(No Model.)

G. V. TROTT.

ELECTRIC ALARM DEVICE.

No. 574,856. Patented Jan. 5, 1897.

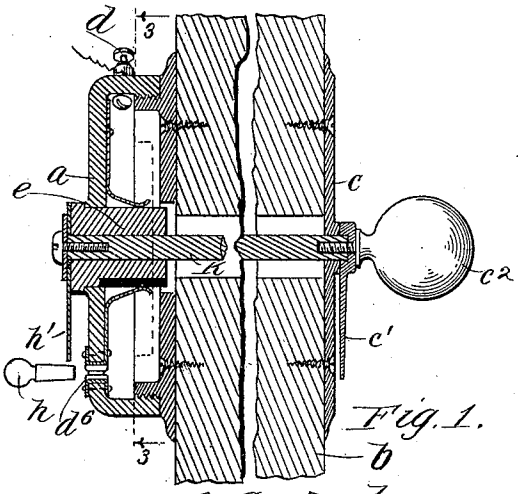


Fig. 1.

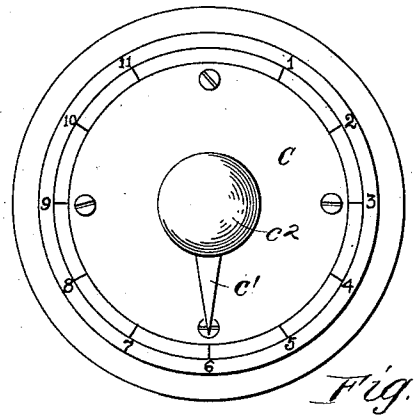


Fig. 2.

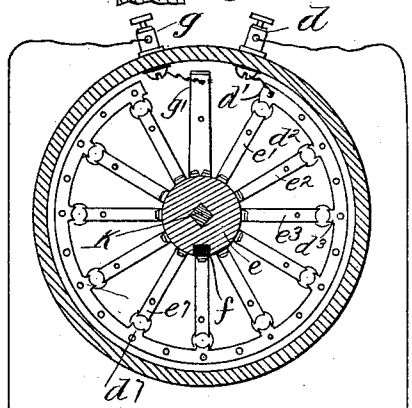


Fig. 3.

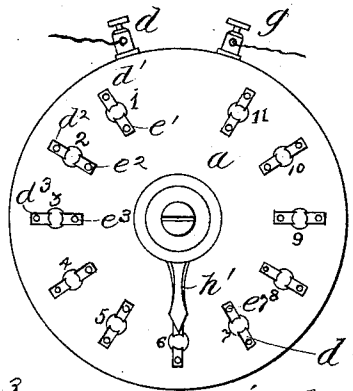
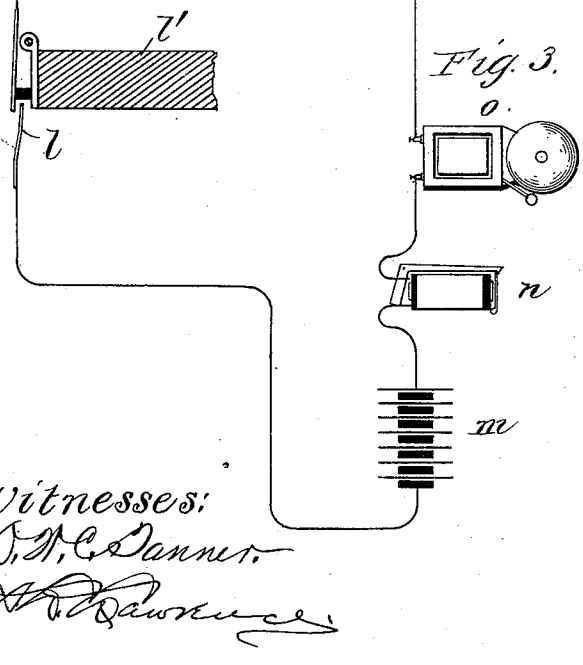


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE V. TROTT, OF CHICAGO, ILLINOIS.

ELECTRIC ALARM DEVICE.

SPECIFICATION forming part of Letters Patent No. 574,856, dated January 5, 1897.

Application filed April 10, 1896. Serial No. 586,948. (No model.)

To all whom it may concern:

Be it known that I, GEORGE V. TROTT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in an Electrical Alarm Device, (Case No. 1,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to an electrical alarm device for buildings or apartments.

In numerous instances it becomes desirable to provide for residences, flat-buildings, the rooms of hotels, &c., means whereby an alarm is adapted to be given whenever any one other than persons rightfully belonging upon the premises attempts to enter the same, while remaining inoperative at all other times.

It is the object of my invention to provide such an alarm device which will permit the proper occupants of a room or building to gain access to the same without giving the alarm and will operate should any other person attempt an entry.

The device of the present application consists of an electric alarm or indicator and a battery in electrical connection with a circuit opening and closing device in which the circuit is normally closed, the device being provided with an operating lever or hand having a number of operative positions, any one of which may be adjusted to open the circuit and prevent an alarm from being given when another contact is made adapted to close the circuit through the said alarm or indicator.

I will describe my invention more particularly as applied in a hotel or apartment-building by reference to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of the circuit opening and closing device. Fig. 2 is an elevation of the exterior dial. Fig. 3 is a section of the plug-switch on line 3 3, showing the circuit connections in diagram. Fig. 4 is an elevation of the plug-switch.

Like letters refer to like parts throughout the several figures.

The plug-switch a is fastened inside the room or building it is designed to protect upon the outer partition or wall b, the disk of said switch being constructed of hard rubber or other insulating material. Upon the exterior of the partition b is mounted a dial c, corresponding to and directly opposite the switch a. Mounted in the face of the said plug-switch are eleven split thimbles, the outer halves of which, d' d^2 d^3, &c., are connected with one terminal d of the circuit, and the inner halves of the said thimbles are continuations of the separate contact-springs e' e^2 e^3, &c., bearing upon the rotatable contact-piece e. A segment f, of insulating material, slightly wider than one of the contact-springs e' e^2, &c., is provided upon the said rotatable contact e. Circuit-terminal g is connected with the said contact-piece e by means of a contact-spring g' bearing thereon, slightly wider than the insulating-segment f. A conducting-plug h is provided, adapted to be inserted in any of the split thimbles, thereby completing the circuit through such thimble and between the circuit-terminals d g of the device except when the insulating-segment f engages the contact-spring, which is continuous with the inner half of the split thimble in which the plug is inserted.

Upon the exterior dial c are provided divisions numbered corresponding to the split thimbles of the switch, and an index arm or lever c' is rotatably mounted thereon and adapted to be moved by the knob c^2. A rod or shaft k, of square cross-section, passing through the partition or wall b, securely connects the index-arm c' and the rotatable contact-piece e, so that when the said index is rotated to point to a number upon the outer dial the insulating-segment f is at the same time rotated to engage the contact-spring connected with the split thimble corresponding to that number, thereby opening the circuit through the device. The index-arm h', carried upon contact-piece e, will also be rotated to point to the thimble in which the plug is inserted.

The usual form of burglar-alarm contact l is secured in the door-frame of the room and connected in the alarm-circuit, which it is adapted to close whenever the door of the room l' is opened. A battery m, an indicator n, and an alarm-bell o, conveniently situated, are also included in the circuit.

The occupant of a room thus protected upon leaving it places the plug h in any one of the

split thimbles he may select, for example, number "7." It is evident that any one thereafter entering the room, although provided with the proper key, must inevitably sound the alarm unless he knows the number upon which the device is set and turns the index-arm upon the outer dial to number "7," thereby opening the circuit through the device and preventing the ringing of the alarm-bell immediately the door is opened, which otherwise serves to complete the circuit by the engagement of the contacts at *l*. Thus should an intruder enter the room the opening of the door *l'* would close the circuit from the battery through the contact *l*, terminal *g* of the switch, spring *g'*, rotatable contact-piece *e*, spring e^7, plug *h*, outer half a^7 of the split thimble, terminal *d*, bell *o*, and indicator *n*, thereby giving the alarm, and an investigation would at once be made. The occupant of the room, however, merely sets the index-arm *c'* upon figure "7" of the outer dial and enters the room without sounding the alarm, as the insulation *f* will then engage the spring e^7 and maintain an open circuit within the device.

It is apparent that the device of the present application may be advantageously applied in numerous ways. The plug-switch, for example, may be placed in the room of a hotel and connected with the annunciator-circuit to ring an alarm in the hotel-office. Flats or detached buildings may be provided with the device, having the alarm and indicating apparatus situated in some centrally-located position or station where there would always be some one on duty to investigate the cause of any alarm transmitted to such central station. I therefore do not desire to be understood as limiting the application of my device to the uses herein specifically named or the precise construction shown and described, as various modifications may be made without departing from the spirit of my invention.

I am aware that electrical apparatus is commonly employed for the purpose of protecting buildings by means of burglar-alarms, and do not wish to be understood as claiming such application as novel.

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

1. In a circuit-controlling device for electrically-operated alarms, the combination with a plurality of possible contacts through which the circuit is open, of an adjustable member adapted to close the circuit through any one of the said contacts, and a rotatable contact-piece adapted to prevent the actuating-current from being transmitted to the alarm when the said contact-piece is in a single adjusted position during its rotation; substantially as described.

2. The herein-described circuit-controlling device, consisting of a base or disk wherein are mounted a plurality of paired contacts *d'* e', d^2 e^2, &c., a plug or key *h* adapted to close the circuit through any one pair of contacts, and a rotatable contact-piece *e* adapted to maintain the circuit closed through the device in all but one of its adjustable positions of rotation, substantially as described.

3. The combination, in a circuit-controlling device, with a base of insulating material, of a plurality of contacts mounted in said base through all of which the circuit is open, a key or plug adapted to close the circuit through any one of the said contacts, and a movable element adapted to open the circuit through the said device when in a single operative position corresponding to the contact through which the circuit is closed, substantially as described.

4. In a circuit-controlling device for an electrically-operated alarm, the combination with a plurality of possible contacts through which the circuit is open, of an adjustable contact-piece or plug adapted to close the circuit through any one of the said contacts, a rotatable contact-piece, and a segment of insulating material mounted thereon by which the said rotatable contact is adapted to prevent the transmission of the actuating-current to the alarm when in a single adjustable position of rotation corresponding to the contact through which the plug is adjusted to close the circuit, substantially as described.

5. In a device for opening and closing an alarm-circuit, the combination with a supporting-base of insulating material, of a rotatable contact-piece mounted therein connected with one of the circuit-terminals, a plurality of paired contacts provided upon the said base, the elements of each pair being connected respectively with the rotatable contact and the opposite circuit-terminal, a member adapted to close the circuit between any one pair of contacts, a segment of insulating material carried upon the rotatable contact-piece, and means for opening the circuit through any one of the paired contacts by rotating the said insulating-segment into engagement with the connection thereof, substantially as and for the purpose specified.

6. The herein-described circuit opening and closing device consisting of the disk *a* of insulating material, a rotatable contact-piece *e* mounted therein connected with the circuit-terminal *g*, the segment *f* of insulating material carried upon the contact *e*, a plurality of split thimbles mounted in the disk *a*, the outer halves *d'* d^2 d^3, &c., of which are connected with the circuit-terminal *d* and the inner halves of the said thimbles are connected with the contact-piece *e* by separate contact-springs e' e^2 e^3, &c., slightly narrower than the insulating-segment *f*, plug *h* adapted to be inserted in and close the circuit through any one of the said split thimbles, and means for rotating the contact-piece *e* so that the insulating-segment *f* shall engage the contact-spring of the split thimble in which the plug is inserted, thereby opening the circuit through

the device, substantially as and for the purpose described.

7. The combination, in a circuit-controlling device for electrically-operated alarms, with a dial or switch whereon the said circuit is adapted to be adjustably closed through any one of a plurality of contacts, disposed within the protected room or building, of a second dial or indicator situated without the said room or building, and an element operated from the exterior connecting the said indicator with the switch, adapted to actuate the latter and prevent the operating-current from being transmitted to the alarm, substantially as described.

In witness whereof I hereunto subscribe my name this 19th day of March, A. D. 1896.

GEORGE V. TROTT.

Witnesses:
A. L. LAWRENCE,
JOHN W. SINCLAIR.