

No. 846,762.

PATENTED MAR. 12, 1907.

M. SPECIALE.
SAFETY LOCK.

APPLICATION FILED AUG. 20, 1906.

Fig. 2

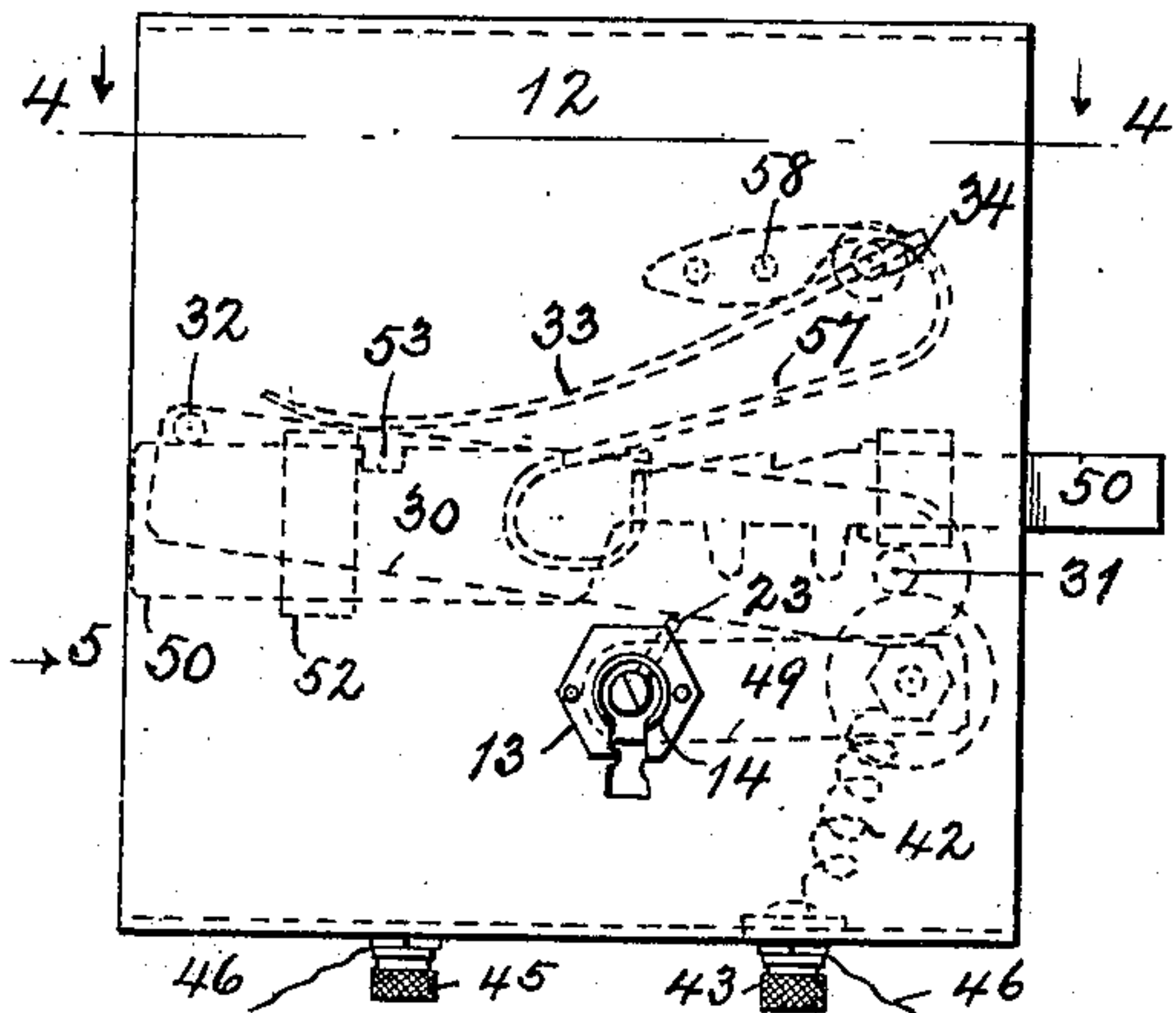


Fig. 3

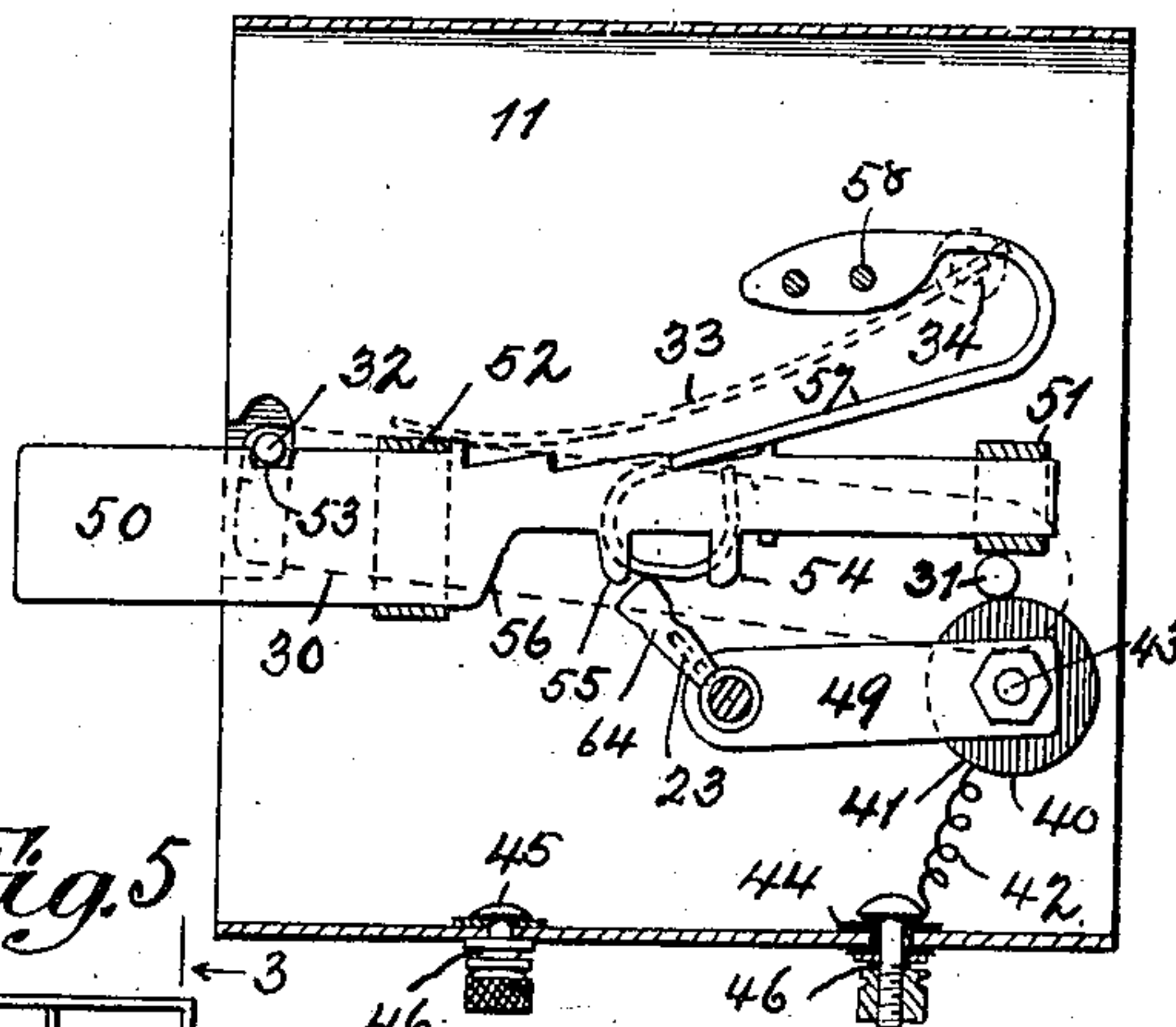


Fig. 5

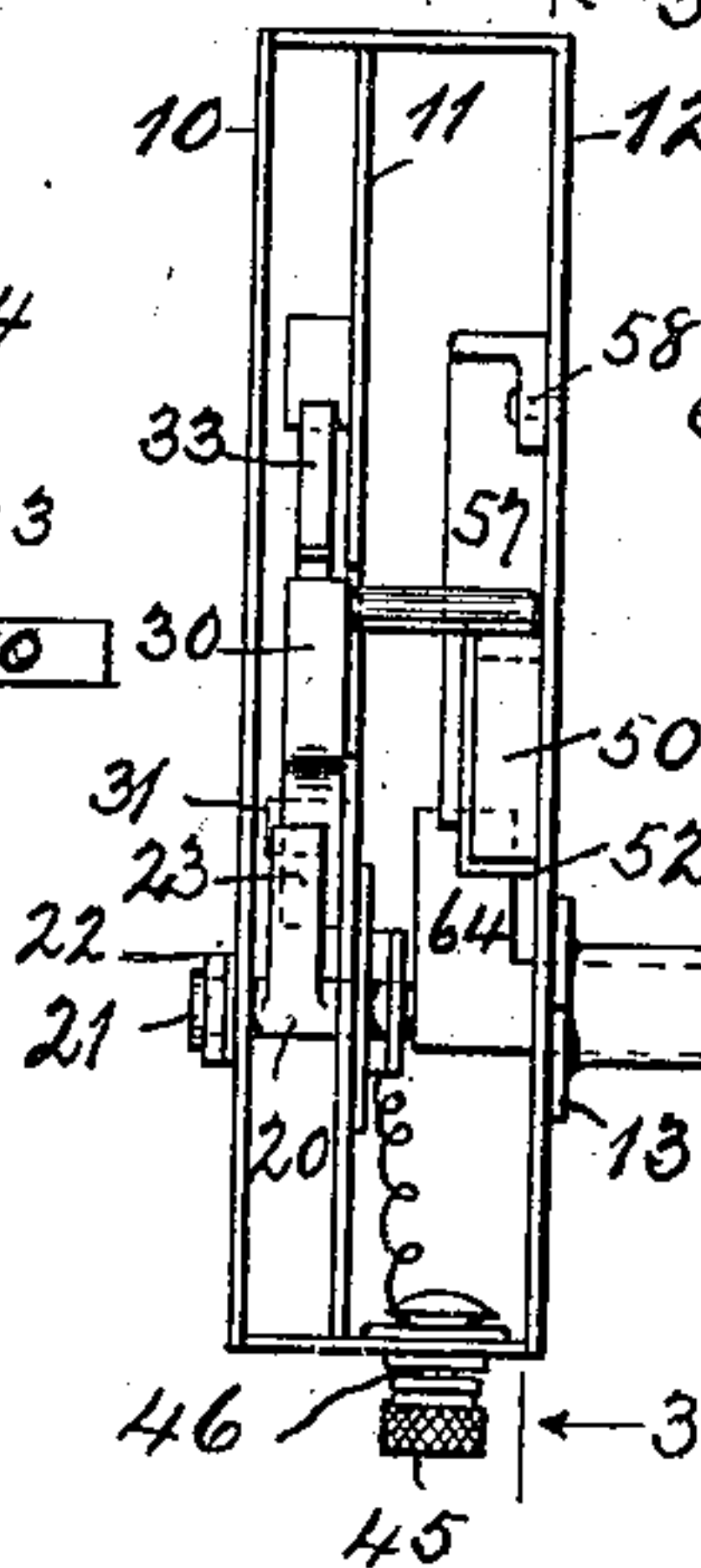


Fig. 6

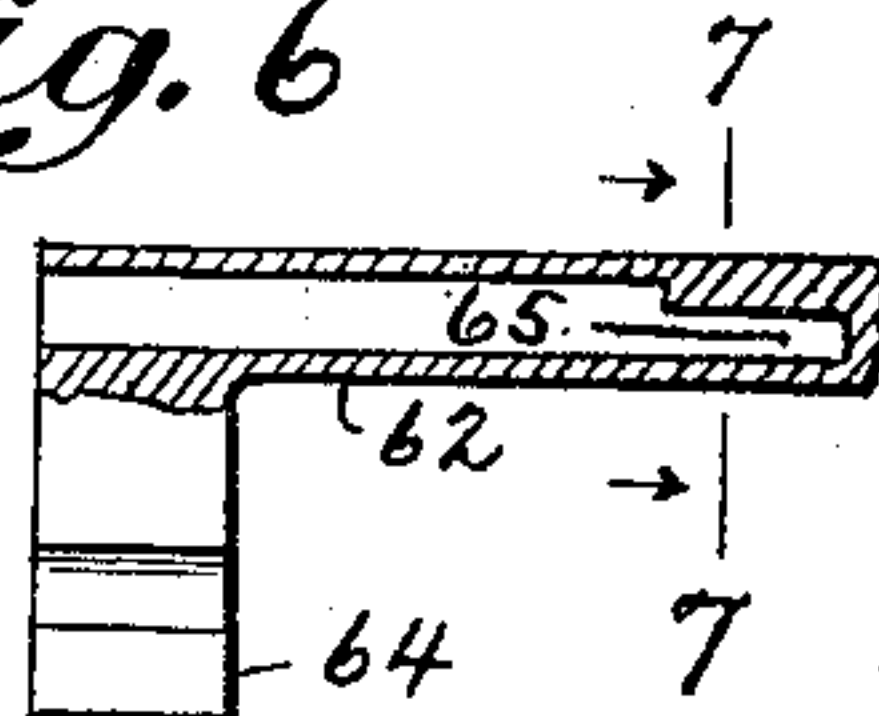


Fig. 4

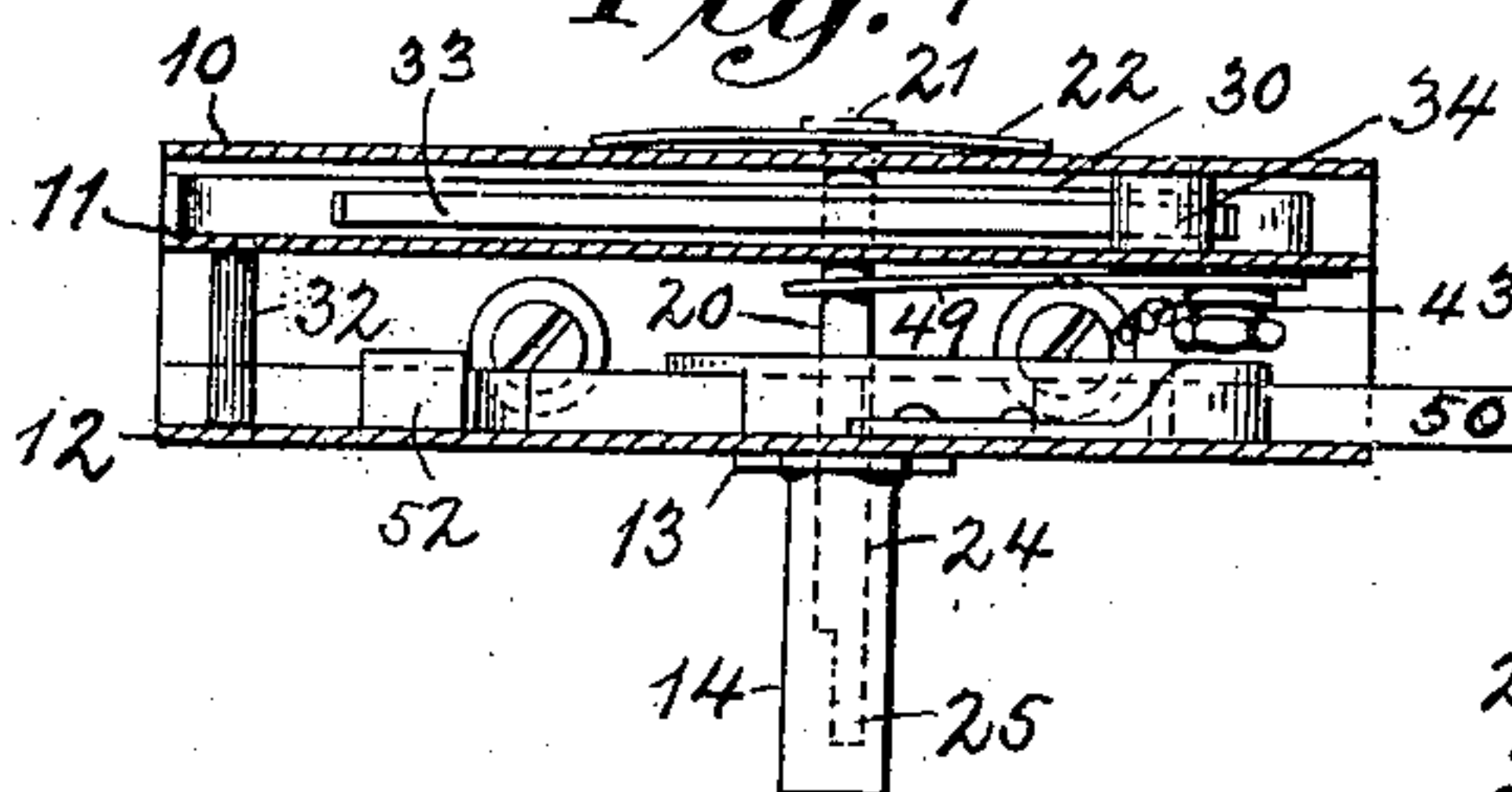
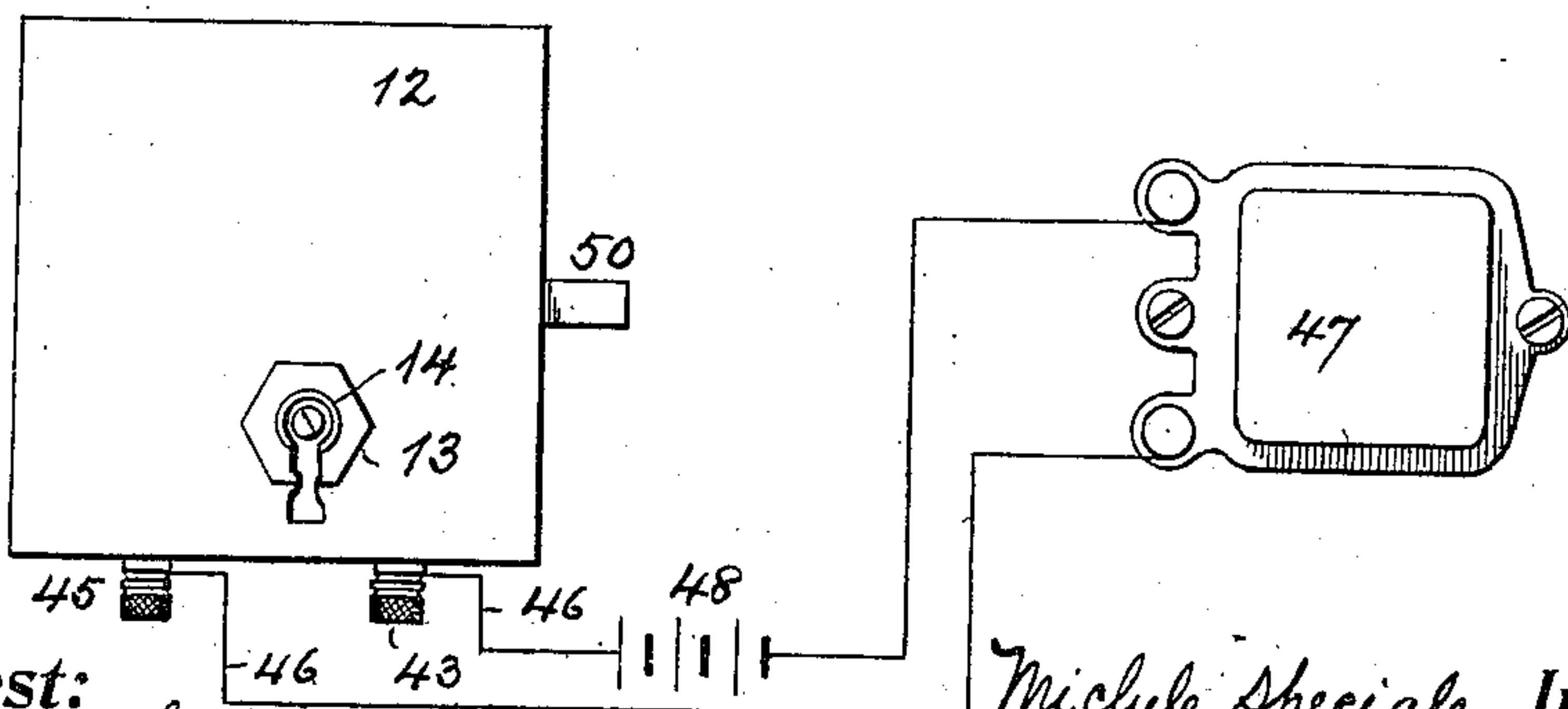


Fig. 7



Fig. 1



Attest:
May Hughes,
Alan Mc Donnell.

Michèle Speciale, Inventor:
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his Att'y.

UNITED STATES PATENT OFFICE.

MICHELE SPECIALE, OF NEW YORK, N. Y.

SAFETY-LOCK.

No. 846,762.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed August 20, 1906. Serial No. 331,247.

To all whom it may concern:

Be it known that I, MICHELE SPECIALE, a citizen of the Italian Kingdom, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Safety-Locks, of which the following is a specification.

My invention relates to safety-locks, and its novelty consists in the construction and adaptation of the parts, as will be more fully hereinafter pointed out.

Figure 1 is a front elevation of the front of the lock, showing the manner in which it is connected up in the electric circuit. Fig. 2 is an enlarged front view of the front plate, the parts back of it being shown in dotted outline. Fig. 3 is a front view of the intermediate plate with the front plate removed, the parts back of it being shown in dotted outline. Fig. 4 is a top plan view beneath the plane of the line 4 4 in Fig. 2. Fig. 5 is an end elevation of the lock and key. Fig. 6 illustrates details of the secret key-stem and safety-key stem, the latter in section; and Fig. 7 is a transverse section on the plane of the line 7 7 in Fig. 6.

In the drawings, 10 is the rear plate of the lock designed to be placed at the inside of the door. 11 is an intermediate plate on which some of the parts are mounted, and 12 is the front plate, provided with any usual form of escutcheon, as 13, having an outwardly-projecting sleeve 14.

Suitably mounted in the lock-casing is a secret key 20, which is here shown as pivoted in the plates 10 and 11 and having its pin 21 expanded to form a head or rivet 22 and provided with a flat bit 23 and a stem 24, passing through the plates 11 and 12 and the escutcheon 13 and projecting outwardly into the sleeve 14 and terminating in a restricted tip 25, which is half-round.

A detent 30 is secured to the rear side of the plate 11 by the pivot 31, on which it is adapted to oscillate, being moved up and down by the rotation of the secret key 20. To the other end of the bar 30 is secured an outwardly-projecting latch-pin 32. A flat leaf-spring 33, secured to the rear side of the plate 11 by the pin 34, serves to retract the detent 30 downward to place after it has been moved upward.

To the front side of the intermediate plate 11 is secured a post 40, insulated from the

plate itself by a sheet of mica 41 or similar insulating material. This post is connected by a suitable conductor 42 to another post 43, insulated by sheets of rubber 44 or other insulating material from the edge plate 15. A third post 45 is secured to this plate 15. Suitable conductors 46 46 lead from these posts 43 and 45 to a buzzer or bell 47, a battery in circuit being indicated at 48. A spring 49, normally pressed upward and away from the surface of the plate 11, is provided with an aperture to admit of the passage of the stem 24 of the secret key. 50 is the main lock bar or bolt. This is adapted to slide behind the front plate 12, being slidably held by two straps 51 and 52. It is provided on its upper edge with a notch 53, adapted to engage with the pin 32. On its lower edge it is provided with two lugs 54 and 55, against which and the surface 56 the bit of a key 60 moves to slide the bar. A spring 57, secured to the plate 12 at 58, co-operates with the bit of the key to throw the latter out of contact with the bolt 50 after it has been moved. The key 60, hereinbefore referred to, may be arbitrarily termed the "main" or "proper" key of the lock. As here shown, it comprises a bow 61, a stem 62, a shoulder 63, and a bit 64. Its stem is made hollow, as usual, but is provided with a semicylindrical recess 65, extending beyond the usual depth and which is adapted to receive the semicylindrical tip 25 of the secret key.

The manner of using this device is as follows: The parts being assembled as shown, when the proper key 60 is placed in the sleeve of the escutcheon the stem of the key slips down over the stem 24 and tip 25, engaging with the recess 65. This moves the secret key as well as the proper key. The proper key, acting against the lugs 54 and 55 and surface 56, moves the bolt 50 forward, while at the same time the secret key lifts the pin 32 out of the notch 53 in this bolt and permits the bolt freely to slide; but suppose a false key is used and one which is not provided with a recess 65 to engage the top 25 of the secret key, then while the bit of the false key will coöperate with the lugs 54 and 55 and surface 56 to move the bolt 50, yet it cannot be moved beyond the point where it will engage with the pin 32, because the secret key not being turned the detent will not be lifted and the pin 32 will stay in that notch.

The electric circuit is arranged to ring the alarm when the lock is tampered with. The spring 49 being pressed down to contact with the plate 11 closes the circuit which is normally kept open by the insulated plate 43.

What I claim as new is—

1. A safety-lock comprising a bolt, a device adapted to arrest the movement of the bolt before completion and a plurality of instrumentalities engaged with and operating said bolt and device respectively, one of said instrumentalities consisting of a key which is adapted to operate the other.

2. A safety-lock, comprising a bolt, a main or proper key, and means for preventing full movement of the bolt, having a secret key adapted to be operated by the first-mentioned key only to permit operation of the bolt.

3. A safety-lock comprising a locking-bolt, a key adapted to slide the same, a detent adapted to engage with the bolt to arrest its movement before completion, and means adapted to move the detent relatively to the bolt comprising a secret key.

4. A safety-lock, comprising a locking-bolt, a key adapted to move said bolt, a detent for holding the bolt against movement, and a second key adapted to be actuated by the first key and to move said detent.

5. A safety-lock, comprising a locking-bolt, a key adapted to move said bolt, a detent for holding the bolt against movement, and a second key adapted to be actuated by the first key and to move the detent, said

second key being permanently mounted in the lock-case.

6. A safety-lock, comprising a locking-bolt, a key adapted to move said bolt, a detent for holding the bolt against movement, and a second key adapted to be actuated by the first key and to move the detent, said second key being permanently mounted in the lock-case and having a stem provided with a projection, and the first-mentioned key being hollow to receive said stem and provided with a supplemental opening to receive said projection.

7. A lock, comprising a bolt, a detent for locking the bolt against movement and a plurality of keys, one of which keys is pivotally mounted in the lock-case and is adapted to move the detent and the other of which keys operates the first-mentioned key and moves the bolt.

8. A lock comprising a bolt, a detent for locking the bolt against movement and a plurality of keys, one of which keys is pivotally mounted in the lock-case and is adapted to move the detent and the other of which keys operates the first-mentioned key and moves the bolt, each of said keys having a bit to engage the bolt and detent respectively.

In testimony whereof I affix my signature in presence of two witnesses.

MICHELE SPECIALE.

Witnesses:

WILLIAM R. BAIRD,
ALAN McDONNELL.