

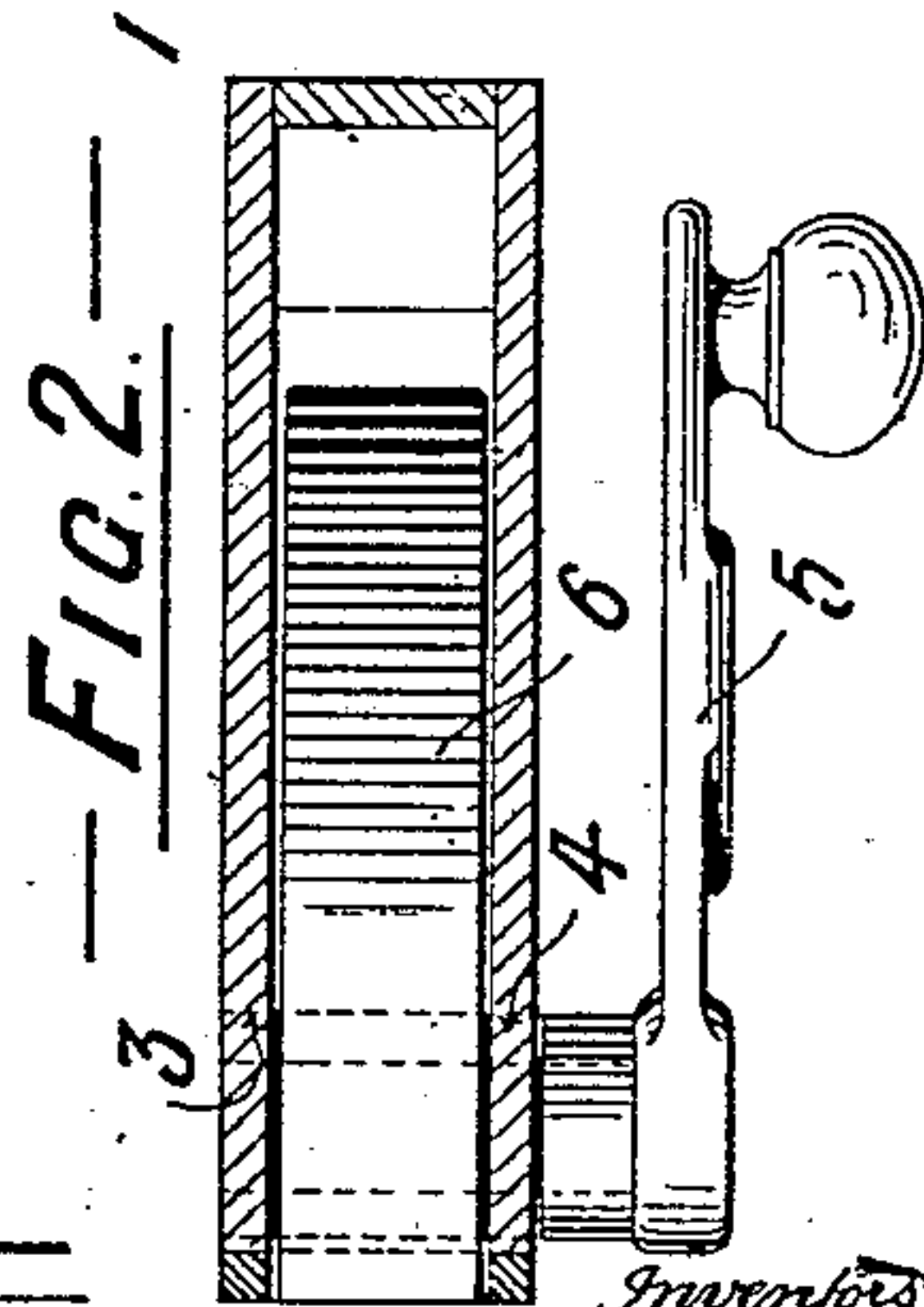
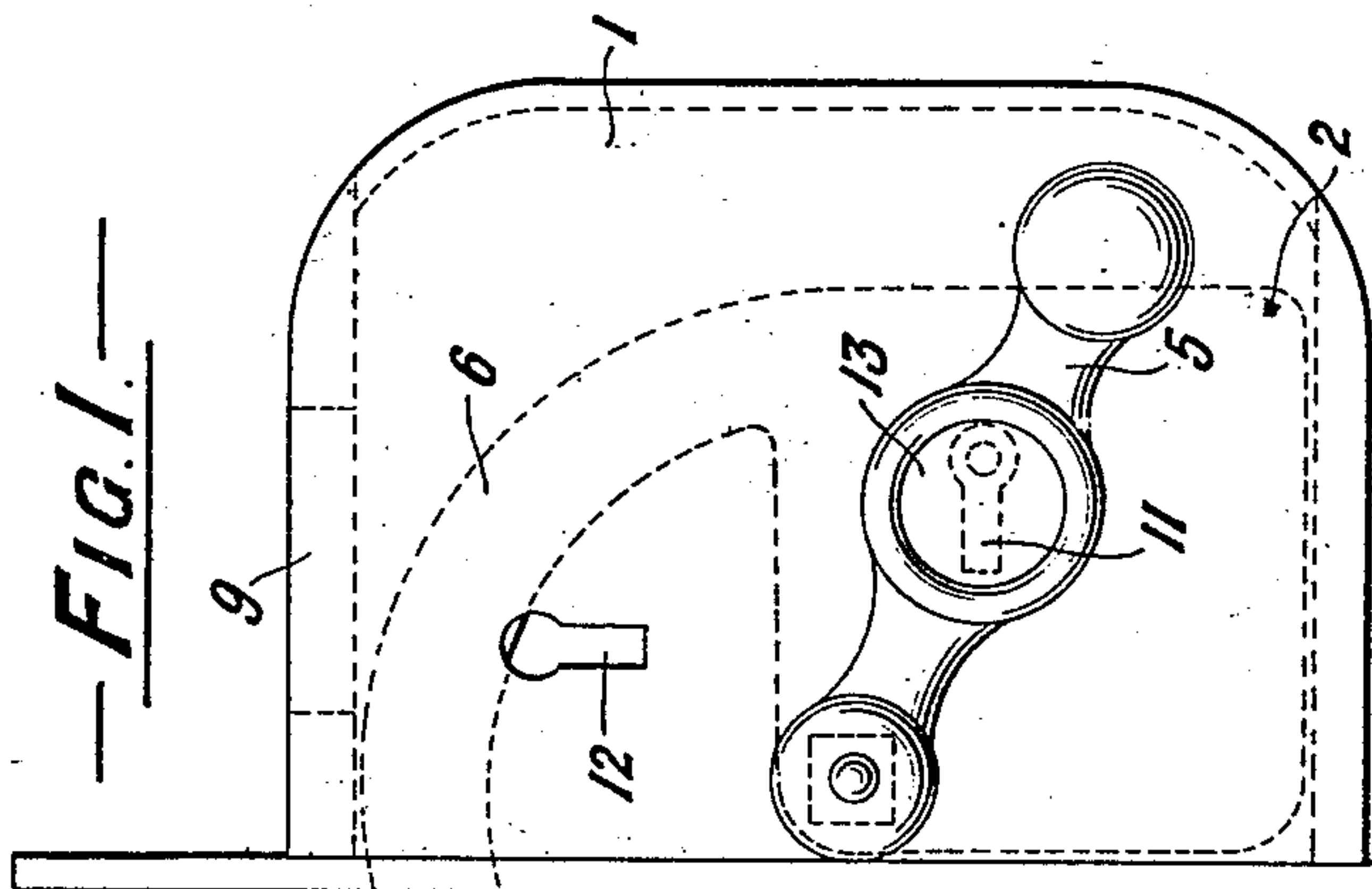
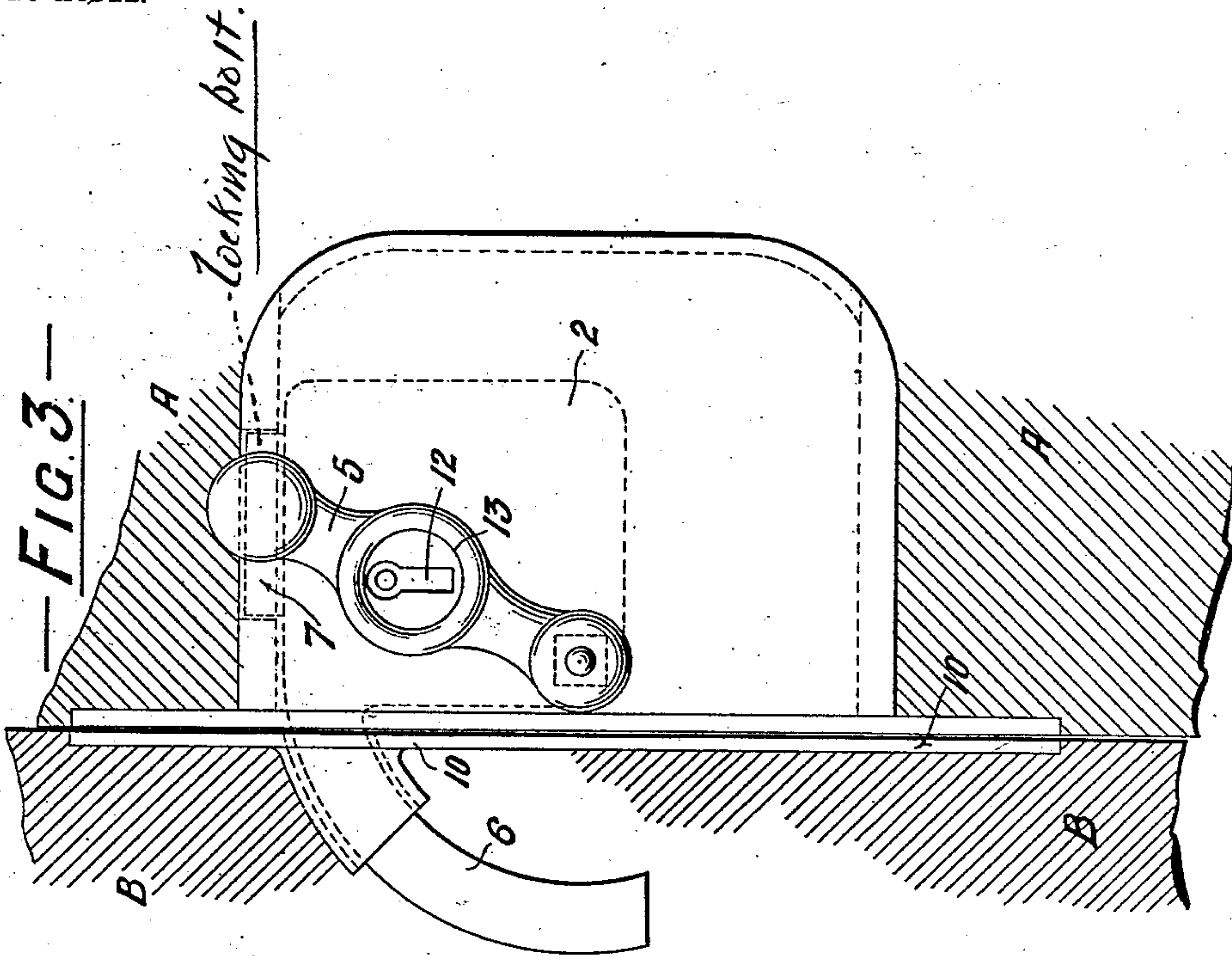
No. 754,226.

PATENTED MAR. 8, 1904.

C. E. LONG & J. C. IRVINE.
LOCK.

APPLICATION FILED MAR. 18, 1903.

NO MODEL.



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UNITED STATES PATENT OFFICE.

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LOCK.

SPECIFICATION forming part of Letters Patent No. 754,226, dated March 8, 1904.

Application filed March 18, 1903. Serial No. 148,313. (No model.)

To all whom it may concern:

Be it known that we, CHARLES ERNEST LONG, a resident of Cannycourt, Brannockstown, county Kildare, Ireland, and JAMES CHARLES IRVINE, a resident of 21 Compayne Gardens, Hampstead, in the county of London, England, subjects of the King of Great Britain, have invented certain new and useful Improvements in Locks, of which the following is a specification.

It has been heretofore proposed to employ a sliding bolt not moved by a key, but by some independent means, and such a bolt has carried a lock which by the translation motion of the bolt has been brought into such a position as to expose the keyhole of the lock in order that the latter may be operated to retain the bolt in its locking position, and among the advantages which have been attendant on such a construction of bolt and lock is to be found the fact that heavy bolts suitable for large doors and the like may be locked by a small key, while mortise-locks may be made which require but a very small portion of the door to be cut away. Such a construction of lock, consisting of the rectilinearly-sliding bolt carrying the lock, must of course be operated by sliding the bolt in the longitudinal direction of its motion. Now in some cases the operation of bringing the bolt into and out of engagement by a sliding action is not suitable or desirable; and the object of this present invention is to provide a lock-carrying bolt which is operated by the rotary movement of an operating-handle through a suitable angle.

This invention therefore refers to locks in which the bolt member is in the form of a segment of a circle and projects from a key-operated lock-casing supported by lateral trunnions having suitable bearings in a box-frame. This form of bolt instead of sliding rectilinearly has an angular rotative movement imparted to it by a suitable handle or lever in the direction of its locking or unlocking positions, moving upon the before-mentioned trunnions with which the segmental bolt is concentric. This motion brings into locking position the key-operated lock, which moves

with the bolt and is carried thereby, the keyway of the lock when in its locking position coinciding with a keyhole in the box-like frame. The said lock cannot, therefore, be operated until the bolt member has engaged with the bolt plate or socket.

We will describe our invention with reference to the accompanying drawings, whereon—

Figure 1 is an elevation of a mortise-lock constructed according to our invention, showing the segmental bolt in its disengaged position, Fig. 2 being a sectional plan of the same and Fig. 3 an elevation showing the mortise-lock in its engaging position along with the bolt-plate.

Referring generally to the drawings, our improved lock comprises a box-like frame, which is fixed to one part, A, of a structure, and upon or within this frame is pivoted a plate having an extended segmental part to act as an engaging bolt, which latter can be brought to interlock with the other part, B, of the structure by the rotative angular movement of the plate about its pivot. The pivoted plate is operated by hand by means of a handle exterior of the frame, by which handle the plate, with its engaging segmental bolt, can be rotated through the requisite angle. The pivoted plate carries a key-operated lock so located that when the engaging bolt has been brought to its operative position to secure the two parts, A B, of the structure together the key-operated lock can be locked by means of a key, so that its key-operated bolt engages with a bolt-hole in the box-like frame.

In the example of construction shown in the accompanying drawings, 1 is a frame fastened to one part, A, of the structure and forms the box-frame of a mortise-lock, containing within it a plate 2, which is provided with lateral trunnions 3 4, Fig. 2, which have a bearing in the side walls of the frame 1, and it is upon these trunnions 3 4 that the plate 2 is capable of being rotated through the requisite angle. To one of these trunnions an exterior handle 5 is fixed, or, as shown in the

drawings, a non-circular hole may be formed through the trunnions to receive the stem of a handle 5 which is to be operated by hand.

Extending from the plate 2 and in a piece 5 therewith is the engaging bolt 6, which must be segmental in form, being a segment of a circle struck from the trunnions as a center.

The plate 2 carries a key-operated lock, or that plate may form a part of the casing of a 10 key-operated lock the key-operated bolt 7 of which can be brought into engagement with its bolt-hole 9 in the frame 1, Fig. 1, when the plate 2 and the engaging bolt 6 have been brought into position shown at Fig. 3. The 15 angular rotative movement of the plate 2 to bring the engaging bolt 6 to interlock with the bolt-plate 10, fastened to the second part B of the structure, as shown at Fig. 3, also causes the keyhole 11 of the key-operated lock 20 (shown by dotted lines at Fig. 1) to coincide with the keyhole 12, formed in the frame 1, and so allows of the insertion of the key.

In the construction shown the operating-handle 5 is so placed that when the bolt 6 is 25 in engagement, as at Fig. 3, an aperture 13 in the handle 5 comes opposite the keyhole 12 of the frame 1, and so enables the key to be inserted through the aperture in the handle. Thus it is necessary after the key- 30 operated lock is unlocked to remove the key before the plate and its bolt 6 can be rotated by the handle into disengagement position.

We have not shown in this construction the pivoted plate and its bolt 6 as being spring-

controlled; but any suitable or convenient 35 springs may be fitted to cause the plate to assume either its locked or its unlocked position, if desired or found necessary.

We claim as our invention—

1. In a lock, the combination with a bolt- 40 plate and a box-casing of a key-operated lock, a bolt secured to said key-operated lock, trunnions on said key-operated lock, bearings in said box-casing adapted to receive said trunnions, and a handle secured to one of said 45 trunnions and by which the said lock and bolt may be rocked in said bearings.

2. In a lock, the combination with a bolt- plate and a box-casing have a keyway, of a 50 key-operated lock, a segmental bolt secured to said key-operated lock and adapted to project from said casing to engage said plate, trunnions on said key-operated lock, bearings in said casing adapted to receive said trunnions, there being a keyhole in said casing corre- 55 sponding in position with the keyway in the said lock when the said bolt is projected, and a handle secured to one of said trunnions and having an aperture at about the center of its 60 length in such a position as to correspond with the said keyhole in the casing and keyway in the lock when the said bolt is projected.

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