No. 683,319. Patented Sept. 24, 1901.

W. G. McCLURE.

BURGLAR ALARM.

(Application filed Nov. 14, 1900.)

(No Model.)

Fig. 1.

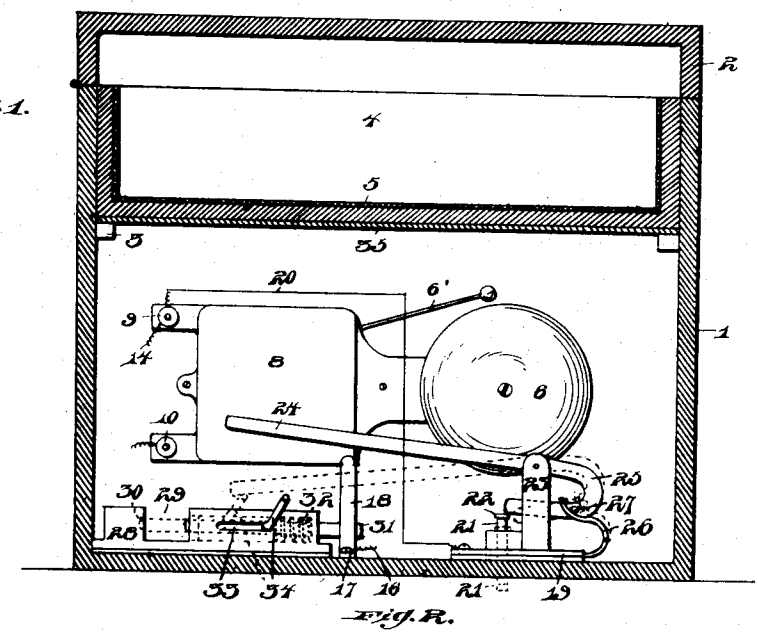
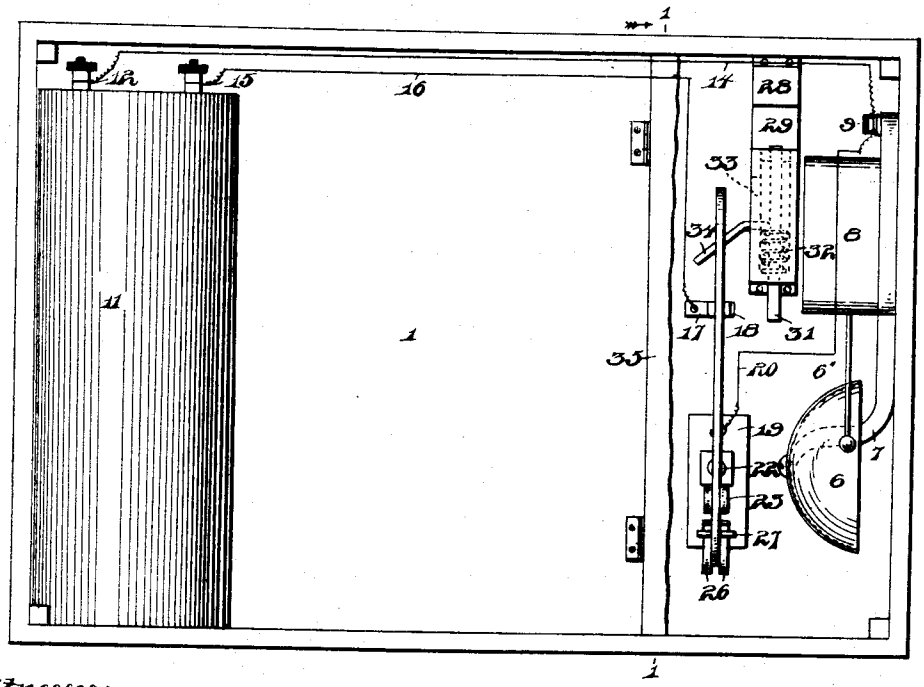


Fig. R.



Witnesses:
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Fig. 5.

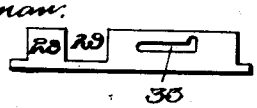
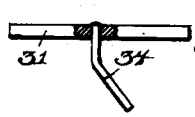


Fig. 4.



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UNITED STATES PATENT OFFICE.

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BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 683,319, dated September 24, 1901.

Application filed November 14, 1900. Serial No. 36,484. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. McCLURE, a citizen of the United States of America, residing at Beaverfalls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Burglar-Alarms, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in burglar-alarms, and relates more particularly to an alarm mechanism which is adapted to be used in connection with jewelry-caskets and the like.

Briefly described, the invention consists of a suitable box or casing having a tray therein for the reception of jewelry or other articles, an electrically-operated bell, means for exploding a percussion-cap, and mechanism which upon the lifting of the box or casing completes the electrical circuit to cause the ringing of the bell and also releases the firing-pin for exploding the percussion-cap, all of which construction will be hereinafter more fully described, and specifically pointed out in the claim.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate corresponding parts throughout the several views, and in which—

Figure 1 is a transverse vertical sectional view of the casing and tray, showing the alarms and operating mechanism. Fig. 2 is a top plan view with the lid or cover of the box or casing and the tray removed, the hinged cover for the alarms being partly broken away in order to show the parts of the latter. Fig. 3 is a side elevation of the casing for the plunger or firing-pin. Fig. 4 is a detail view of the plunger or firing-pin, partly in section, showing the locking-pin for holding the same in the retracted position.

To put my invention into practice, I provide a suitable box or casing 1, having a hinged lid or cover 2 and provided in each corner with a small block 3, which acts as a support for the tray 4, the latter when used for the reception of jewelry or the like being preferably provided with a lining 5, composed of velvet or similar material.

The alarm mechanism comprises a bell 6, which is supported on the arm 7 of the bell-mechanism casing 8, this casing carrying contacts 9 10 and is attached to the inner face of the box at one end thereof. A battery 11 is located in the box at the opposite end and has its one pole 12 connected by the wire 14 to the contact or binding-post 10 and its other pole 15 connected by the wire 16 to the contact 17, secured on the bottom of the box or casing 1 adjacent to the bell mechanism. This contact 17 is provided with an upwardly-extending arm 18, having its upper end curved for the purpose, as will be hereinafter further explained. Secured to the bottom of the box in line with the contact 17 is a contact-plate 19, with which connection is made, by means of the wire 20, to the binding-post 9. This contact-plate 19 is provided on its upper face with a bushing provided with an aperture which extends through the plate and through the bottom of the box or casing 1. In this aperture is mounted a pin 21, provided on its upper end with a head 22 to prevent the pin dropping out of its aperture when the box is lifted. The plate 19 also carries a pair of uprights or standards 23, in the upper ends of which is mounted a contact-lever 24, provided with a goose-necked end 25, which is normally engaged by the head 22 of the pin 21, as shown in Fig. 1 of the drawings, so that the lever will be held normally out of contact with the arm 18. A pair of springs 26 are connected to the end of the plate 19 and engage a pin 27, which is inserted through the goosenecked end of the contact-lever 24, so that when the box is lifted from the table or other support upon which it is resting the pin 21, which is held elevated by the contact of its lower end with the support for the box, is permitted to fall by gravity, and the springs 26, acting against the lever, force the same downwardly into contact with the arm 18, thus completing the electrical circuit and causing the tapper 6′ to strike the bell and sound the same. I have also provided a mechanism for exploding a cap simultaneously with the ringing of the bell, said mechanism being operated by the fall or descent of the contact-lever 24. It consists of an oblong casing 28, having a cut-away portion 29, in the forward wall of which

is a seat 30 for the cap. This casing 28 is provided with a longitudinal bore in which is arranged a plunger or firing-pin 31, which is actuated by the spring 32, arranged on said pin within the casing, and one end of said spring is of course connected to the pin in order that when the spring is released from its tension it will force the pin through the bore, so that the forward end of the same will strike and explode the cap which has been placed in the seat 30. The casing 28 is provided in one side with a bayonet-shaped slot 33, and mounted in the firing-pin 31 is a trigger or arm 34 of somewhat angular shape, which when in engagement with the vertical portion of the bayonet-shaped slot holds the spring 32 under tension and the firing-pin or plunger retracted. When, however, the contact-lever 24 falls, it strikes the trigger or arm 34, so as to move the same out of the vertical part of the slot 33 into the longitudinal part thereof, thus releasing the lock for the firing-pin and allowing the spring to operate the same. While the contact-lever 24 is descending by gravity, so as to complete the contact with the arm 18, the springs 26, engaging this lever, serve to operate the same with sufficient force to disengage the trigger or arm 34 from its locked position, so as to permit the spring to operate the firing-pin or plunger, and the upper end of the contact-arm is preferably curved to prevent liability of the lever 24 striking the top end of this arm, as, although this would complete the electrical circuit, it would prevent the arm from descending sufficiently far to strike the trigger 34 in order to release the firing-pin. I have shown a portion of the hinged cover 35, which may be provided for inclosing the mechanism, and, if desired, the battery may also be inclosed in a like cover or casing.

It will be observed that the lifting of the box from its support permits the pin 21 to fall, thus releasing the support for the contact-lever 24, allowing the same to complete the electrical circuit to sound the bell and also to explode the cap. It will also be observed that when the free end of this lever 24 is permitted to fall, so as to make the contact, it will, by means of pressure on the lower end of the pin, be impossible to reset the lever 24, owing to the curved end of this lever having retreated beyond the line of vertical movement of the pin 21, so that in order to reset the device it is necessary that the box be opened and the free end of the lever 24 elevated to the position shown in full lines in Fig. 1 of the drawings. It will thus be seen that should the box be tampered with or moved from its usual place or support both alarms will be immediately sounded, and the mechanism cannot be reset, so as to cease the sounding of the alarm, until the box is opened and the tray removed, so as to have access to the interior of the box.

Attention is directed to the fact that this improvement may be also applied to drawers by fastening the same to the rear end of the drawer in the same manner as it is secured to the bottom of the box.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

In a burglar-alarm, the combination with the box or casing, of an electrically-operated alarm and mechanism for operating the alarm, said mechanism comprising in connection with a source of electrical supply and the circuits, a contact-plate mounted on the bottom of the casing, a contact-lever pivotally supported from said plate and provided with a curved end, a contact-arm supported on the bottom of the box or casing, a pin normally held elevated and in engagement with the curved end of the lever for holding said lever out of engagement with the contact-arm, said pin being held in its elevated position by the engagement thereof with the support for the box or casing and adapted upon the lifting of the box or casing to permit the fall of the contact-lever against the contact-arm to sound the alarm, and springs engaging the curved end of said lever for accelerating its downward movement when its support is removed, substantially as described.

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

WILLIAM G. McCLURE.

Witnesses:
T. C. McPHERSON,
JOS. C. ROUZER.