No. 738,963. PATENTED SEPT. 15, 1903.

F. WALDER.

BURGLAR ALARM.

APPLICATION FILED JUNE 5, 1903.

NO MODEL.

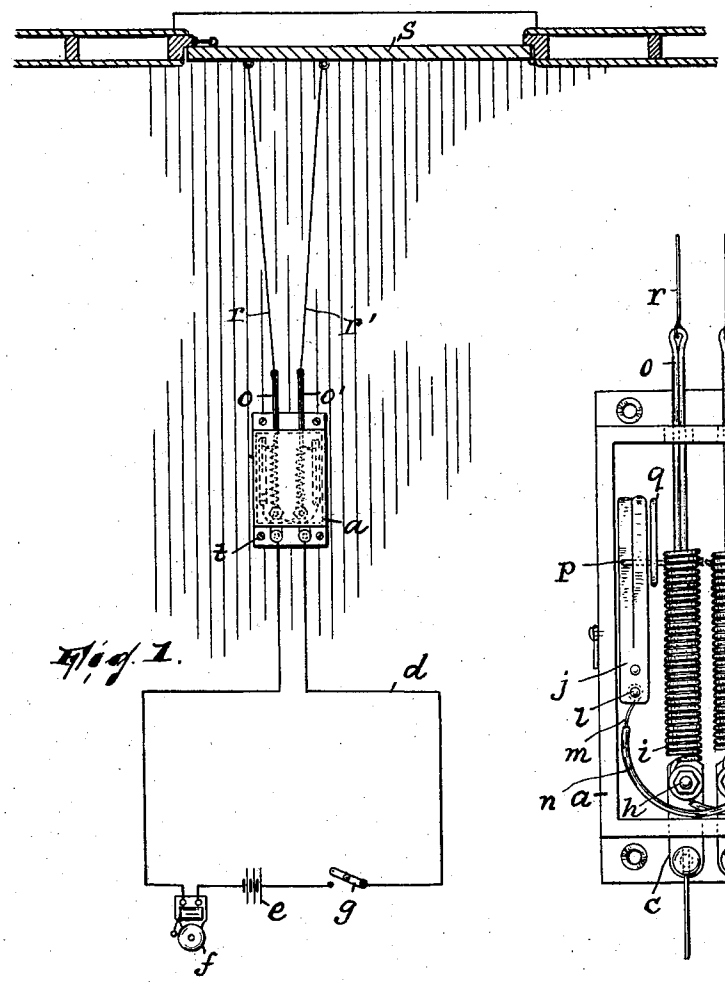

Fig. 1.

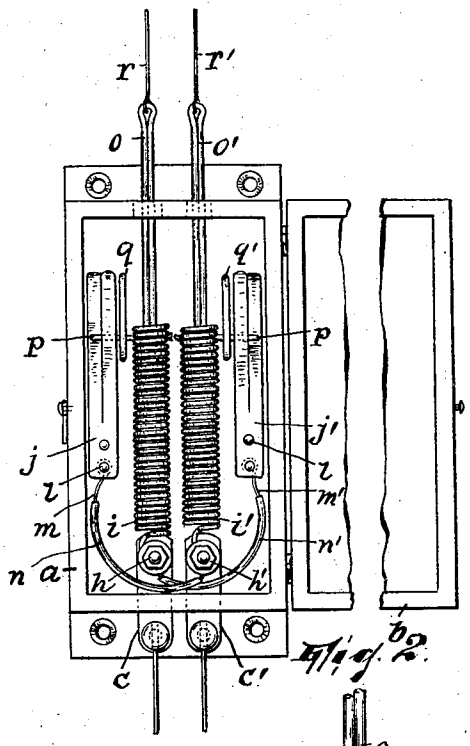

Fig. 2.

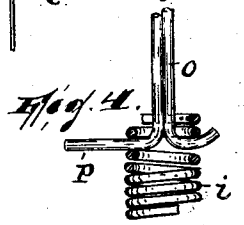

Fig. 4.

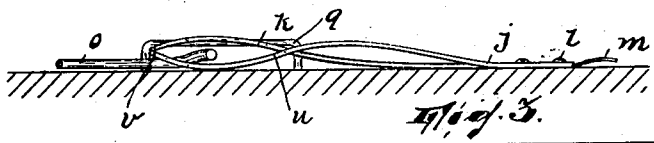

Fig. 3.

WITNESSES:

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INVENTOR,

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BY

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No. 738,963. Patented September 15, 1903.

UNITED STATES PATENT OFFICE.

FERDINAND WALDER, OF ROCHELLE PARK, NEW JERSEY.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 738,963, dated September 15, 1903.

Application filed June 5, 1903. Serial No. 160,195. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND WALDER, a citizen of the United States, residing in Rochelle Park, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Burglar-Alarms; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to burglar-alarms; and it has reference particularly to burglar-alarms of the class in which the sash, door, or other closure when closed maintains an elastic element out of the normal position, so that should the closure be moved said element will be released and in moving close an electric circuit containing the alarm proper.

My invention will be found fully illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view showing my improved apparatus in operative connection with a closed door. Fig. 2 is an enlarged plan view of the essential parts of my invention, a certain case in which said parts are inclosed having its cover thrown open; and Figs. 3 and 4 are views illustrating details.

In a case *a*, having a suitable cover *b*, are fixed terminals *c c'* of an electric circuit *d*, including a battery *e*, an alarm *f*, and a switch *g*. Said terminals project through one of the walls of the case and inside the case carry binding-posts *h h'*, to which are secured, one to each binding-post, the ends of coiled springs *i i'*, arranged in parallel disposition in the case. Said springs are disposed between parallel clips *j j'*, each clip being split for a part of its length, as illustrated in Figs. 1 and 3, and the legs formed thereby being bent in the manner illustrated in Fig. 3, so as to form a loop *k*. Each clip is secured in place by pins *l*, and it is connected with the terminal *c*, (*c'*,) which is next adjacent the other clip, by a wire *m*, (*m'*,) protected by an insulating-tube *n* from contact with the other terminal.

o o' designate pulls formed of bent wire, each pull having its extremities bent off at right angles, so as to give substantially the shape of a T to the pull, the bent-off portions of each pull being extended between the coils of one of the springs *i i'*. One of the ends of each pull, as *p*, extends into the loop *k* of the adjoining clip, and the pull is guided by an elongated staple *q*, (*q'*,) secured in the case between each spring and the adjoining clip and extending over the part *p*.

r r' designate wires or other flexible connections adapted to connect the pulls with the door or other closure *s*.

It will be understood that the case is adapted to be fixed relatively to the closure, as to the floor of the building, by screws *t*. Normally, the closure *s* being closed, the flexible connections and pulls draw the springs *i i'* into their extended positions. In this position the portions *p* occupy substantially the position in the loops illustrated in Fig. 3. Although the switch *g* is closed, the circuit is broken at the loops; but should the closure be opened the springs will contract and bring the portions *p* into contact with the clips at *u*, thus closing the circuit and sounding the alarm. By duplicating the circuit-closing devices which each combination of elements *i*, (*i'*,) *p*, and *j* (*j'*) compose should the person opening the door discover one of the connections *r* (*r'*) and attempt to keep the circuit open by maintaining the spring extended the other spring will relax when the closure is opened, and by providing the loop *k* even such an attempt to maintain the circuit open by manually holding the spring extended may be frustrated, because it would be practically impossible for the spring to be held extended by hand without inadvertently bringing the projection *p* against the extreme end of the loop, as at *v*.

My apparatus is especially adaptable for use in connection with poultry-coops and the like, but, as indicated herein, it may be used as a burglar-alarm for general purposes.

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

1. The combination, with an electric circuit having an opening therein and comprising an alarm, of two pairs of contact parts, one part in each pair being movable into engagement with the other to close the circuit, said movable parts being electrically connected to the

terminals at the opening in said circuit, one to each of them, and the other contact parts being likewise connected with said terminals, each with that terminal to which the movable part of the other pair is connected, substantially as described.

2. The combination, with an electric circuit having an opening therein and comprising an alarm, of two pairs of contact parts, one part in each pair being elastic and movable into engagement with the other to close the circuit, said movable parts being electrically connected to the terminals at the opening in said circuit, one to each of them, and the other contact parts being likewise connected with said terminals, each with that terminal to which the movable part of the other pair is connected, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of June, 1903.

FERDINAND WALDER.

Witnesses:
JOHN W. STEWARD,
JAMES BHEMTON.