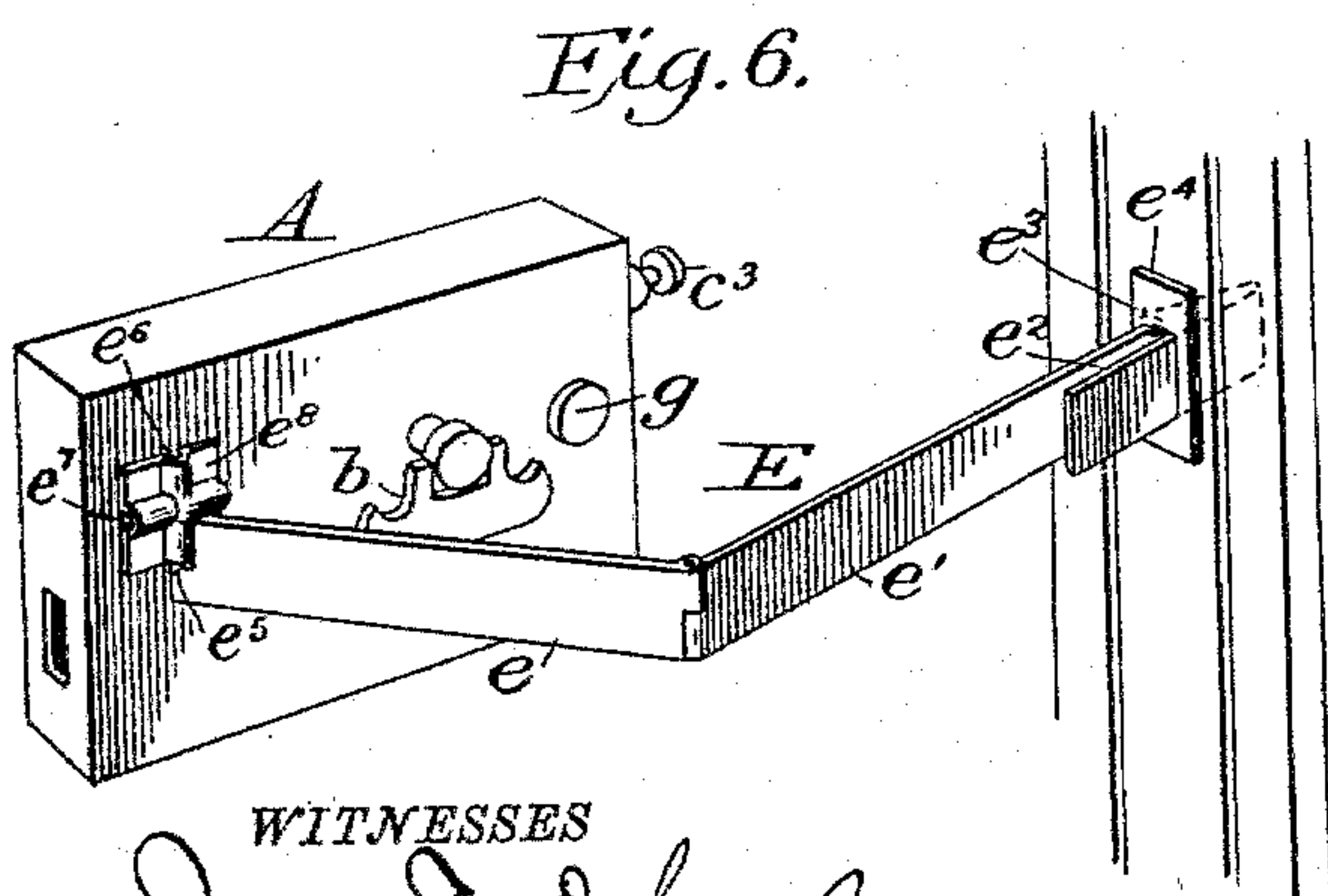
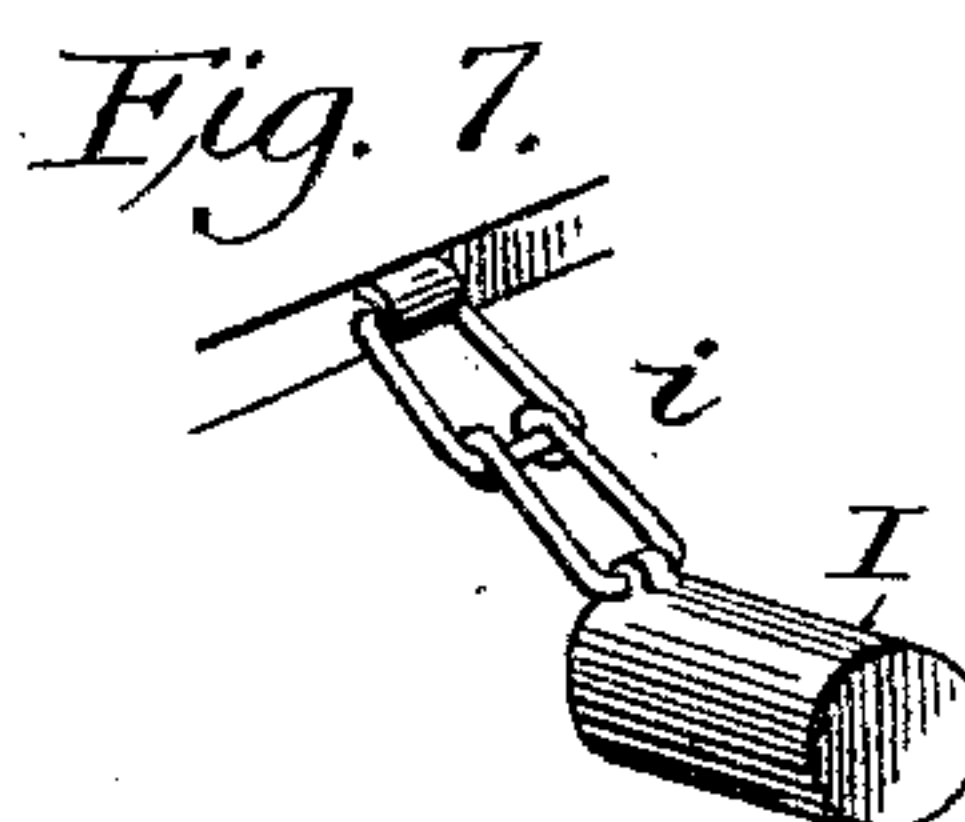
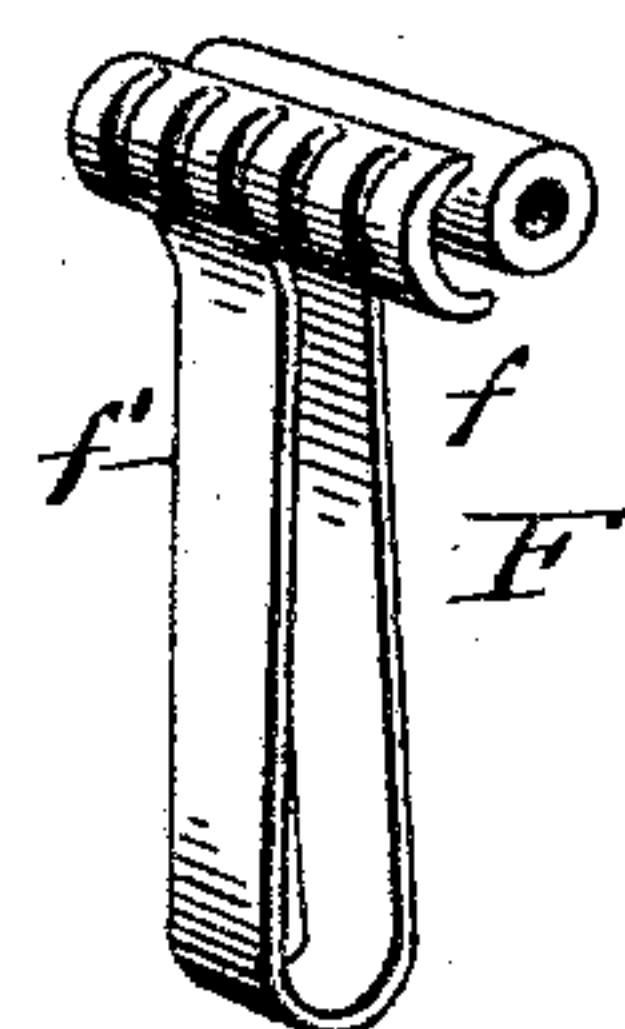
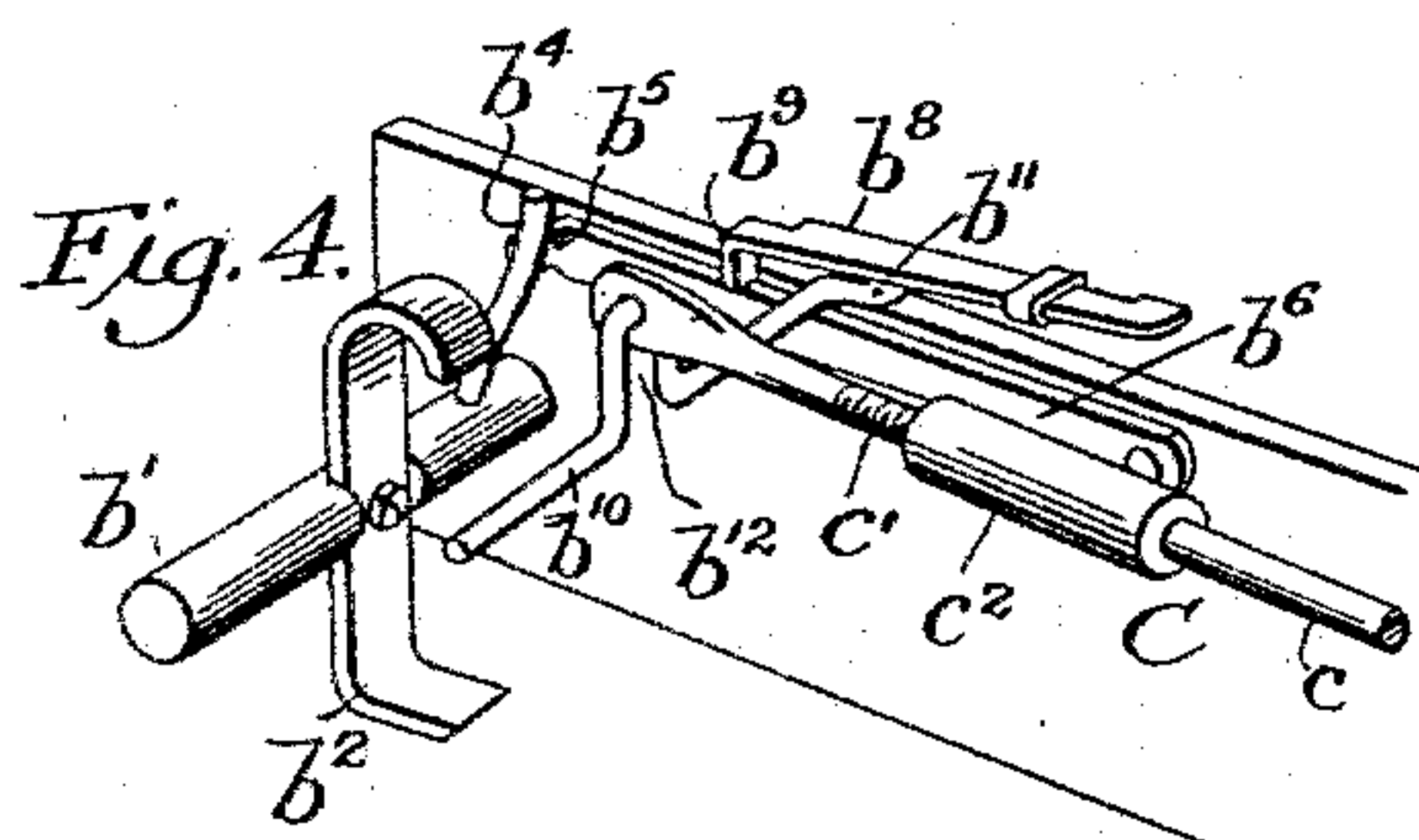
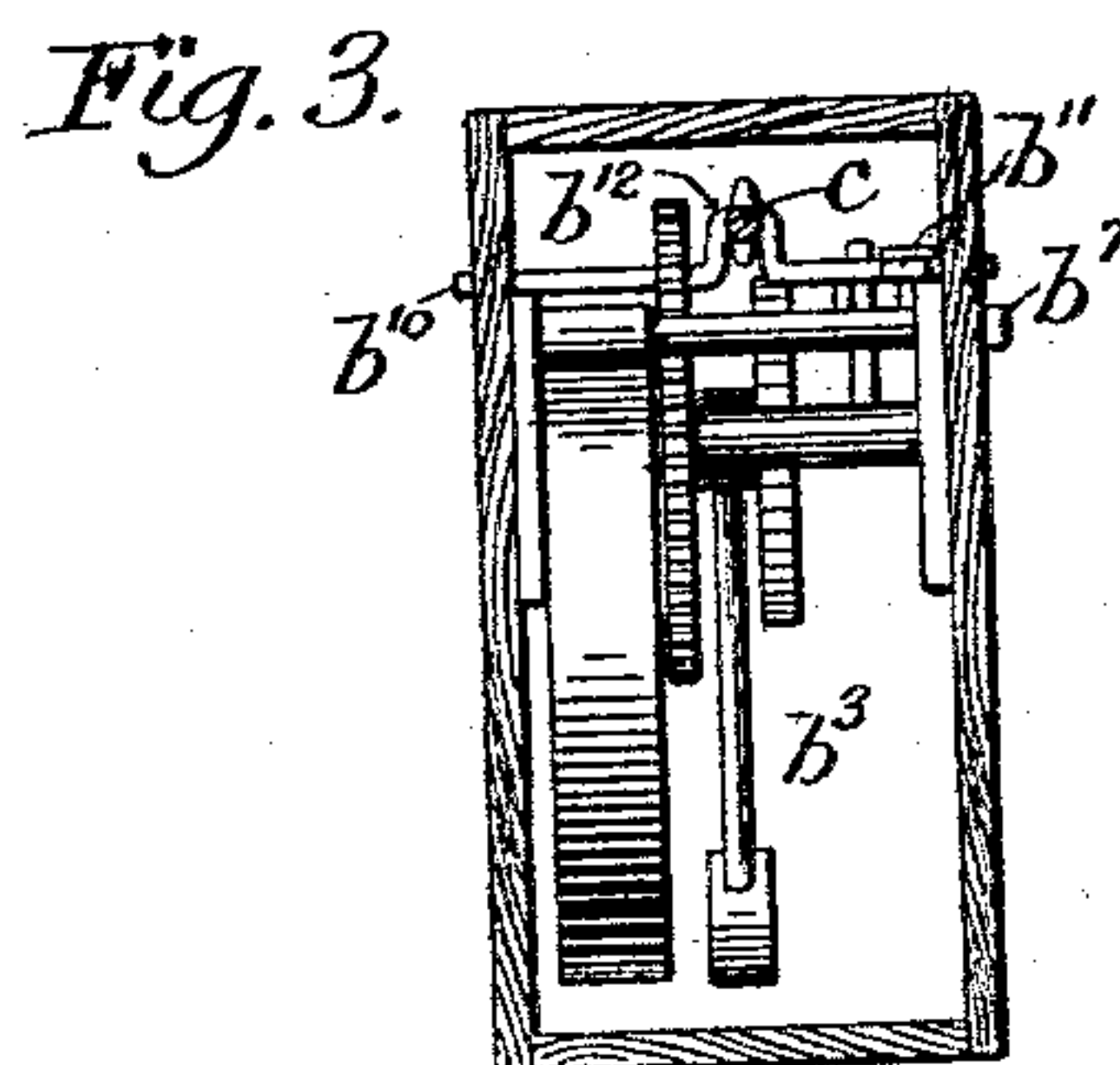
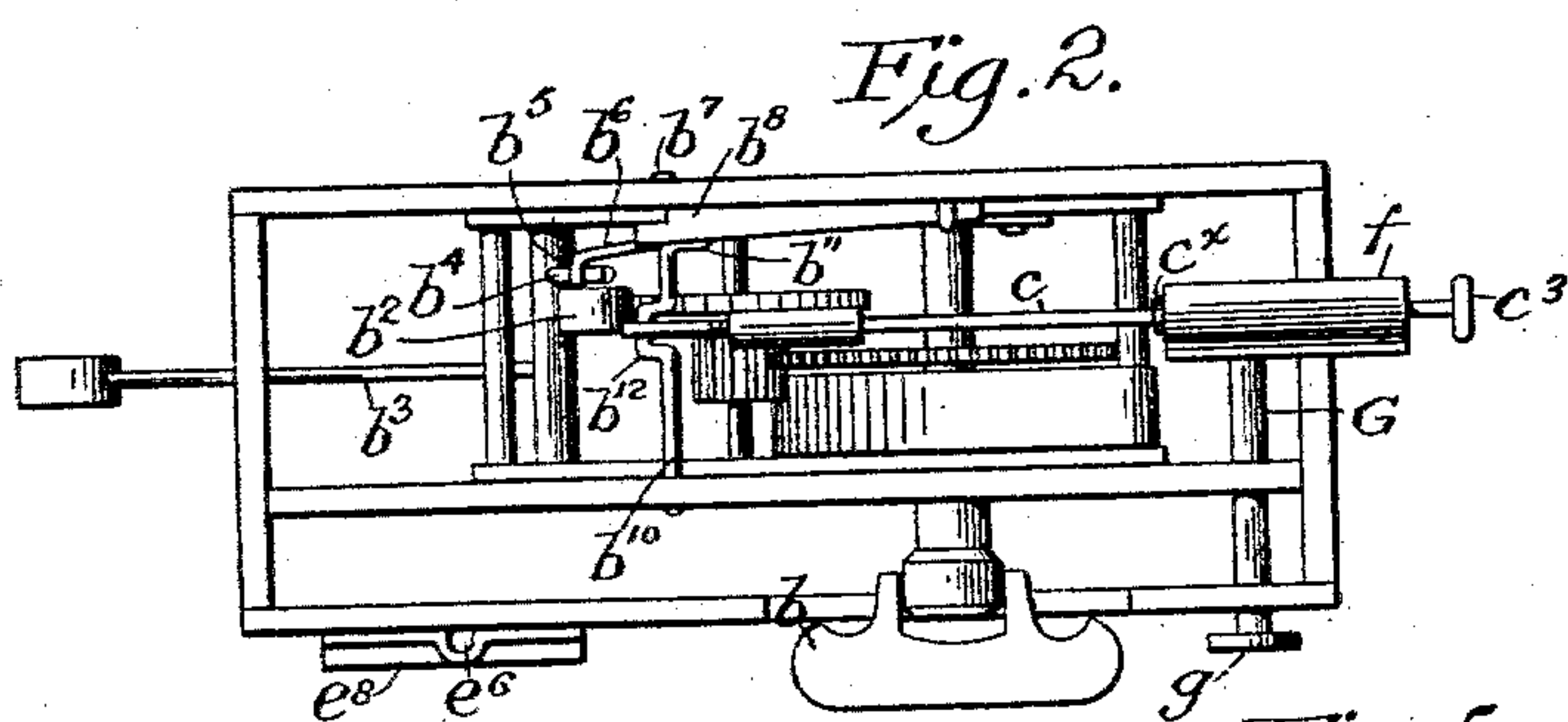
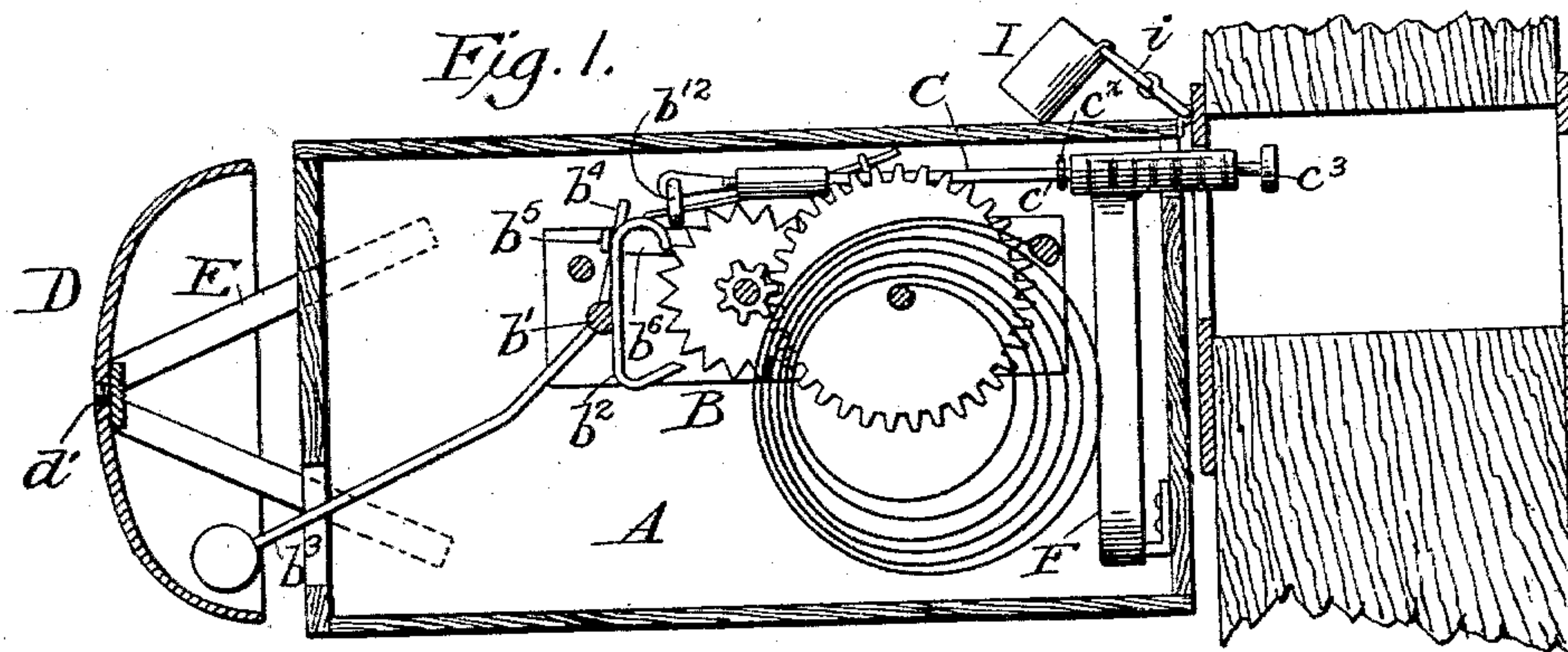


J. P. TOWLER.
BURGLAR ALARM.

Patented Sept. 7, 1897.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN P. TOWLER, OF BLOOMFIELD, NEBRASKA.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 589,540, dated September 7, 1897.

Application filed November 17, 1896. Serial No. 612,466. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. TOWLER, a citizen of the United States, residing at Bloomfield, in the county of Knox and State of Nebraska, have invented certain new and useful Improvements in Burglar-Alarms; 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 improvements in burglar-alarms, and has more particular relation to portable alarms that are automatically set off by the opening or closing of a door or window.

The invention consists of the combination, with a suitable casing, of a spring-actuated bell-clapper mounted therein, an escapement controlling said clapper, a trigger for locking said escapement, and means for applying said casing to a door, whereby the trigger is operated by the insertion of a key into the keyhole.

The invention also consists of certain other constructions, combinations, and arrangements of parts, all of which will be hereinafter more fully described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a central vertical section of my improved alarm applied to the keyhole of a door. Fig. 2 represents a top plan view of my said improved alarm detached from the door, the top being removed to expose the interior. Fig. 3 represents a transverse vertical section through my said alarm. Fig. 4 represents a detached and enlarged perspective view of the escapement, its withstraining-arm, the spring-catch, and crank-shaft. Fig. 5 represents an enlarged detail perspective view of the clamping spring for guiding the trigger-rod and engaging the keyhole. Fig. 6 represents an enlarged detail perspective view of a portion of the door with my improved supporting-bracket applied thereto. Fig. 7 represents an enlarged detail perspective view of the protecting-cap for the trigger.

A in the drawings represents the casing of my improved alarm; B, the escape mechanism mounted therein; C, the trigger-rod; D, the bell, and E the jointed supporting-bracket.

The casing A may be of any desired material and construction and has mounted therein an escapement device B, similar to a clock mechanism and adapted to be wound up by a pivoted operating-handle *b*, projecting from the spring-shaft upon one side of said casing and lying in a socket *a*, so that when turned down it lies flush with the outer surface of the casing. The escapement-shaft *b'* of said mechanism B is provided with the usual escapement-piece *b²*, and has also secured thereto a bell-clapper *b³*, adapted to be oscillated by the movements of said shaft. This bell-clapper projects through a suitable slot in the bottom of the casing A, so as to strike the bell D, which is mounted upon said casing A by means of a suitable supporting-bracket E, having a screw-threaded end *d'*, adapted to screw into a screw-threaded socket cut in the bell. The said shaft *b'* is also provided with an angular projecting arm *b⁴*, by means of which the escapement is locked or released at will. This locking of said escapement is accomplished by the angular end *b⁵* of a flat spring *b⁶*, secured to the inner side of said casing at its opposite end and provided with a laterally-projecting pin *b⁷*, that projects through the wall of said casing and is adapted to be forced inward by the thumb or finger to set the projection *b⁵* behind the arm *b⁴* and thus lock the escapement. The said spring *b⁶* is held in its inner locked position by means of an auxiliary spring *b⁸*, secured to the casing and having an angular end *b⁹*, adapted to fit down behind said spring *b⁶* when the latter is pressed inward, and thus prevent it from returning. The said spring *b⁸* is operated to withdraw its angular extension *b⁹* from behind the spring *b⁶* and allow the latter to assume its normal position by a crank-shaft *b¹⁰*, mounted in said casing. One of the crank-bends *b¹¹* of said shaft is arranged under the spring *b⁸*, so that when said shaft is rotated the said spring is lifted, thus withdrawing the end *b⁹* from behind the spring *b⁶* and allowing the projection *b⁵* of said latter spring to spring from behind the arm *b⁴* and the escapement to operate and ring the bell. The said crank-shaft *b¹⁰* is also provided with a crank-bend *b¹²*, to which is connected the trigger-rod C. This rod is formed in two sections *c* and *c'*, respectively. The upper sec-

tion c is provided with a screw-threaded block c^2 , into which the lower section c' screws, thus providing for the adjustment of said rod longitudinally. The said rod C projects through the casing A at its upper end and is provided with an operating-head c^3 and a stop c^x to prevent its being unscrewed from the section c' and withdrawn from the casing.

It will be observed from the foregoing description that as the spring b^8 engages the crank-bend b^{11} of the crank-shaft b^{10} and normally holds the same down the normal position of the trigger-rod and its head c^3 will be out of the casing. The upper end of said trigger-rod C is surrounded and guided by an eye on one arm of a loop-spring F , secured within the said casing A . Both ends f and f' of said spring-loop project from the casing A and are roughened or corrugated upon their outer faces, so as to firmly engage the keyhole when inserted therein. The normal position of the end f' of said spring F is open and away from the rod C , but when the device is to be applied to a keyhole the said end of the spring F is compressed against the rod C , so as to permit of the insertion of both ends f and f' into the keyhole. This compression is caused by a rod G , mounted in the upper end of the casing and provided with an operating knob or head g , by means of which it may be pressed inward, so as to cause the inner end to engage said spring F and effect this action.

It will be observed from the foregoing description that when the end f' of the spring F is compressed about the rod C both of said ends may be readily inserted into a keyhole and the end f' allowed to expand and hold the casing firmly in position upon the door.

When the device is not in use, it becomes necessary to protect the delicate trigger-rod and its head c^3 against injury, and to effect this I provide the casing A with a protecting-cap I , secured thereto by a link i . Said cap is adapted to be slipped over the protruding end of the trigger-rod and its head. By means of the peculiar arrangement between the respective parts of the trigger-rod I am enabled to adjust the same to any desired position, so that the head c^3 will project either more or less from the casing, as desired.

When the device is applied in position within a keyhole, it is first wound and the escapement locked with a slight pressure inward upon the pin or arm b^7 .

Upon the insertion of a key in the outer end of a keyhole the head c^3 is engaged by said key, and the escapement is thus released and sounds the alarm.

Sometimes I wish to apply my alarm to either windows or doors in different positions, and to accomplish this I employ a divided bracket E . This bracket comprises a section e , upon which the casing A is adapted to be supported by a suitable hook, and a section e' hinged to the first-mentioned section and provided at its rear end with a spring

clamping portion e^2 . One arm of said clamping portion e^2 is bent to form a groove e^3 . The wall or window-jamb to which the alarm is to be attached is provided with a slotted plate e^4 , set over a suitable recess cut within the window or frame. When the device is to be applied, the looped end of the section e^2 is slipped through the slot in said plate e^4 until one of the walls of the said slotted plate enters the groove e^3 , when said section e' becomes firmly locked within said plate, but may instantly be released when so desired by compressing said looped end. The end of the arm e is provided with an upright stud e^5 , which is adapted to be slipped in the grooves e^6 or e^7 formed in a plate e^8 , attached to the casing A . This support E is attached in such a position that the trigger-head will come directly in the path of an opening door or window, and thus be operated upon by any movement of said door or window.

It will also be observed that my alarm is altogether portable and can be carried about in the pocket from place to place and applied in position at will.

The alarm when it is sprung continues to ring for a sufficient period of time to awaken the occupants of the house or frighten away the intruder.

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

1. In a portable burglar-alarm, the combination with a suitable casing, of a bell-clapper pivoted therein, an escapement controlling said clapper, a locking device for said escapement, a spring for releasing said locking device, a crank-shaft for operating said spring, a trigger connected to said crank-shaft and projecting from the casing, and means for securing said casing in position so that the trigger will be engaged by an opening door or window to set off the alarm, substantially as described.

2. In a portable burglar-alarm, the combination with a suitable casing, of a bell-clapper mounted therein, an escapement mechanism connected to said clapper, a catch for said escapement, a trigger for controlling said catch and projecting from the casing, and a clamp attached to said casing and adapted to be applied within the keyhole to hold the casing in position, and the trigger in the proper relation to be engaged and operated by the insertion of a key in said keyhole, substantially as described.

3. In a portable burglar-alarm, the combination with a suitable casing, of a bell-clapper mounted therein, a spring-actuated escapement mechanism connected to said clapper, a catch for locking said escapement, a trigger connected to said catch and extending out of the casing, an expansion-spring mounted upon said casing and supporting the trigger-rod and adapted to be expanded within a keyhole to hold the casing in position, substantially as described.

4. In a portable burglar-alarm, the combination with a suitable casing, of a spring-actuated escapement mounted therein, an alarm device, connected to said escapement,
5 a locking-catch for said escapement, means for setting said catch from the exterior of the casing, a trigger connected to said catch for setting off the same, and a clamping device
10 inserted within a keyhole to secure said casing in position, substantially as described.

5. In a portable burglar-alarm, the combination with a suitable casing, of a spring-actuated escapement mounted therein, an
15 alarm device connected to said escapement,

a locking-catch for said escapement, a trigger for setting off said catch, attaching means for securing the casing in position, and a protecting-cap adapted to be applied over the portion of the trigger extending from the casing when the alarm is not in use, substantially
20 as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN P. TOWLER.

Witnesses:

S. SAUNDERS,
W. D. FUNK.