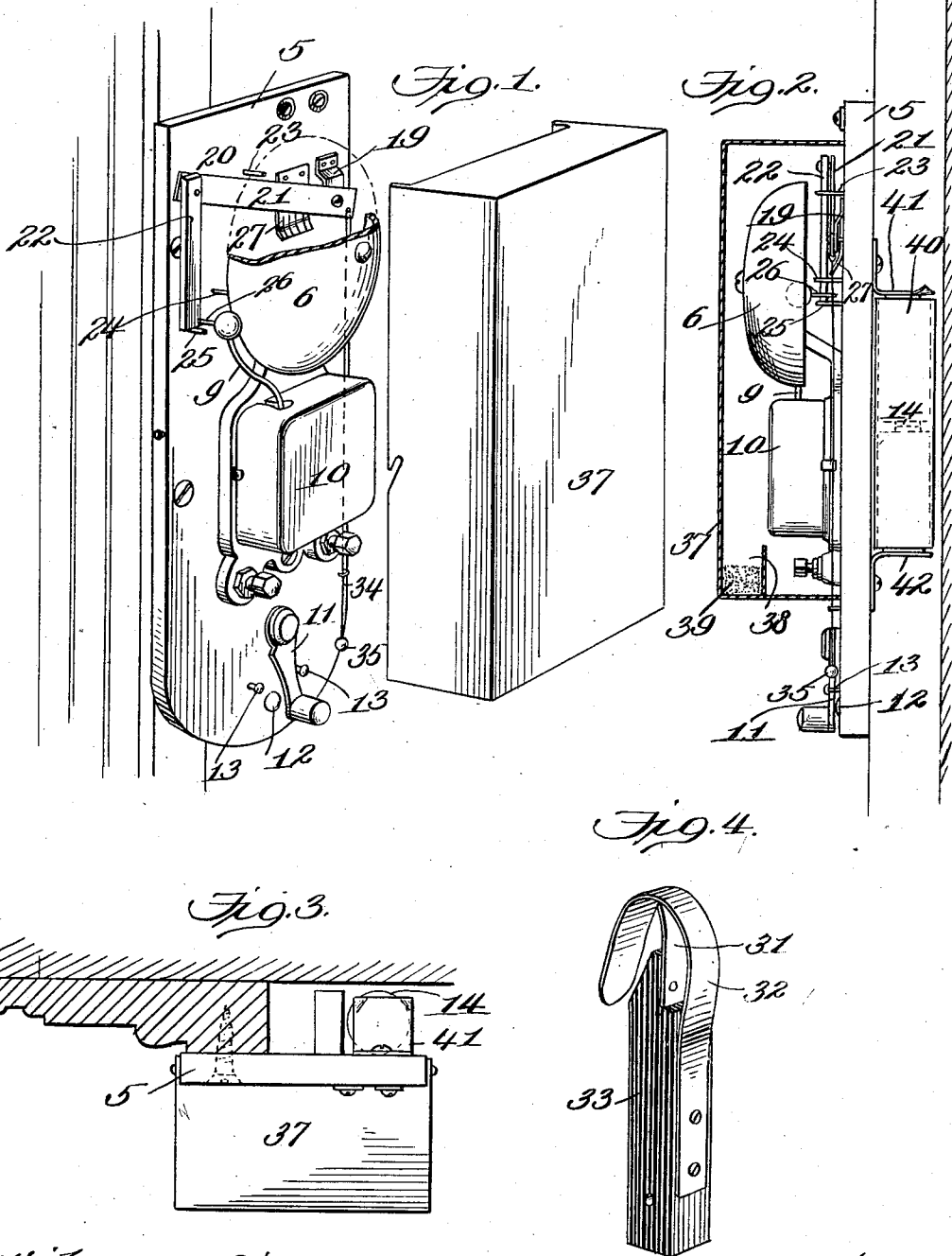


F. C. RIES.
BURGLAR ALARM.
APPLICATION FILED JAN. 13, 1910.

1,018,926.

Patented Feb. 27, 1912.

2 SHEETS—SHEET 1.



Witnesses:
C. H. Kessler
Robert E. Smith.

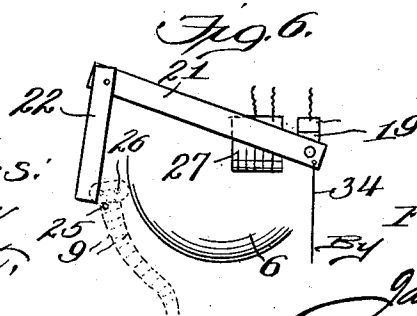
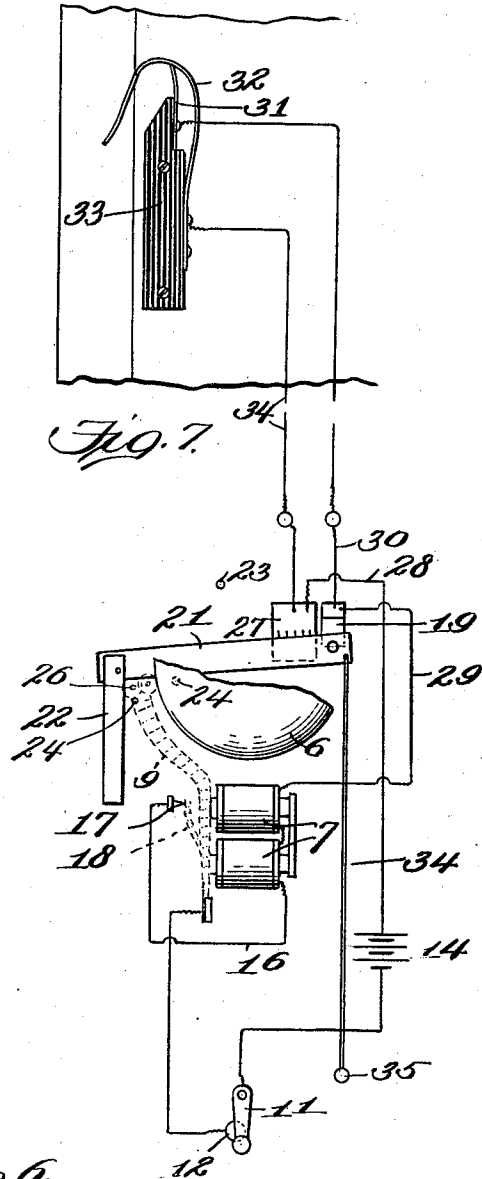
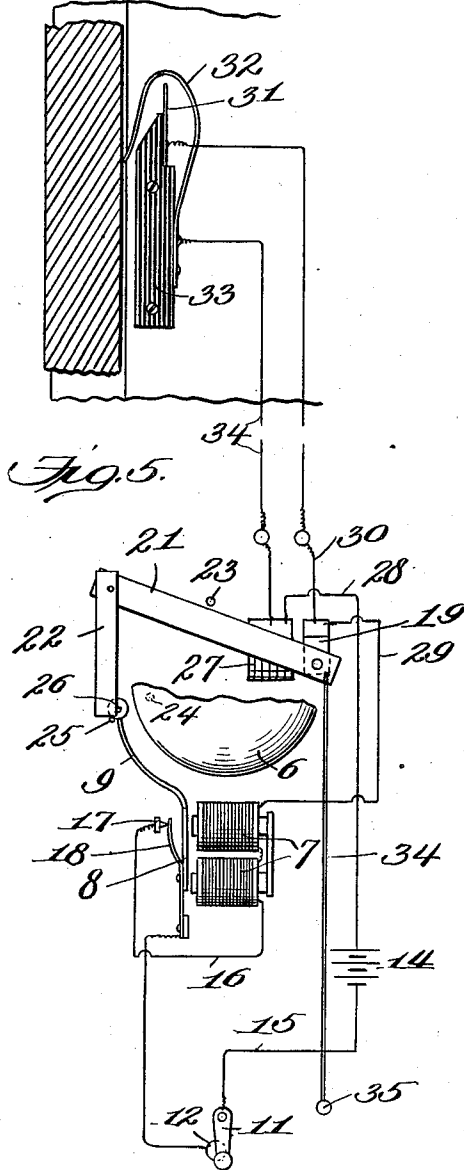
Inventor:
Frederick C. Ries
By James L. Norris

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2 SHEETS—SHEET 2.



Witnesses:
Chas. Nesler
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UNITED STATES PATENT OFFICE.

FREDERICK C. RIES, OF MACON, GEORGIA.

BURGLAR-ALARM.

1,018,926.

Specification of Letters Patent.

Patented Feb. 27, 1912.

Application filed January 13, 1910. Serial No. 537,897.

To all whom it may concern:

Be it known that I, FREDERICK C. RIES, a citizen of the United States, residing at Macon, in the county of Bibb and State of Georgia, have invented new and useful Improvements in Burglar-Alarms, of which the following is a specification.

This invention relates to burglar alarms of the automatic drop or continuous ringing type embodying terminals or contacts normally open and closed by the movement of a window, door or other device to which the support or holding means for the contacts is adjacently applied.

The object of the invention is to provide a comparatively simple construction and arrangement of burglar alarm of the type specified having a positive and effective operation and which may be readily applied in operative position.

Other objects and advantages will appear in the subjoined description, and in the accompanying drawings a preferred embodiment of the burglar alarm is disclosed, and referring to the drawings—

Figure 1 is a perspective view of a burglar alarm broken away in part and showing the casing removed, and embodying the features of the invention. Fig. 2 is a side elevation of the same showing the casing applied and in section. Fig. 3 is a top plan view of the burglar alarm and showing the support therefor in horizontal section. Fig. 4 is a detail perspective view of the contact or terminal carrier. Fig. 5 is a diagrammatic view, partially in section, showing the burglar alarm set for operation. Fig. 6 is a detail view illustrating how the drop or contact making device is released. Fig. 7 is a view similar to Fig. 5 illustrating the drop or contact making device released and the alarm in condition for continuous ringing.

The numeral 5 designates a support or backing which carries the main portions of the burglar alarm and preferably consists of a strip of non-conducting material such as wood. On this support or backing 5 is secured a bell 6, an electro-magnet 7 having a vibrating armature 8 carrying a striker 9, a casing 10 for the electro-magnet, and a switch 11 cooperating with a contact 12 and movable between two limiting or stop pins 13. A battery 14 is held against the rear side of the support or backing 5, and as shown by Figs. 5 and 7 the electro-magnet

is connected to the battery by a wire 15 which includes the switch 11 and contact 12, and the electro-magnet is connected up by a wire 16 to the stop screw 17 cooperating with a spring 18 of the armature 8.

The features thus far described are all well known in the art of electrical bell ringing or signaling and the essential features of the invention will now be particularly explained.

On a fulcrum support 19 secured in suitable position on the backing 5 within the area covered by the bell 6 is a drop or contact making device 20 embodying a bar 21 having a pendant trigger 22 formed of wood or other non-conducting material and movably attached to the extremity thereof opposite to that held on the fulcrum support 19. The bar 21 is formed of a suitable strip of conducting material, such as metal, and is limited as to its vertical movement in opposite directions respectively by pins 23 and 24. The bar 21 projects outwardly from beneath the bell 6 so that the pendant trigger 22 will be free to engage a rest or stop 25 adjacent to the head of the striker 9, the latter carrying a trip pin or device 26 which is disposed a little higher up than the plane of the rest 25 to release the pendant trigger 22. Disposed in the path of movement of the bar 21 is a metallic contact brush 27 with which said bar is brought into frictional contact to complete the circuit, and connected to the said brush is a wire 28 running to the terminal of the battery 14 opposite to that to which the wire 15 is connected. The fulcrum support 19 is connected by a wire 29 to the electro-magnet 7, and also by a wire 30 with a circuit closing means which in this instance consists of a contact 31 to which wire 30 is attached, and a contact 32, both contacts 31 and 32 being secured to a carrier or insulated strip 33 adapted to be secured adjacent to a door, window sash or other movable device with which it is desired to use or apply the burglar alarm.

The contact 31 consists of a yieldable metal strip normally extending in a straight plane from the carrier 33 within the contact 32 and normally out of engagement with relation to said contact 32, the latter being in the form of a bendable tongue electrically connected by a wire 34 to the brush 27.

After fastening the carrier 33 and its con-

tacts in position adjacent to a door, window sash or other movable device, accurate contact adjustment is made relative to the part engaging the tongue or contact 32 inwardly or outwardly as may be required, and read-
5 justment of the said tongue or contact may be accomplished at any time desired and when found necessary by further bending the said tongue or contact inwardly or out-
10 wardly.

The wires 30 and 34 and the circuit closer as just described complete the circuits of the burglar alarm, and when the contact 32 is released from its set position by the move-
15 ment or clearance in relation thereto of the door, window sash or other movable device it springs into engagement with the contact 31 and closes the circuit and consequently starts the vibration of the armature 8, this
20 vibration continuing as long as the circuit is closed as in ordinary devices of this class.

The drop or contact making device is elevated to set the same, and to conveniently accomplish this set position a cord 34 is at-
25 tached to the bar 21 adjacent to the fulcrum support 19 and is provided with a pull-device at its lower end, as at 35, said pull-device being of any preferred form, such as a knob or tassel. By drawing downwardly
30 on the cord 34, the bar 21 and trigger 22 are elevated until the said bar strikes the uppermost pin 23 when the trigger will be free to automatically drop and bear upon the rest 25 and touch and remain in contact with the
35 projection 26 as shown by Figs. 1 and 5. The trigger 22 loosely depends from the bar 21, and as the free extremity of the latter carrying the said trigger is elevated, the trigger assumes a perpendicular position by
40 reason of its looseness and the lower end of the trigger moves over the rest or stop 25 after the side edge of the trigger clears the said rest or stop during the upward move-
45 ment of the trigger with the free extremity of the bar 21, and by slightly slackening the pull-cord 34 the lower end of the trigger will contact with and remain upon the rest or stop 25 until released or shut off by the
50 vibration of the striker 9 carrying the trip pin 26 against which the lower portion of the side edge of the trigger also bears when said trigger is in set position. The elevation of the bar 21 breaks contact thereof with
55 relation to the brush 27, the latter being of resilient character and having its lower terminal bent outwardly, as shown by Figs. 1 and 2, to insure a reliable frictional contact of the said lever with the brush. When the lower end of the trigger 22 is disposed
60 on the rest 25, the striking pin or release projection 26 of the striker arm 9 is in close relation to the lower portion of the inner side edge of the said trigger 22, as clearly shown by Fig. 1. As soon as the armature 8
35 starts to vibrate, the projection 26 on the

striker arm 9 displaces the trigger 22 with relation to the rest 25 and the drop or contact making device as a whole is released and contact set up between the bar 21 and the brush 27. The drop or contact making
70 device after its release and gravitation defeats any attempt to check the alarm in its continuous operation, because the moment that the first engagement of the contacts 31 and 32 ensues by reason of the movement of
75 the door, window sash or other device to which it is applied, the armature 8 is set in motion and the bar 21 in view of the release of the trigger 22 frictionally engages the brush 27, which completes the circuit within
80 the bell mechanism itself independent of the engagement of the contacts 31 and 32 and a continuous ringing of the bell 6 is set up with advantages in awakening the inmates of the house, compartment or other place
85 where the alarm is used. The battery 14 is thrown into circuit through the medium of the switch 11 and contact 12, and to preserve the battery at a time when the use of the burglar alarm is undesirable, the switch 11
90 is turned to disengage the contact 12, as shown by Fig. 1.

The bell, electro-magnet and drop are all normally inclosed by a casing 37 applied over the support 5, and hence the said parts of
95 the alarm not readily accessible except to those who understand that the said casing may be removed in a particular manner. The casing 37, as shown by Fig. 2, is provided with means to prevent insects from lodging
100 or nesting therein and injuring the parts of the alarm inclosed thereby. This means consists of a pocket or receptacle 38 formed in the interior of the casing to receive a
105 poisonous insecticide as at 39. This poison receptacle prevents insects from crawling upwardly over the interior of the casing above said receptacle and also serves to kill
insects.

The battery 14 is by preference, in the present instance, composed of suitable dry cells inserted endwise in a casing 40 held
110 between yielding and conducting supports or brackets 41 and 42 and freely removable for repair or recharging by the substitution of new cells. The terminals of the respective cells in the casing 40 have direct
115 contact with the yielding brackets 41 and 42, and the battery terminal wires as 15 and 28 are connected to the said yielding brackets. This manner of applying the battery is exceptionally convenient as the bat-
120 tery is set in position and in connection with the alarm at the time the latter is applied for service without requiring wiring to be done to make the proper connections.
125

The alarm as herein described will be found exceptionally convenient and is comparatively cheap in the cost of manufac-
130 ture and instalment. It does not require

skilled knowledge to apply the same and it may therefore be readily applied in operative position by anyone.

What is claimed is:

5 1. In a burglar alarm, the combination with an electro-magnetic signal including a battery in circuit therewith, the electro-magnetic signal embodying a bell striker and bell, the bell striker having a projection extending therefrom, of a drop lever pivoted
10 at one end and electrically connected to the signal and having a free extremity with a depending trigger pivoted thereto, a stop device on which the lower end of the trigger
15 has bearing when the alarm is set and holding the said trigger in raised position adjacent to the bell striker projection, a yielding brush contact adjacent to the pivotal point of the drop lever and over which the latter
20 has movement to set up a frictional engagement of the lever with the contact when the trigger is released, the said brush contact being electrically connected to the signal battery, the trigger being released from its
25 set position by the projection on the bell striker when the latter vibrates to insure continuous operation of the signal, and a circuit closer having movable contacts respectively connected to the said brush contact and drop lever.
30

2. In a burglar alarm, the combination of an electric bell having a striker provided with a release projection at its free end, a rest projection adjacent to the striker, an electro-magnet and battery for controlling
35 the operation of the striker, an automatic drop consisting of a lever pivoted at one end and having a depending trigger pivoted and freely movable on the opposite end, the depending trigger having its lower end dis-
40 posed on the rest projection when the alarm is set and released by the projection of the bell striker when the latter vibrates, a brush contact disposed for frictional engagement by an intermediate portion of the said drop
45 lever, a carrier arranged adjacent to a part to be guarded and having contact devices, and circuit wires connecting the said contact devices and the lever and brush contact, the contact devices of the carrier when
50 in engagement closing the circuit to release the drop to set up a continuous ringing of the bell.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.
55

FREDERICK C. RIES.

Witnesses:

ROBERT J. FLOURNOY,
GUY ARMSTRONG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."