

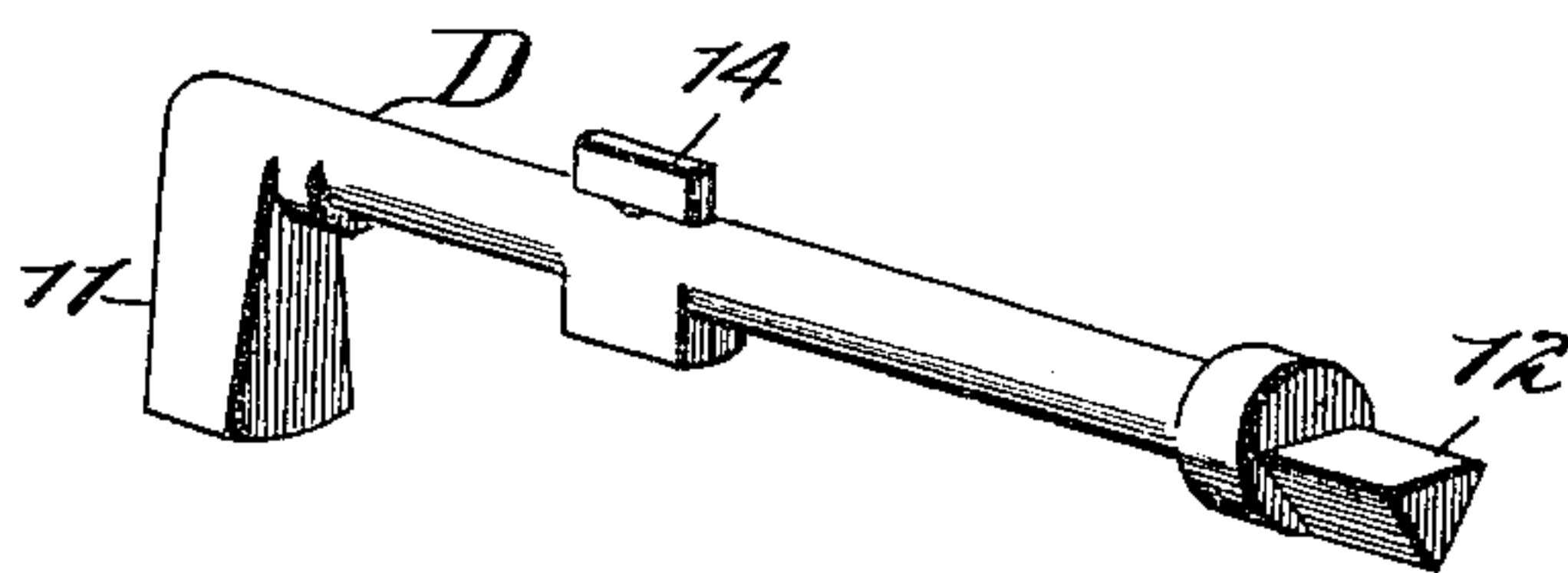
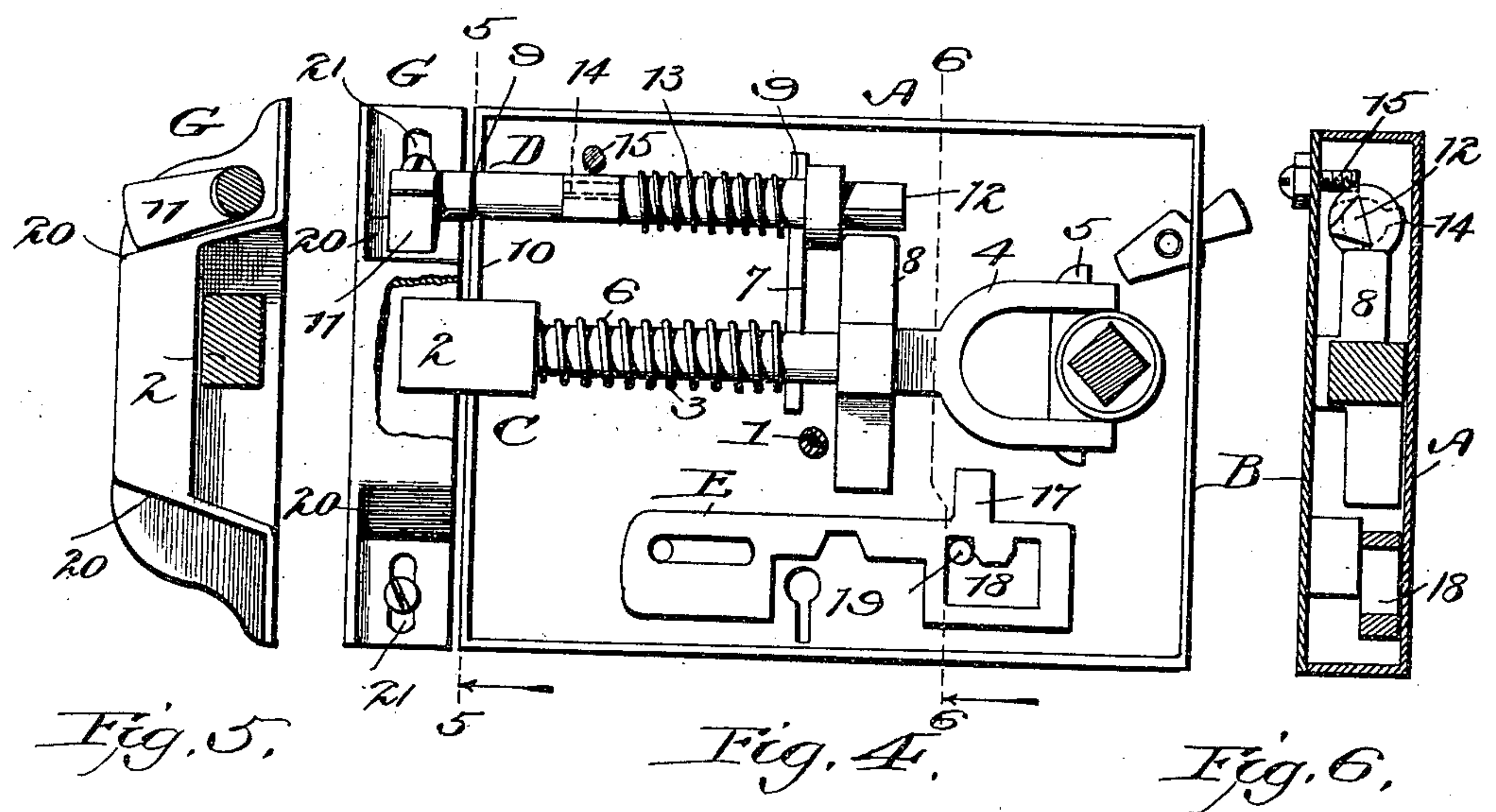
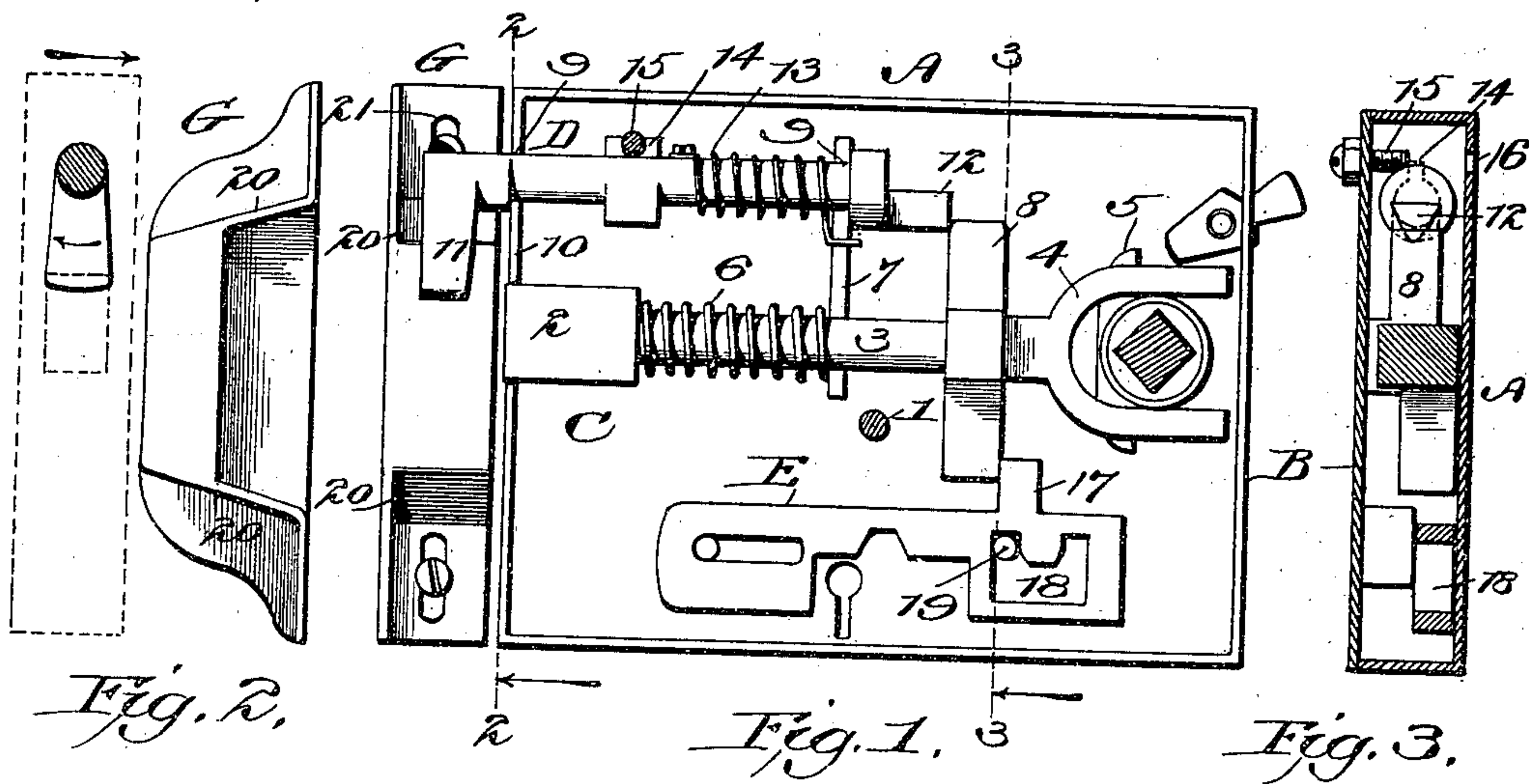
No. 642,961.

Patented Feb. 6, 1900.

C. CLOSZ.  
LOCK AND LATCH.

(Application filed Jan. 26, 1899.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

CHARLES CLOSZ, OF MARIETTA, OHIO.

## LOCK AND LATCH.

SPECIFICATION forming part of Letters Patent No. 642,961, dated February 6, 1900.

Application filed January 26, 1899. Serial No. 703,475. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES CLOSZ, a citizen of the United States, residing at Marietta, in the county of Washington and State of Ohio, have invented certain new and useful Improvements in Locks and Latches, of which the following is a specification.

My invention relates to an improvement in door-locks of the automatic variety, one object being to provide a door-lock that will latch easily and one that will necessitate no slamming of the door to make it latch; and another object is to provide a lock which will do away to a great extent with the use of springs, which has been a prevalent cause of trouble and breakage.

With these objects in view my invention consists in certain novel features of construction and combinations of parts, more fully described hereinafter and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view showing the interior of the lock and the keeper in position to operate the bolt. Fig. 2 is a section on line 2 2 of Fig. 1, with the parts in the relative position indicated in Fig. 1, showing the relation of the lock in dotted lines at the left just prior to the engagement of the trip with the keeper. Fig. 3 is a view in section on line 3 3, the parts being in the same relation. Fig. 4 is a similar view to the one shown in Fig. 1, with the bolt thrown or in the keeper. Fig. 5 is a section on line 5 5 of Fig. 4, showing the position of parts indicated in Fig. 4. Fig. 6 is a section on line 6 6 of Fig. 4, and Fig. 7 is a view of the rocking trip.

A represents the casing, and B the removable portion thereto, the two being held together conveniently by a single screw 1 at or near the center.

C is a combined lock and latch. This terminates at its outer end in a bolt 2, back of which the cylindrical portion 3 is formed, and at the extreme rear end the usual yoke 4, which is engaged by a turnbuckle 5 for withdrawing the combined lock and latch, as is customary. A spiral spring 6 surrounds the cylindrical portion of the bolt, bearing at one end on the partition 7 and at the other

end on the bolt, whereby the tendency is normally to throw the bolt outwardly as a result of the extensible action of the spring. At a point on the bolt in proximity to its center or between its center and the yoke is a cross-bar 8, which extends a short distance above and below the bolt.

The rocking trip is represented by the letter D, it being supported in bearings 9 9, formed, respectively, in the outer edge 10 of the lock-casing and the partition 7 at a point a little above the combined bolt and latch. This rocking trip has a laterally-projecting arm or lever 11 formed on its upper end, and at its opposite end is an angular lug 12, which is located eccentrically of the axis of the rocking trip and extends in a rearward direction. A spiral spring 13 surrounds the rocking trip, it being connected to it at one end and to the partition 7 or part of the casing A at the other end, whereby its tendency is to normally turn the rocking trip, so that the lug 12 will be in the path of the upper end of the cross-bar 8 to prevent the outward movement of the combined lock and latch. This is the position which the rocking trip assumes when the bolt or latch is withdrawn in opening the door in consequence of turning the knob and in which position the arm or lever 11 assumes a direction downwardly or approximately in front of the outer end of the combined bolt and latch. A lug 14 on the rocking trip is in position to strike a set-screw 15 in one side of the casing to prevent the rocking trip from turning in the wrong direction. In this connection it is to be mentioned that this set-screw 15 is removable and can be placed in the opposite side of the casing in the hole 16 when the latter is to be placed on the opposite side of the door.

E represents the tumbler, which is operated and controlled by a key in the usual manner, a projection 17 being formed on this tumbler in position to engage the lower end of the cross-bar 8 when the combined bolt and latch is to be locked in this position in the keeper. The construction of the tumbler is such, owing to the formation of the slot 18 therein and its relation to the pin 19, that the key cannot be turned when the bolt is not



sprung, thus avoiding the inconvenience of the combined bolt and latch being sprung when the door is opened.

G represents the keeper. This is provided with inclined top and bottom walls 20 20, and it has elongated vertical slots 21 21, which admit of the keeper being adjusted on the casing to correspond with the position of the parts of the lock in the event of any settling of the door or casing, which is liable to take place. The inclined portion of the keeper is adapted to operate upon the arm or lever 11 of the rocking trip and turn the latter so that the angular stud 12 clears the upper end of the cross-bar 8 to release the combined bolt and latch, at which time the latter enters the keeper, and in this way the door becomes latched, when the door may be locked by turning the key and throwing the tumbler in the usual manner, its projection 17 assuming a position in the rear of the cross-bar 8 to hold the latter in locked position.

The operation is to close the door, and to do this all that is necessary is to "push the door to," when the lower part of the arm or lever of the rocking trip will come into contact with the inclined portion of the keeper, and by so doing the rocking trip will be turned far enough to bring the annular stud at the inner end of the trip into the path of the cross-bar 8 of the bolt or latch, thereby releasing the same and allowing the spiral spring to force the latch or bolt outward and into the keeper. Then to lock the door the key may be turned and the tumbler thrown in the usual manner. To open it again, the tumbler must be thrown back by the usual unlocking operation of the key. Then the knob is turned and the stud of the rocking trip drops normally in front of the cross-bar 8 and holds the latch or lock back in its inward position, leaving the arm or lever 11 in readiness to be again forced aside by its entrance into the keeper when the door is closed.

It is evident that slight changes might be made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but,

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

1. The combination with a lock and latch casing, of a spring-actuated slide-bolt having a cross-bar 8 thereon, a spring-actuated rocking trip provided at one end with a laterally-projecting arm or lever adapted to be struck by the keeper to rock said trip, the rocking trip also provided with a lug 14 on its side and an angular lug 12 eccentrically placed on its inner end in position to engage the cross-bar and a removable set-screw 15 capable of being inserted from either side of the lock-casing.

2. The combination with a lock and latch casing, of a spring-actuated slide-bolt having a cross-bar 8 thereon, a spring-actuated rocking trip provided at one end with a laterally-projecting arm or lever adapted to be struck by the keeper to rock said trip, the rocking trip also provided with a lug 14 on its side and an angular lug 12 eccentrically placed on its inner end in position to engage the cross-bar, a removable set-screw 15 capable of being inserted from either side of the lock-casing and a tumbler adapted to be controlled by a key for engaging said cross-bar to hold the bolt securely in place.

3. The combination with a lock and latch casing, of a spring-actuated slide-bolt having a cross-bar 8 thereon, a spring-actuated rocking trip provided at one end with a laterally-projecting arm or lever, said rocking trip also provided with a lug 14 on its side and an angular lug 12 eccentrically placed on its inner end in position to engage the cross-bar, a removable set-screw 15 capable of being inserted from either side of the lock-casing and a reversible keeper having two external inclines 20 thereon, one of which is always in position to engage the arm 11 of the rocking trip when the door is closed, said keeper also having an opening or recess to receive the lock released by said trip when struck by the incline.

CHARLES CLOSZ.

In presence of—

CHARLES A. LUDLY,  
S. A. COFFMAN.