

C. G. CARLSON.
FIRE ALARM.
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1,023,123.

Patented Apr. 16, 1912.

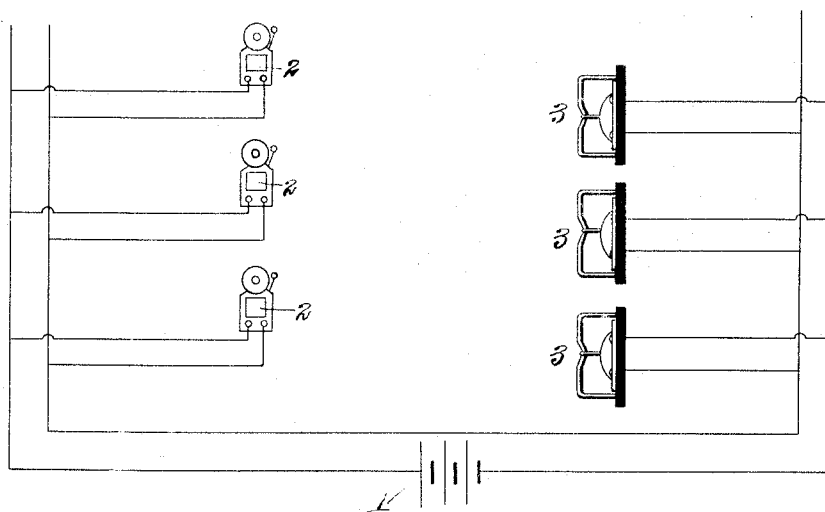


Fig. 1.

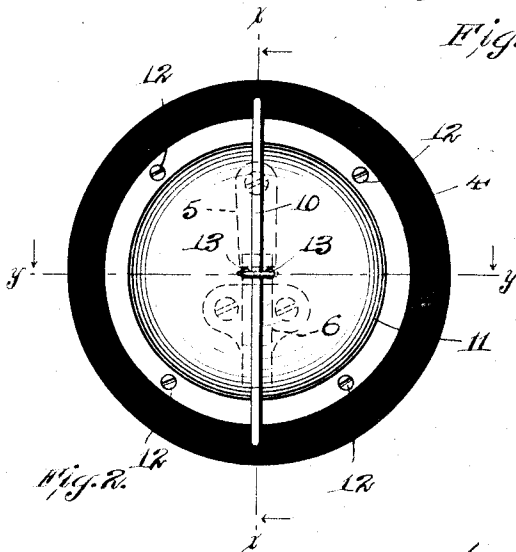


Fig. 2.

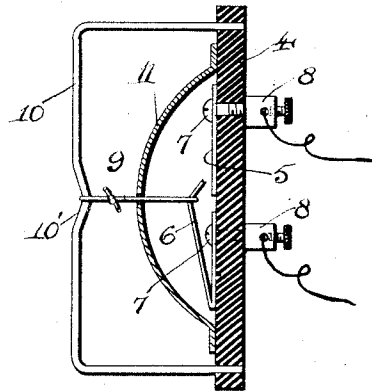


Fig. 3.

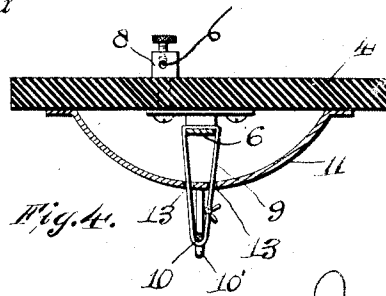


Fig. 4.

Witnesses:

A. A. Olson

B. H. Richards

Inventor:
Carl G. Carlson

by Joshua R. H. Sells

His Attorney.

UNITED STATES PATENT OFFICE.

CARL GERHARD CARLSON, OF CHICAGO, ILLINOIS.

FIRE-ALARM.

1,023,123.

Specification of Letters Patent.

Patented Apr. 16, 1912.

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To all whom it may concern:

Be it known that I, CARL GERHARD CARLSON, a citizen of the United States, residing at the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Fire-Alarms, of which the following is a specification.

My invention relates to improvements in alarm devices and more specifically to a device of this character especially adapted for use in the spreading of alarm in case of fire.

The object of my invention is the production of a fire alarm which will be automatic in its operation and one which will be of durable and economical construction and which will be positive and efficient in operation.

Other objects will appear hereinafter.

With these objects in view my invention consists in a fire alarm characterized as above mentioned and in certain details of construction and arrangements of parts, all as will be hereinafter more fully described and particularly pointed out in the appended claim.

My invention will be more readily understood by reference to the accompanying drawing forming a part of this specification and in which,

Figure 1 is a diagrammatic view of an alarm system embodying my invention, Fig. 2 is a front elevation of the circuit closing device included in my invention, and Figs. 3 and 4 are sections taken on substantially lines $x-x$ and $y-y$ respectively of Fig. 2.

The preferred form of my construction as illustrated in the drawing comprises an electric circuit in which is included a battery 1 or any other suitable source of electric energy. Connected in shunt with the main circuit is a plurality of electric bells or other suitable electric alarm devices 2. Also arranged in the main circuit at the opposite side of the battery 1 is a plurality of circuit closing devices 3 which are also connected in shunt with said main circuit. The arrangement is such that normally the main circuit is open, closing thereof in order to effect actuation of the alarm devices 2 being effected through the medium of said circuit closing devices, closing of any one of said circuit closing devices effecting the closing of the circuit and hence the sounding of the alarm devices.

Each of the circuit closing devices 3 comprises a circular base 4 formed of any suitable insulating material. Mounted upon the front side of the base 4 is a stationary contact 5 and a spring contact 6, said contacts being secured in position by screws or other suitable securing devices 7, binding posts 8 being connected with the rearward ends of the screw 7 of contact 5 and one of the screws 7 of the contact 6 for facilitating the connection of the wires or electrical conductors with said contacts. The spring contact 6 is so arranged and designed that normally the free end thereof will engage the contact 5, said end of said spring contact being held out of engagement with the stationary contact by a cord 9 which passes around said free end, the outer end of said cord engaging over the central portion of a substantially U-shaped frame 10 the extremities of which are rigidly secured in the base member 4. The frame 10 and the free extremity of the contact 6 are so formed as will be observed as to be adapted to maintain the cord 9 in proper position, this object being accomplished by a kink 10' which is provided in said frame and a similar construction of the free end of said contact, as clearly shown in Fig. 3. The cord 9 is formed of any suitable inflammable material so that in the event of fire in the vicinity of its location causing burning thereof it will effect the release of the contact 6 and the establishment of electrical connection between the contacts 5 and 6, the latter because of its inherent resiliency moving into engagement with the contact 5 upon being released.

The contacts 5 and 6 are inclosed in a suitable casing or housing 11 which is secured upon the base member 4 by screws 12. The front side of the casing 11 is provided with perforations 13 to permit of the passage of the cord 9. The casing 11 is provided to prevent the accumulation of dust or dirt upon the contacts 5 and 6 and so as to maintain the surface thereof clean so that when the end of the contact 6 is brought into engagement with the outer surface of the contact 5 an efficient electrical connection will be established.

In using my device the alarm devices 2 are distributed throughout the building at suitable locations, preferably in sleeping apartments, where the device is installed in an apartment building or hotel. The circuit

closing devices are similarly distributed preferably in such locations as it is thought that fires are most likely to start, it being clear that although only three of each of the devices are shown, any number may be employed and connected with the main circuit in the same manner as shown. When so connected it will be seen that in the event of a fire in the building where the fire alarm system is employed, upon the flame destroying any one of the cords 9 of the several circuit closing devices, the main circuit will be immediately closed and the alarm given so that the occupants of the building may escape and the fire be extinguished before any great headway has been gained.

A fire alarm device or system of the construction set forth is simple and economical and hence may be installed at a very low cost, and the same is of high efficiency in use.

While I have illustrated and described the preferred construction for carrying my invention into effect, the same is capable of variation or modification without departing from the spirit of the invention. I therefore do not wish to be limited to the exact details of construction as set forth but de-

sire to avail myself of such variations and modifications as come within the scope of the appended claim.

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

A fire alarm comprising a normally open electric circuit; an alarm device in said circuit; an insulating base member; a contact member on said base member and in said circuit; a spring contact on said base and in said circuit and arranged to contact with said first mentioned contact to close said circuit; a hemispherical casing secured to said base and inclosing said contacts, there being two openings in the top of said casing; a frame secured to said base member and passing over said casing; and an inflammable cord tied in a loop passing over said frame, under said spring contact and through said openings, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CARL GERHARD CARLSON.

Witnesses:

HELEN F. LILLIS,
ARTHUR A. OLSON.