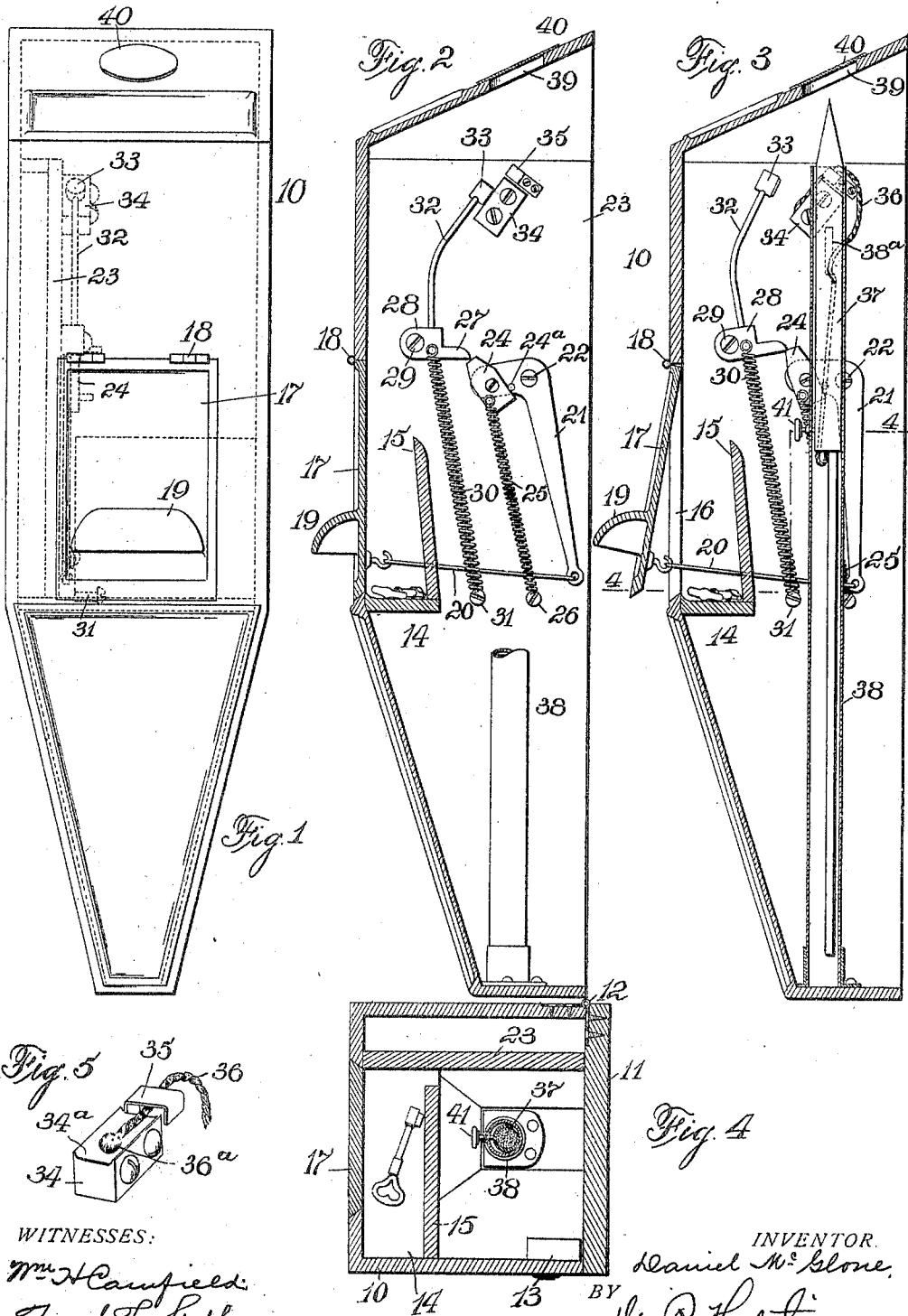


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D. McGLONE.
KEY BOX FOR FIRE ALARMS.
APPLICATION FILED DEC. 2, 1904.



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KEY-BOX FOR FIRE-ALARMS.

No. 816,932.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed December 2, 1904. Serial No. 235,231.

To all whom it may concern:

Be it known that I, DANIEL MCGLONE, of Far Rockaway, in the county of Queens and State of New York, have invented a new and Improved Key-Box for Fire-Alarms, of which the following is a full, clear, and exact description.

My invention relates to improvements in key-boxes for fire-alarm systems.

Many people do not understand how to work the usual fire-alarm and think that when they have turned the knob to open the box they have rung in an alarm. It also often happens through mischievousness and maliciousness that false alarms are rung in.

The object of my invention is to obviate both these difficulties and to produce a simple device in which the key of the fire-alarm box can be kept and which will operate when a person opens the key-box to get the key to exhibit a visual signal and sound an alarm, to the end that the attention of patrolmen, passers-by, or neighbors, as the case may be, may be called to the box, and so the person getting the key is made conspicuous and will not be likely to ring in a false alarm.

In carrying out my invention I prefer to have a simple box-like structure or case which can be arranged near the fire-alarm box and in which a door is opened to obtain the key to the fire-alarm box. I use mechanism which will be operated by the opening of the door and which will fire a bomb the sound of which and the sight of which will attract attention to the act of the opener of the box.

With these ends in view my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of the key-box embodying my invention. Fig. 2 is a vertical section thereof with the back removed and with the mechanism in normal position. Fig. 3 is a view similar to Fig. 2, but showing the door in the act of being opened and with the mechanism about ready to trip and sound the alarm. Fig. 4 is a sectional plan on the line 4 4 of Fig. 3, and Fig. 5 is a detail of the fuse-block used in connection with the apparatus.

The box 10 can be of any approved design

and is provided with a back 11, which can be fastened securely to a support and to which the box is hinged, as shown at 12, the opposite side being provided with a suitable lock 13, so that the box or case can be opened to insert a new bomb or to adjust any of the mechanism. In the front part of the box or case 10 is a shelf 14, on which the key of the fire-alarm box can be laid, and extending upward from this shelf is a partition 15, essentially parallel with the front of the box and which prevents the mechanism from being tampered with. In front of the shelf 14 is a swinging door 17, which is hinged at the top, as shown at 18, but can be hinged in any suitable way, and it has a suitable handhold 19 or equivalent device to enable it to be easily opened.

Near the free edge of the door and on the back thereof is attached a rod 20, which connects with the long arm of a bell-crank lever 21, and the latter is fulcrumed, as shown at 22, on the vertical partition 23, this being merely for the purpose of supporting the working mechanism in the right relation to the door; but this mechanism can be supported in any convenient manner. The short arm of the bell-crank 21 has pivoted thereon a pawl 24, which is prevented from turning in one direction by a stud 24^a on the bell-crank and which has attached thereto on the side opposite its center from the stud 24^a a spring 25, which is also attached to a fixed part of the casing, as at 26. The pawl 24 is adapted to engage the projecting end 27 of the trigger 28, which is pivoted as shown at 29 and is normally pulled by a spring 30, attached to the casing, as at 31, so as to swing back the striking-arm 32 and hammer 33 and bring the latter into impact with the fuse-block 34. This is fastened to the partition 23, and near it is a fuse-holder 35, which is simply a bent spring, as shown best in Fig. 5, and which is adapted to hold the fuse 36 in position on the block. The block is preferably hollowed slightly on top, as shown at 34^a, and the fuse terminates in a striking-cap 36^a, which is arranged in the path of the hammer 33. The fuse connects with a bomb 37, which is held in the vertically-arranged cylindrical bomb-holder 38, this being attached to the floor of the box or casing 10 and extending upward nearly through the same. The cylinder or bomb-holder 38 has a slot 38^a therein, through

which the fuse 36 passes to the bomb. The bomb can be of any approved kind, and I prefer to use one which is somewhat in the nature of a Roman candle which will send
 5 forth a series of balls, which, in addition to the noise of the explosion, will serve to attract attention. Above the bomb is a hole 39, which is made in the top of the box 10, and this can be covered by oiled paper 40 or any
 10 suitable frangible substance which will protect the mechanism of the box from the weather. The bomb is held in the cylinder or holder 38 by a suitable clamp, and for this purpose an ordinary thumb-screw 41
 15 (see Fig. 4) can be used.

In practice the device is fastened to a support near the fire-alarm box. When a person wishes to ring an alarm, he opens the door 17 to get the key. This tilts the bell-
 20 crank 21 against the tension of the spring 25, and the pawl 24 being held steady by the stud 24^a lifts the trigger 27 28 against the tension of the spring 30, and thus throws back the hammer 33. The continued opening
 25 of the door causes the pawl 24 to pass the trigger, and the spring 30 throws the hammer 33 quickly inward against the fuse-box 34, thus exploding the cap 36^a and firing the bomb. As the parts return to position
 30 the pawl 24, which tips readily in the opposite direction, passes the part 27 of the trigger 28, and the mechanism is ready for another operation, though, of course, a new bomb will have to be inserted before the
 35 mechanism will sound the alarm.

I have shown in the drawings a simple firing mechanism for exploding the bomb; but it will be patent that other equivalent mechanisms can be substituted for the purpose, and I do not limit myself to the structure shown, but claim, broadly, the combination with the equivalent structure and a
 40 door operating to work the same.

Having thus fully described my invention,

I claim as new and desire to secure by Letters Patent—

1. In combination a box, a door therefor, a lever within the box, a connection between the door and one end of the lever, a pawl on the lever, a cap-striking mechanism operated
 50 by the pawl of the lever, and means for firing a bomb from the cap-striking mechanism.

2. In combination a box, a door therefor, a lever within the box, a connection between the door and one end of the lever, a pawl on
 55 the opposite end of the lever, a stop carried by the lever for limiting the movement of the pawl, a cap-striking mechanism operated by the pawl of the lever, and means for firing a bomb from the cap-striking mechanism. 60

3. In combination a box, a door therefor, a lever within the box, a connection between the door and one end of the lever, a pawl on the opposite end of the lever, a spring secured at one end to the pawl and at its opposite
 65 site end to the box, a cap-striking mechanism operated by the pawl of the lever, and means for firing a bomb from the cap-striking mechanism.

4. In combination a box, a door therefor, a lever within the box, a pawl on the lever, a connection between the door and one end of the lever, a cap-striking mechanism operated by the pawl of the lever, a spring secured at
 70 one end to the cap-striking mechanism and at the opposite end of the box. 75

5. In combination, a box, a door therefor, a lever within the box, a connection between the door and the lever, a pawl on the lever, means for limiting the movement of the
 80 pawl, a cap-striking mechanism operated by the pawl of the lever, and means for firing a bomb from the cap-striking mechanism.

DANIEL McGLONE.

Witnesses:

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 ANDREW P. MARTIN.