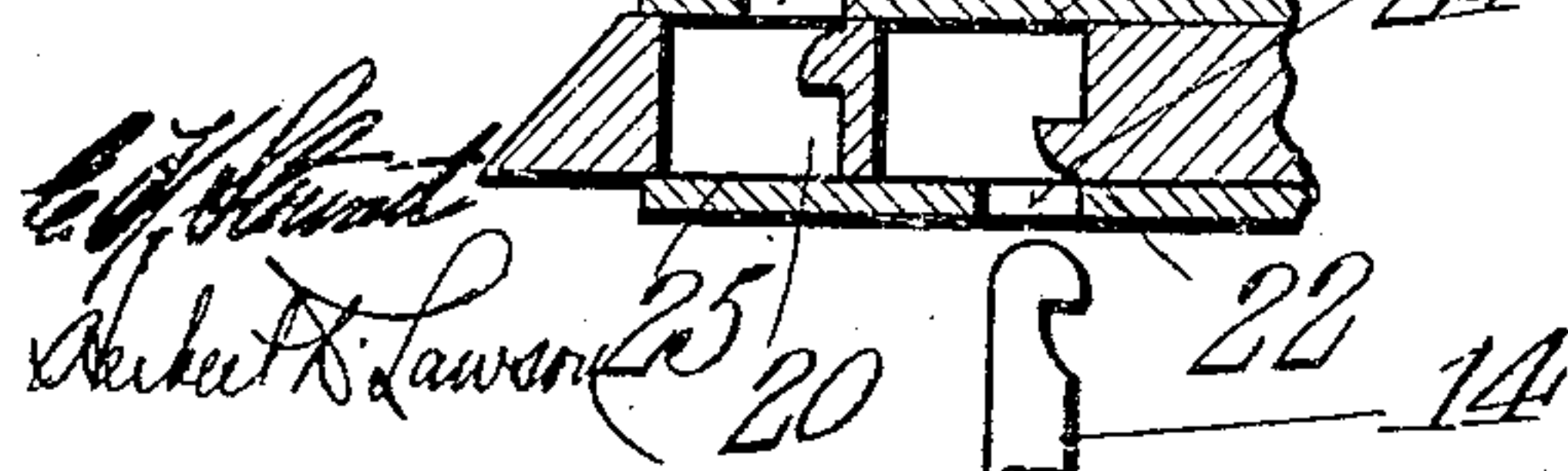


Fig. 9.

Fig. 8.

Witnesses



Inventor

John Johnson

By

C. A. Snow & Co.

Attorneys

UNITED STATES PATENT OFFICE.

JOHN JOHNSON, OF CROOKSTON, SCOTLAND.

DOOR-LOCK.

958,406.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed July 23, 1909. Serial No. 509,172.

To all whom it may concern:

Be it known that I, JOHN JOHNSON, a subject of the King of England, residing at Crookston, in the county of Renfrew, Scotland, have invented a new and useful Door-Lock, of which the following is a specification.

This invention relates to door locks and is more particularly designed for use in connection with an ordinary form of lock for the purpose of holding a door against movement while partly or entirely open.

The device is more specifically adapted for use upon boats, in hotels, and other places where it is desirable to leave the door partly open for the purpose of better ventilating the room.

The object of this invention is to provide a device of this character which is simple in construction, can be readily applied, and which when used in connection with the ordinary lock bolt, operates to lock the door in either closed or partly closed position.

Another object is to provide a device of this character which can be readily slipped out of operative position so as not to interfere with the closing of the door.

With these and other objects in view, the invention consists in certain novel details of construction and combination of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings;—Figure 1 is a horizontal section through a door locked in closed position, the device constituting the present invention being shown in plan. Fig. 2 is a view similar to Fig. 1 and showing the door, locked in partly open position. Fig. 3 is a similar view showing the door locked in partly open position but utilizing a modified means for holding it in place. Fig. 4 is an enlarged view partly in elevation and partly in section of the stem constituting the keeper utilized for securing the door in partly open position. Fig. 5 is an elevation of the latch bolt used in connection with the lock shown in Figs. 1, 2, and 3. Fig. 6 is a horizontal section through the lower portion of the lock and showing the relative positions of the stem and latch bolt immediately prior to becoming locked together. Fig. 7 is a horizontal section through the

lower wing of the latch bolt and showing the relative positions of said wing and the stem of the knob immediately prior to the engagement of said parts, the knob being utilized for the purpose of securing the door when the same is in open position. Fig. 8 is a longitudinal section through a modified form of latch bolt for use with stems in the same horizontal plane. Fig. 9 is a detail view of a modified form of lock.

Referring to the figures by characters of reference, 1 designates a door of the hinged or any preferred type the door being provided with a lock 2 of that form utilizing a latch bolt as well as a sliding bolt. In the usual forms of locks of this kind when the sliding bolt is shot into the keeper by means of the key, the latch bolt becomes locked against movement. It is in connection with this form of lock that the present keeper is especially designed for use. The keeper 3 of the lock has ears 4 extending therefrom, said ears being disposed at angles to the keeper and supporting a pivot pin 5 on which is mounted the eccentric head 6 of a stem 7. This head is so shaped as to permit the stem to be swung into vertical position and to hold it against further upward movement after it has been lifted to horizontal position. The ears are extended at such an angle that when the stem is in its lifted or horizontal position, its free end will project into the path of the door. As shown in the drawings a notch 8 is formed within the stem adjacent its free end, this notch being provided for the purpose hereinafter set forth.

The lock 2 has a latch bolt 9 mounted to reciprocate within the lock casing, this bolt being provided with an upstanding wing 10 and a downwardly extending wing 11, each of the wings having the outer portion of its advancing or front edge rounded or beveled as indicated in Figs. 6 and 7. The wing 10 partly projects across the inner end of an opening 12 formed within the door 1 and the lock casing 2, this opening being of such size as to readily receive the stem 7. The wing 11 normally projects partly across an opening 13 formed within the lock casing 2 and which is designed to receive a notched stem 14 projecting in a knob 15 which has a base plate 16 designed to be secured in any preferred manner to a wall, post or other structure arranged back of the door and in the

path thereof. A wear plate 17 is preferably secured upon the door 1 around the opening 12, there being an opening within the wear plate which registers with said opening 12 and is tapered so as to properly guide the stem into the jaw opening 12.

When the stem 7 is swung downward to vertical position the door can of course be closed and the latch bolt 7 will be seated below the keeper 3, thus holding the door shut. When it is desired to lock the door while partly open, said door is released from the keeper and swung open and the stem 7 is moved upward to horizontal position and with its notched end in the path of the door. The door is then swung toward said stem so as to cause the notched end thereof to enter the opening 12. The free end of the stem is beveled or rounded and will thus move against the wing 10 and shift it away from the opening 12 until after the notch 8 assumes a position in the path of the wing whereupon the bolt will automatically return to its initial position, the wing 10 assuming a position within the notch 8 and thus prevent the door from moving with relation to the stem 7. The latch bolt can then be locked in any of the various ways devised in locks of different constructions and the door will therefore be positively secured to the stem and it will be impossible to move it. When it is desired to lock the door in open position, the same is swung back so as to cause the stem 14 to enter the opening 13 and to engage the wing 11 of the latch bolt.

As heretofore stated, the knob 15 can be secured to the wall back of the door or can be secured to a removable post located in the path of the door. This last arrangement has been shown in Fig. 3, it being understood that the post which has been disclosed at 19, may be removed from the floor when it is desired to open the door to its greatest extent.

Instead of providing upper and lower wings for the latch bolt, said bolt may be provided with openings 20 and 21 therein placed one back of the other and each having a projection 22 on one wall thereof. These openings 20 and 21 are designed to register with openings 23 and 24 respectively in opposite sides of the lock 25, and one of which is designed to receive the stem 7 while the other is designed to receive the stem 14.

As shown in Fig. 9, instead of forming openings or wings such as heretofore described, a pin or trunnion 26 may be extended from the bolt and project into a diagonal slot 28 formed within a slide 29 projecting beyond the lock 30. This slide has a slotted end 31 mounted within a guide strap 32 in which an opening 33 is formed, said opening being designed to receive either the stem 7 or the stem 14.

Strap 32 is secured to the door on which the

lock 30 is mounted. Obviously when the bolt is in its normal position the slide 29 rests with one end wall of the slot projecting into the notch formed in either of the stems inserted in the opening 33. However, when the bolt is retracted the stem 27 will operate to shift the slide so as to release the stem engaged thereby.

It is of course to be understood that various other changes may be made in the construction and arrangement of parts without departing from the spirit or sacrificing the advantages of the invention.

What is claimed is:—

1. The combination with a door and a keeper, of a stem pivotally connected to the keeper and normally held by gravity in a downwardly extended position, a casing upon the door, a keeper engaging bolt slidably mounted within the casing, said casing having an aperture for the reception of the stem when elevated, and cooperating means upon the stem and bolt for holding the casing and stem against relative movement.

2. The combination with a door and a keeper, of a casing upon the door, a bolt within the casing for engaging the keeper to hold the door in closed position, and means movable into the side of the casing and transversely of the bolt for engaging said bolt to lock the door in partly closed position.

3. The combination with a keeper and a door mounted for movement relative to the keeper, of a casing upon the door and a bolt within the casing and movable into engagement with the keeper to hold the door in closed position, a stem movable into the side of the casing and transversely of the bolt, and cooperating means upon the bolt and stem for locking the door in a partly closed position.

4. The combination with a keeper, of a door, a casing upon the door, a bolt slidably mounted upon the casing and movable into engagement with the keeper to hold the door in closed position, a projection carried by the bolt and within the casing, and a stem insertible into the casing and having a notch for the reception of the projection on the bolt to lock the stem and bolt together.

5. The combination with a keeper, of a door, a casing upon the door, a bolt slidably mounted therein, and movable into engagement with the keeper to hold the door in closed position, a projection upon the bolt and within the casing, a stem pivotally connected to and normally hanging downward from the keeper, said stem being movable upwardly into the path of the lock casing and having a notched end insertible into said casing for engagement with the projection on the bolt.

6. The combination with a keeper, of a door, a casing on the door, a bolt slidably

mounted within the casing, and movable
into engagement with the keeper to hold the
door in closed position, a notched stem in
the path of the door, and means movable
5 with the bolt for engaging the stem to lock
the door in partly open position.

In testimony that I claim the foregoing as

my own, I have hereto affixed my signature
in the presence of two witnesses.

JOHN JOHNSON.

Witnesses:

HENRY A. STONE,
L. A. PALMER.