

(No Model.)

2 Sheets—Sheet 1.

J. H. DOSCHER.
ALARM LOCK.

No. 580,680.

Patented Apr. 13, 1897.

Fig. 1.

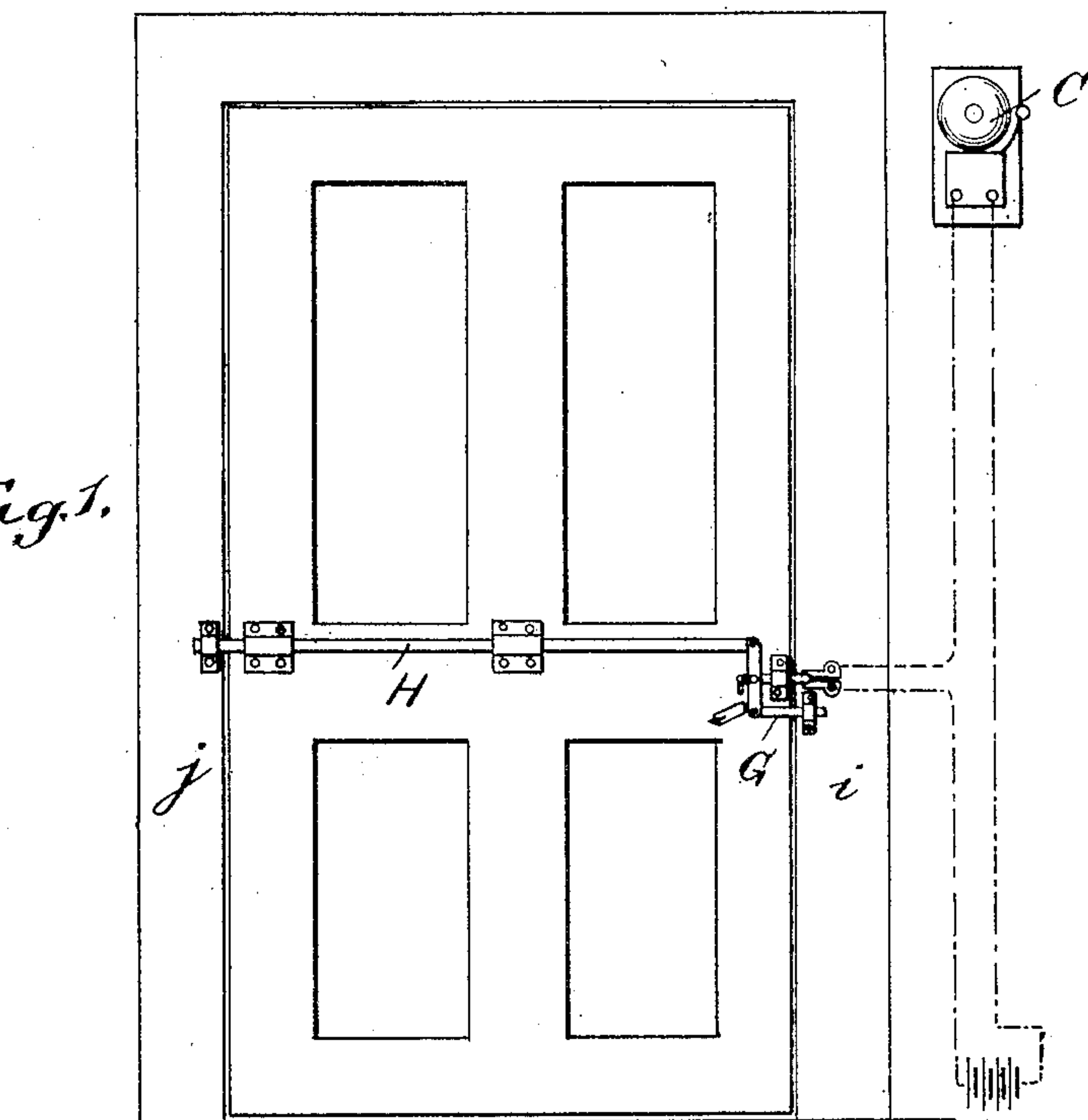


Fig. 2.

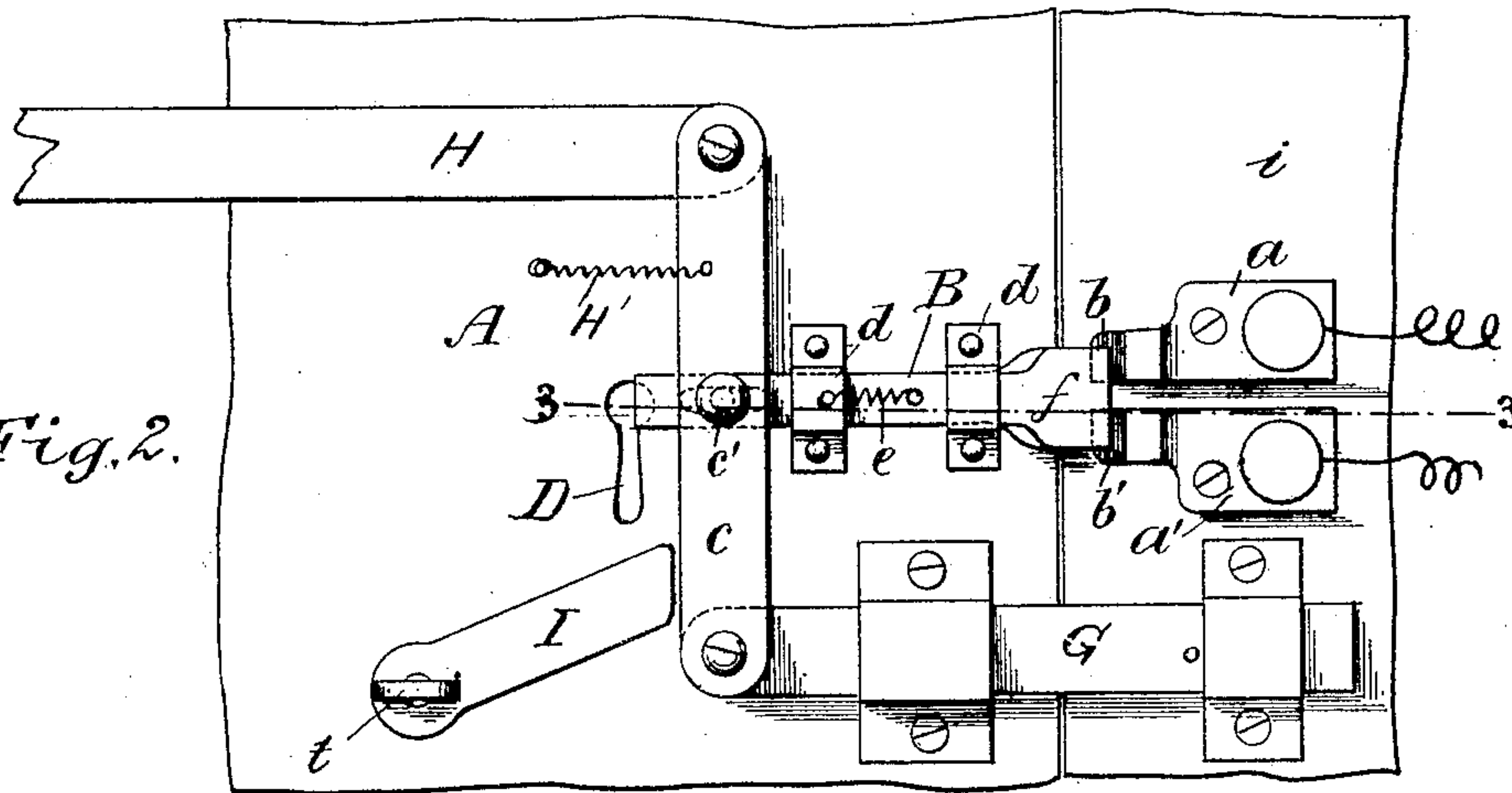
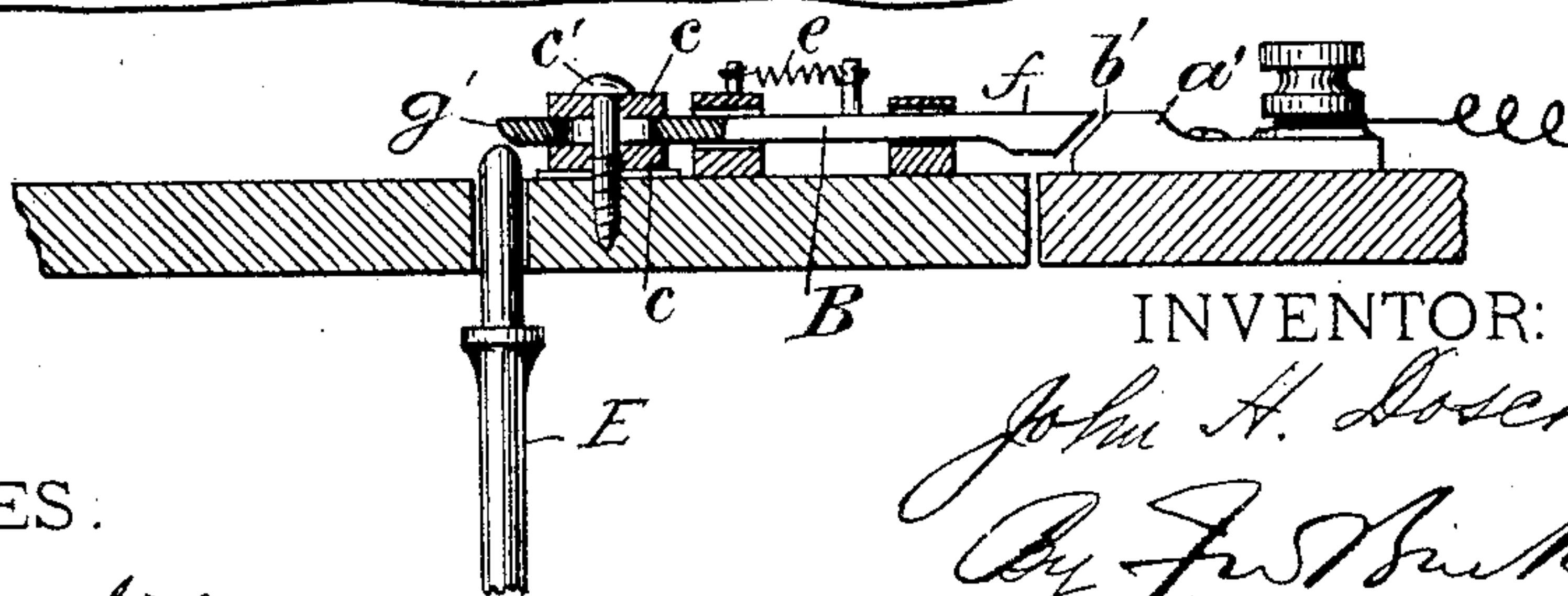


Fig. 3.



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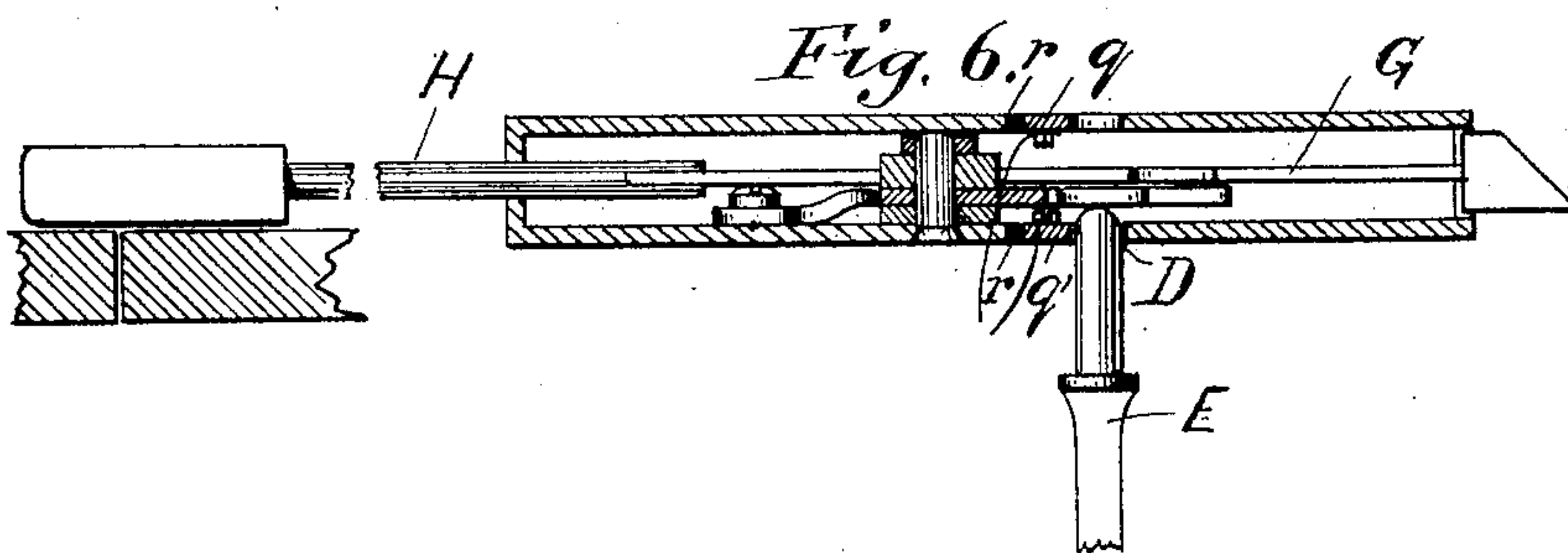
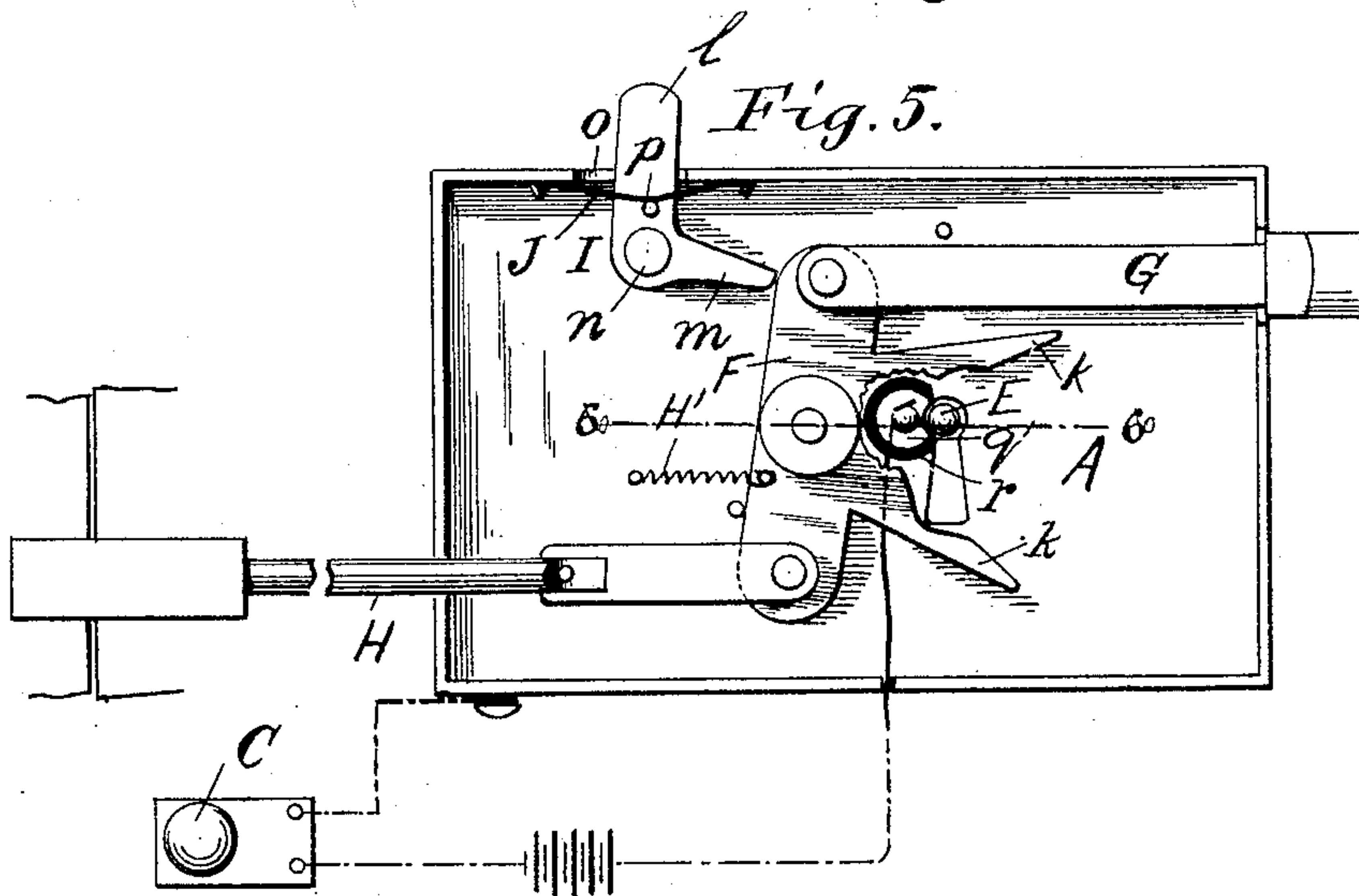
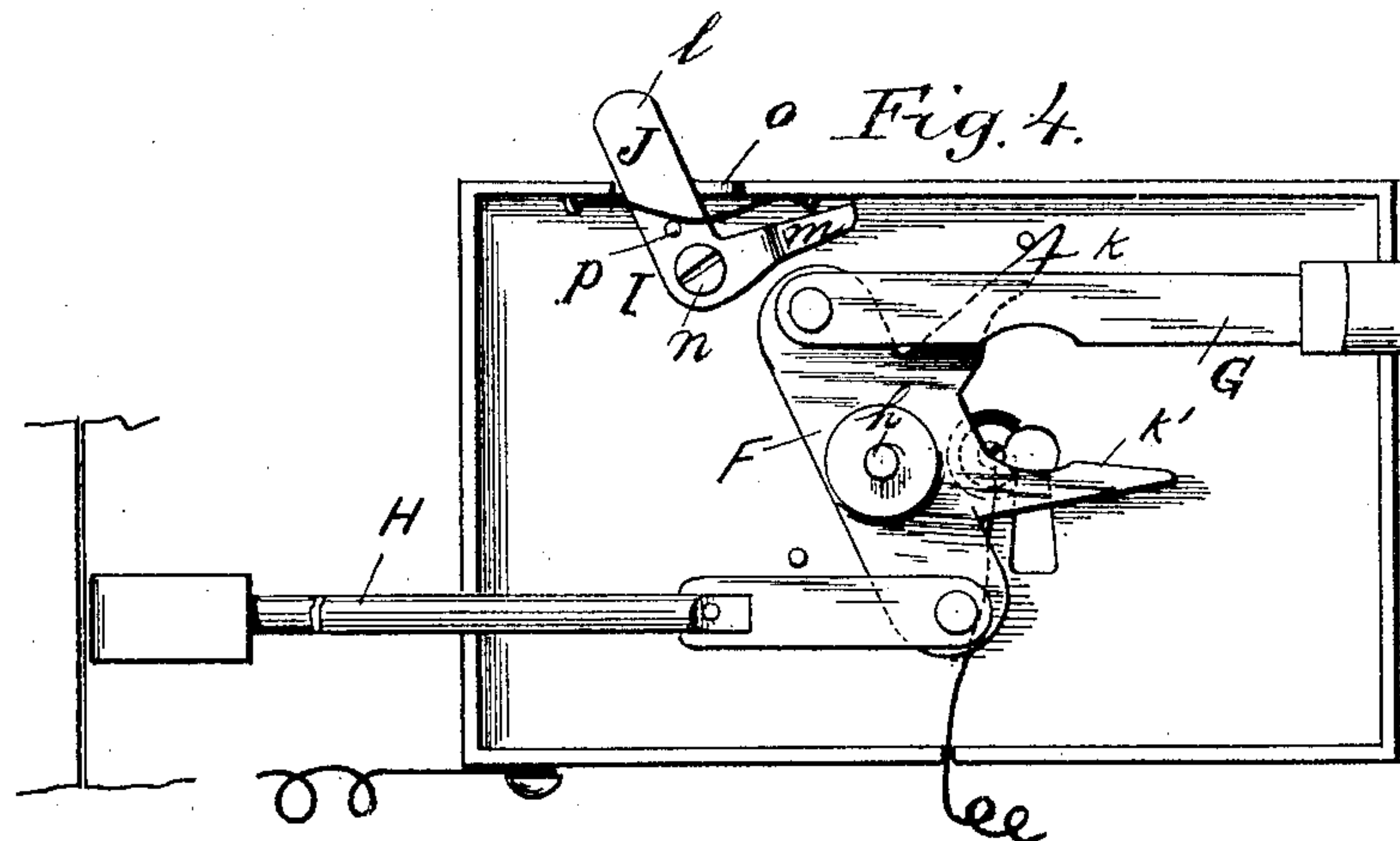
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UNITED STATES PATENT OFFICE.

JOHN H. DOSCHER, OF BROOKLYN, NEW YORK.

ALARM-LOCK.

SPECIFICATION forming part of Letters Patent No. 580,680, dated April 13, 1897.

Application filed March 26, 1896. Serial No. 584,946. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. DOSCHER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Alarm-Locks, of which the following is a full, clear, and exact specification.

This invention relates to door-locks; and its object is to provide means whereby the insertion of a key into a lock of my improved construction or of ordinary construction will cause an electric bell to be rung, and such bell will continue to ring while the key remains inserted in the keyhole, a further feature of my invention being the provision of a double-ended bolt which is capable of simultaneous engagement with the jambs at either side of the door.

The means for actuating an electric bell by the simple insertion of a key consist, broadly, of two contact-plates representing the opposite poles of a battery, said plates being contained within or formed by insulated parts of a lock, said contacts being arranged to be put in circuit by connection with an ordinary key or by a piece intermediate said contacts and key and capable of moving into circuit by the simple insertion of a key.

My lock construction comprises a pair of bolts arranged in parallel lines and pivotally connected at opposite ends by a connecting-piece, which is normally spring-held at right angles with said bolts, which are normally "shot." A catch-piece is pivoted in the lock adjacent to the said connecting-piece, said catch being adapted to engage therewith and prevent retraction of the bolts, said catch-piece being operated only from the inside of the door.

In order that my invention may be clearly understood and explained in detail, I have annexed drawings hereto, in which—

Figure 1 is a rear elevation of a doorway and door with my improved lock and alarm represented. Fig. 2 is a plan view of my lock with the top plate removed, clearly showing the construction of parts. Fig. 3 is a side sectional view taken on the line 3 3 of Fig. 2. Fig. 4 is a plan view of a modified construction of lock in which the double-bolt right-angular connecting-piece is provided with

key-actuated jaws, the contact-points consisting of the lock itself and a little piece of metal set in the lock-plate at the keyhole and insulated therefrom. The lock is retracted in this view. Fig. 5 is a similar view to Fig. 4, but with the bolts shot. Fig. 6 is a longitudinal vertical side sectional view taken on the line 6 6 of Fig. 5.

Proceeding first with the description of the construction shown in Figs. 1, 2, and 3, A indicates a side plate of a lock, and A' a door-jamb having secured thereon two separate contacts $a a'$, which are effectively insulated from each other and separated from the plate A. Said contacts have beveled edges $b b'$. B indicates a sliding piece or bar which is held at one end between insulation $c c$ by screw c' or the equivalent, passes through guides d , and is normally held by spring e with its free end f adjacent to, but not touching both of the contacts $a a'$. Said end f is preferably coincidently inclined to the bevel of contacts $a a'$, so that when said piece B is pressed against said contacts $a a'$ it will effectively complete an electric circuit and cause bell C to ring. The piece B where secured to plate A is provided with a longitudinal slot g , allowing it a sliding movement within said slot, and the adjacent end of said piece B has a beveled edge g' . D is a keyhole, and E a key part way inserted therein. In its forward movement the key comes against bevel g' , and in being pushed forward the rounded end of the key moves past the bevel g' , slightly displacing said piece B in so doing and moving it through its guides upon the contacts $a a'$, thereby ringing the bell, such ringing continuing while the key remains in the lock. F indicates a cross-beam or connecting-piece which is pivoted centrally to the plate A at h and has pivoted thereto at either end the oppositely-extending bolts G H, said bolt G being adapted to engage with the jamb A' on the ordinary locking side of the door, and bolt H being adapted to engage with the jamb j upon the opposite side, or that where the door is usually hinged. It will be observed that when the key is inserted and turned to bear against the lower portion of beam F this action will cause the bolts to be shot, and when said key is turned to bear upon the upper portion of beam F the bolts are retracted. I in-

indicates a catch-piece which is pivotally secured to the lock, having an actuating device *l*, which is conveniently arranged on the inner side of the door and which may be turned to bring its free end against beam *F* to hold said beam stationary with its bolts in the locked position, from whence they cannot be moved by a key or other means without first removing the catch *I*.

10 In the construction shown in Figs. 4, 5, and 6 the beam or connecting-piece *F* is provided with jaws *k k'*, which jaws are arranged to be acted upon by the key to enable the beam to move the bolts *G H* into and out of engagement with the door-jambs. Spring *H'* serves to retain the bolts normally in the locked position. The catch device *I* is in this construction formed of an elbow shape, comprising the portions *l m*, and is pivoted as a bell-crank at *n* to the plate *A*. The portion *l* of the catch is passed through a slot *o* in plate *A*, and the catch device may be operated thereby. *J* is a spring bearing upon a projection *p* on catch *I* and designed to frictionally retain said catch to hold the bolts in the locked or shot position. In this modification likewise contact is somewhat differently made. *q q'* are the contact-pieces, being set in and insulated from the lock-plates by non-conducting material *r*, a wire from one of the said pieces and a wire from the lock itself forming the opposite poles of a battery. Said contacts *q q'* are placed right against the keyhole, forming, in fact, a portion of its line, so that the key when being inserted will touch against both the said contact *q* or *q'* and the lock-plate proper, thus completing the circuit and ringing the bell.

I am aware that a small contact-plate, such as those indicated at *q q'* in Figs. 4, 5, and 6, may be inserted, properly insulated, in any ordinary lock in such a position as to lie in the path of the key in entering the keyhole, as, for instance, is illustrated in the construction of my improved lock illustrating this application, and I wish it to be clearly understood that the feature of such a contact-plate so arranged and wired in an ordinary manner is an essential part of my invention.

As will be readily perceived, it is impossible with my invention for a key to be inserted into a lock without causing a bell to ring, and such bell must continue to ring while the key remains in the lock, thus proving a certain alarm.

I am aware of previous devices wherein when the key is turned in a lock it will make an electrical connection and ring a bell, but the person attempting to open a door so secured would at once release his hold of the key upon hearing the bell, when the bell would cease ringing, perhaps before the inmates were aroused, but he would not necessarily withdraw the key.

By my construction and with the bell continually sounding while the key remains in the lock the inmates could not fail to be aroused and enabled to protect their property. The feature of the double bolt herein shown and described is that if the hinges of the door should be removed the door would still be secure by reason of the bolt which engages with the rear door-jamb.

Having now described my invention, I declare that what I claim is—

In an alarm-lock an electric contact situated in and insulated from said lock and arranged in the path of a key entering the keyhole of said lock, the lock itself forming an opposite electric contact, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of February, 1896.

JOHN H. DOSCHER.

Witnesses:

F. W. BARKER,
T. BRIDGWATER JONES.