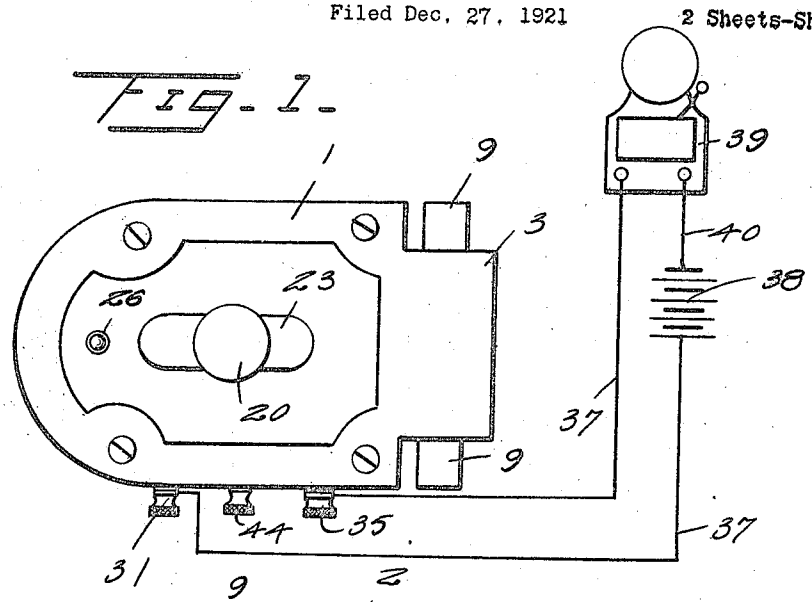
Aug. 7, 1923. 1,464,456

A. F. W. VIEHWEGER

LOCK

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Fig. 1.



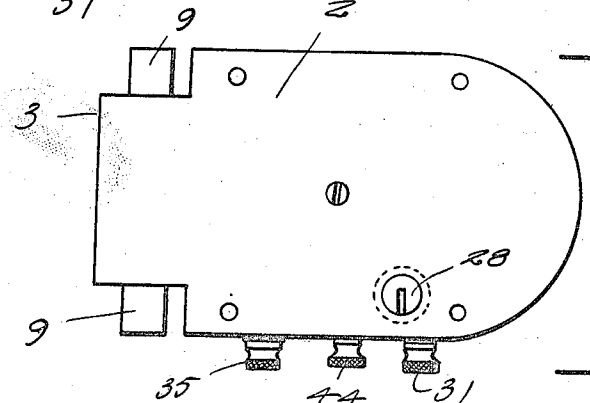


Fig. 2.

Fig. 6.



Fig. 7.

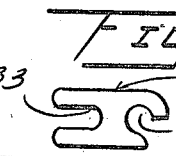


Fig. 8.

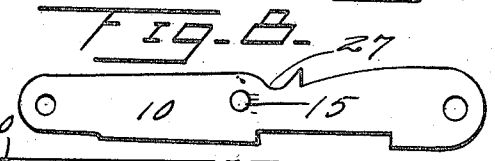
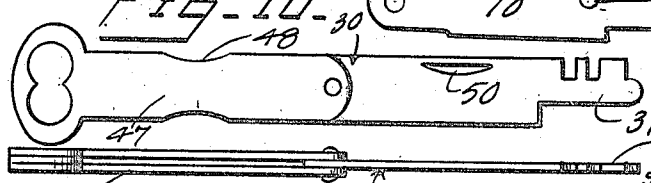


Fig. 10.



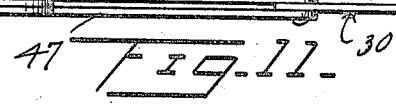


Fig. 11.

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Fig. 3.

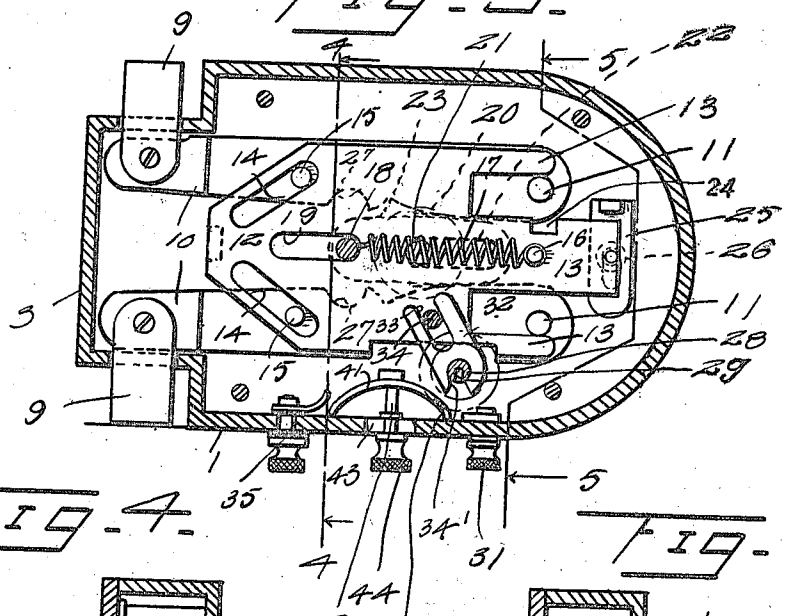


Fig. 4.

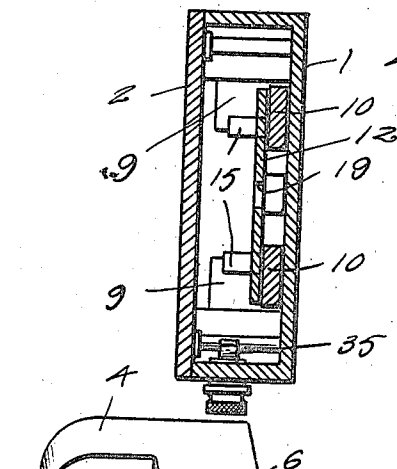


Fig. 5.

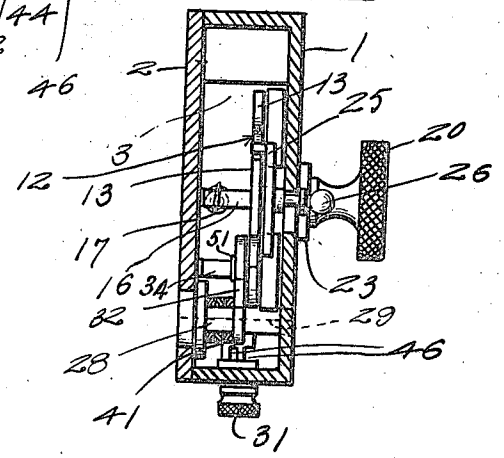
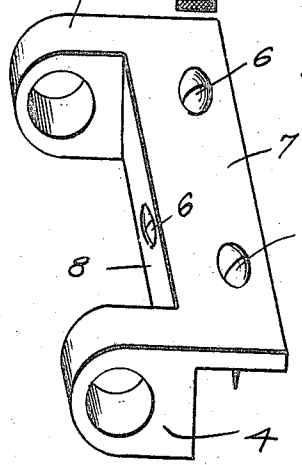


Fig. 9.



Inventor

A. F. W. Viehweger

By

Attorney

Patented Aug. 7, 1923. 1,464,456

UNITED STATES PATENT OFFICE.

AUGUST F. W. VIEHWEGER, OF SECAUCUS, NEW JERSEY, ASSIGNOR OF ONE-HALF TO PAULINE KRONSTEIN, OF JERSEY CITY, NEW JERSEY.

LOCK.

Application filed December 27, 1921. Serial No. 525,230.

To all whom it may concern:

Be it known that I, AUGUST F. W. VIEHWEGER, a citizen of the United States, residing at Secaucus, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Locks; 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 new and useful improvements in locks, and has for its primary object the provision of oppositely movable bolts adapted to enter oppositely arranged apertured ears of a keeper to provide a jimmy-proof lock and one that has a hinge connection with its keeper.

Another object of this invention is the provision of an actuating plate for the bolts, and which is provided with means at one side of the lock casing to permit of the bolts being manually retracted when desired and with means accessible from the other side of the casing to retract the bolts through the medium of a proper key.

A further object of this invention is the provision of a combined key guard and circuit closer to an electric alarm for the purpose of sounding the alarm when an improper key is used, and to prevent the actuation of the lock either by an incorrect key or by the use of a pick.

A still further object of this invention is the provision of a lock of the above stated character which will be simple, durable and efficient, and which may be manufactured and sold at a comparatively low cost.

With these and other objects in view, as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a front elevation, illustrating a lock constructed in accordance with my invention and having an alarm associated therewith,

Figure 2 is a rear elevation, illustrating the lock,

Figure 3 is a vertical sectional view, illustrating the same,

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 3, looking in the direction indicated by the arrows,

Figure 5 is a similar view taken on the line 5—5 of Figure 3, looking in the direction indicated by the arrows.

Figure 6 is a detail view, illustrating the key barrel,

Figure 7 is a similar view, illustrating a key barrel lever,

Figure 8 is a plan view, illustrating a bolt actuating lever,

Figure 9 is a perspective view, illustrating the lock keeper,

Figure 10 is a plan view, illustrating the key, and

Figure 11 is an edge view, illustrating the same.

Referring in detail to the drawings, the numeral 1 indicates a lock casing having a removable wall or cover 2, and one end of said casing is reduced to provide an extension 3 adapted to be received between the apertured ears 4 of a keeper 5. The keeper 5 is adapted to be secured in place or to a permanent object by fasteners 6 extending through the walls 7 and 8 thereof. The extension 3 is provided with oppositely arranged openings to slidably receive bolts 9 that have their inner ends reduced and secured to levers 10 that have their opposite ends pivotally mounted on studs 11 carried by one wall of the casing 1. The outward movement of the bolts 9 from the extension 3 causes said bolts to move through the apertured ears 4 of the keeper 5 for the purpose of establishing a hinge connection between the lock and the keeper and also to provide a jimmy-proof connection between said parts.

An actuating plate 12 is provided at one end with spaced fingers 13, between which are received the studs 11 for the purpose of slidably supporting the plate within the casing 1, and said plate, adjacent its opposite end, is provided with converging slot 14 to receive studs 15 secured to or formed on the levers 10, so that a sliding movement of the actuating plate 12 in one direction will cause the bolts 9 to extend into the apertured ears 4 of the keeper, and a movement of the actuating plate in an opposite direction will cause a retraction of the bolts.

A stud 16 is secured to one of the fingers of the actuating plate 12 and has one end of a coil spring 17 secured thereto while the other end of the coil spring is secured to a stud 18 carried by one wall of the casing 1, and which also extends through a slot 19 in the actuating plate for the purpose of cooperating with the studs 11 in slidably supporting said plate. The spring 17 is adapted to normally urge the actuating plate in one direction for the purpose of causing the bolts to be positioned outwardly of the extension 3 to engage the keeper. A knob 20 is provided with a shank 21 that operates through a slot 22 in one wall of the casing 1 and also extends through the actuating plate and is fastened thereto so as to provide a manual means whereby the bolts 9 may be retracted. The shank 21 of the finger piece or knob 20 is provided with a cover plate 23 adapted to close the slot in the casing at all times or during the various positions of the knob. It is to be understood that the knob 20 is located upon one side of the lock casing and that side which is located within the room.

One of the fingers 13 of the actuating plate 12 is provided with a notch 24 to be engaged by a latch 25 when it is desired to hold the bolt 9 in a retracted position, and the latch 25 is provided with a knob 26 that extends through a slot in the casing 1 so that a person may engage or disengage the latch from the notch if desired. It is to be understood that the knob 26 of the latch 25 extends through the same wall of the casing that the knob 20 extends.

The levers 10 are provided with cut away portions or notches 27 to receive the stud 18 when the bolts 9 are in full retracted position.

A key barrel 28 is located in the casing 1 and has its ends rotatably secured to the front and rear walls of said casing, and the wall of the casing which is opposite to the wall that has the knob 20 extending therethrough is provided with a keyhole 29 which exposes one end of the key barrel 28 so that the key slot 29 thereof may receive a key 30 having a bit 31. The slot 29 extends through one side of the key barrel so as to permit the bit 31 of the key 30 to project beyond said barrel when within the casing 1. A key barrel lever 32 is provided with a forked portion 33 that receives a stud 34 on the actuating plate 12 and is also provided with a slot 34′, one portion of which is substantially circular to receive the key barrel and permit the lever to turn freely thereon, while the other portion of the slot 34′ is adapted to receive the bit 31 of the key or the portion of the bit that projects beyond the slot 29 of the key barrel for the purpose of establishing a driving connection between the key barrel and the lever. It should be apparent that it is necessary to have a proper key in order to retract the bolts 9 by sliding the actuating plate 12 in one direction through the medium of the key barrel lever 32, as the bit of the key must establish a driving connection between the key barrel and the lever.

Contacts 35 and 36 are carried by the casing 1 and have conductors 37 connected thereto and one of said conductors is connected to a battery or electrical source 38, while the other conductor is connected to an electric alarm 39. The alarm 39 is connected to the battery or other electrical source 38 by a conductor 40. The contact 35 is insulated from the casing 1 while the contact 36 has electrical connection therewith. A bowed movable contact 41 is located in the casing 1 between the contacts 35 and 36 and is carried by a stud or shank 42 that operates through a slot 43 in the casing 1 and is provided with a knob 44 for the purpose of permitting a person to position one end of the member 41 from the contact 35 and in close proximity to the key barrel. The end of the bowed member 41 which is located adjacent the key barrel, is provided with notches 46 corresponding to the bit 31 of the proper key so that said bit may turn or move through said end of the bowed member during the actuation of the lock without moving the bowed member 41 into engagement with the contact 35. In case an incorrect key is used, it not conforming to the slots of the bowed member 41, will cause the latter to move into engagement with the contact 35 on the turning of said key, thereby closing a circuit to the electric alarm, sounding the latter and thereby warning that the lock is being tampered with.

Washers 51 are located on the stud 34 at each side of the lever 32 to prevent the latter from shifting on the key barrel and provides means whereby the location of the lever on the key barrel may be changed which permits the lock to be altered for another key.

From the foregoing description taken in connection with the accompanying drawings, it should be apparent that it is possible to actuate the bolts 9 to unlock the lock from a point within the room without the use of a key and that the bolts 9 may be held in a retracted position when desired through the medium of the latch 35. To unlock the device or retract the bolts 9 from the point outside of a room, it is necessary to employ a proper key which must be inserted into the key barrel for the purpose of establishing a driving connection between the key barrel and the lever 32 and the turning of said key will cause the actuating plate 12 to slide in one direction and retract the bolts.

For the convenience of carrying the key

30, the shank 46 that has the bit 31 at one end, has its other end pivoted to a handle 47 and is capable of being folded into the latter to provide a compact article which can be conveniently carried in a person's pocket. The handle 47 is provided with cut away portions 48 to permit a person to readily engage the fingernail slot 50 of the shank 46 when it is desired to unfold or position the shank 46 to be inserted within the key barrel.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention as claimed.

Having thus described my invention, what I claim is:

1. A lock comprising a casing, a bolt carried by said casing, a lever connected to said bolt and pivotally mounted in the casing, an actuating plate for said lever and slidably mounted in the casing, a key barrel journaled in said casing, means journaled on said key barrel and connected to the actuating plate and adapted to be engaged by the bit of a key.

2. A lock comprising a casing, a bolt for said casing, a bolt actuating means in said casing, a key barrel journaled in said casing and having the key slot thereof extending through one wall, a lever connected to said means and journaled on the key barrel and having a slot to receive the bit of a key projecting beyond the key slot of the barrel.

3. A lock comprising a casing, a bolt carried by said casing, an actuating means for said bolt, a key barrel carried by said casing and having its key slot extending through one wall thereof, a lever connected to said means and journaled on the barrel and having a slot adapted to receive the bit of a key projecting beyond the key slot of the barrel, and means whereby the location of the lever on the key barrel may be varied.

4. A lock comprising a casing, bolts carried by said casing, levers pivoted in said casing and to the bolts, an actuating plate slidable in said casing and connected to said levers, said actuating plate having spaced fingers at one end, pins pivoting the levers in the casing and contacting with and guiding certain of the fingers, tension means for urging said plate in one direction to extend the bolts, means for moving the plate in an opposite direction to retract the bolts, and a latch carried by said casing and adapted to engage in a notch in one of the fingers carried by the actuating plate to hold the same against movement under the influence of the spring.

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

AUGUST F. W. VIEHWEGER.

Witnesses:
JOSEPH BILDSTEIN,
RAYMOND E. CAGNEY.