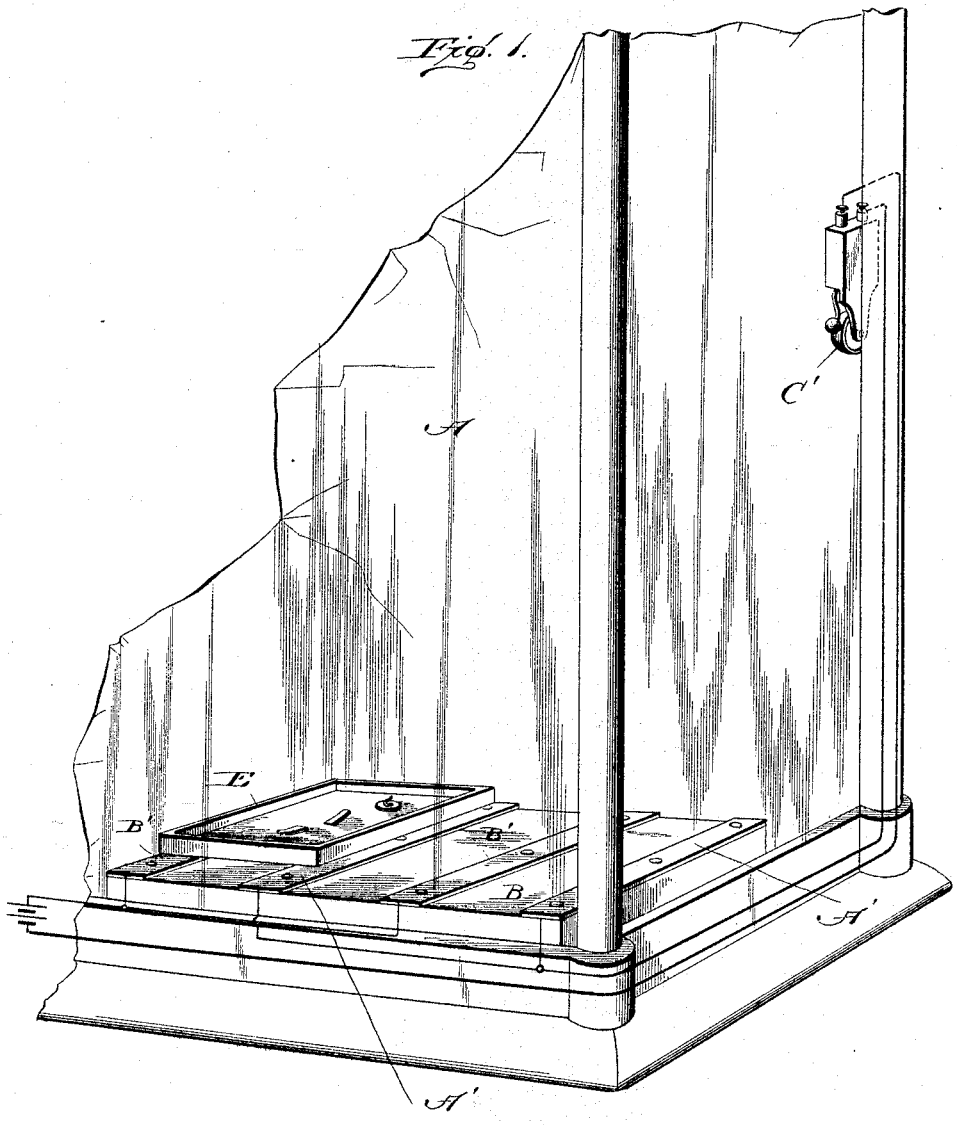
(No Model.) 2 Sheets—Sheet 1.

R. C. KRUSCHKE.

ELECTRIC SHOW CASE ALARM.

No. 490,479. Patented Jan. 24, 1893.

Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

R. C. KRUSCHKE.

ELECTRIC SHOW CASE ALARM.

No. 490,479. Patented Jan. 24, 1893.

Fig. 2.

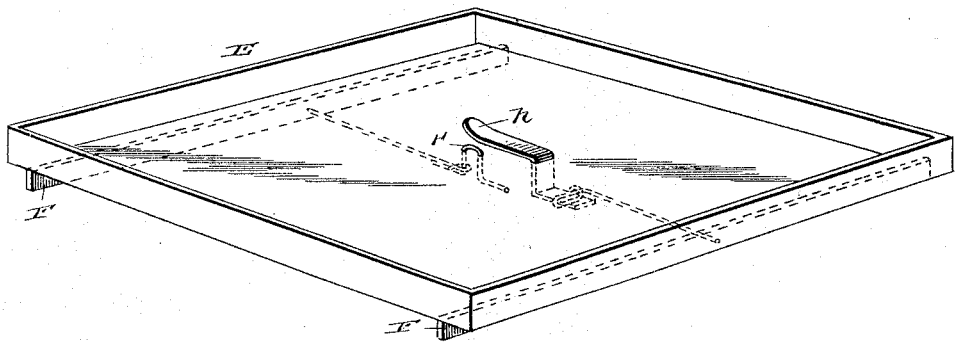


Fig. 3.

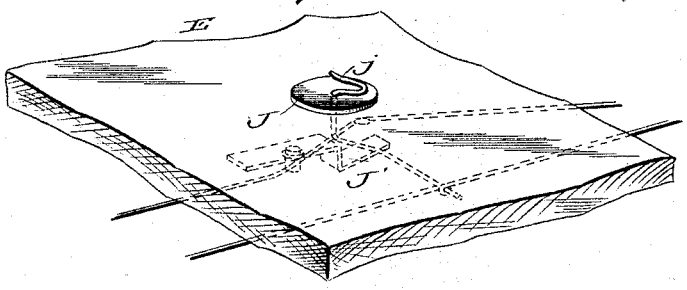
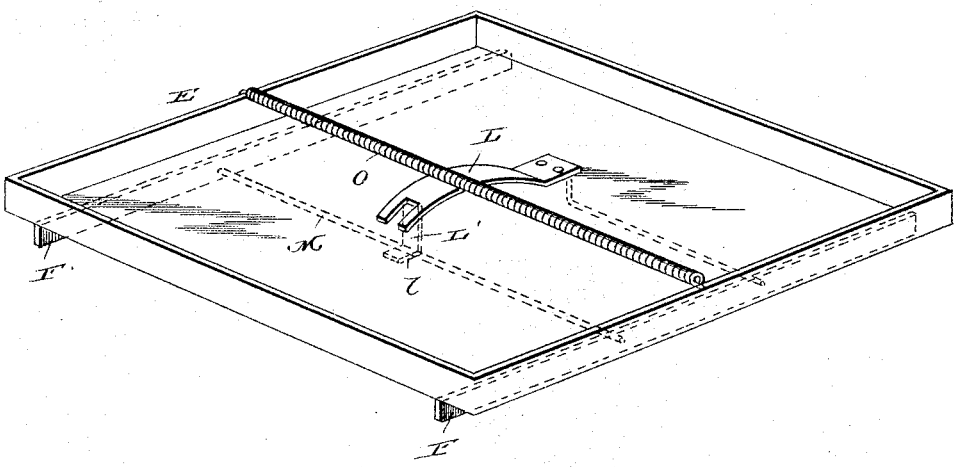


Fig. 4.



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UNITED STATES PATENT OFFICE.

RUDOLPH C. KRUSCHKE, OF DULUTH, MINNESOTA.

ELECTRIC SHOW-CASE ALARM.

SPECIFICATION forming part of Letters Patent No. 490,479, dated January 24, 1893.

Application filed July 9, 1892. Serial No. 439,491. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH C. KRUSCHKE, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Electric Show-Case Alarms; and I do 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 the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in electric show-case alarms, of that class wherein provision is made for the automatic sounding of an alarm in case any article is removed from a tray or other receptacle in which it is arranged for display.

The invention is designed more particularly as an improvement upon the construction shown in the Patent No. 460,019, granted to me September 22, 1891, and it has for its objects among others to provide improved trays or means or devices for holding the different articles, whereby the construction is simplified and rendered more sensitive, rendering it absolutely impossible to remove any article from its retaining or supporting means without sounding an alarm.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which

Figure 1 is a perspective view showing a portion of a show-case with some of the trays embodying the present invention in place. Fig. 2 is a perspective view of a tray with one form of retainer. Fig. 3 is a perspective view of another form of retainer. Fig. 4 is a perspective view of a tray with still another form of retainer.

The electrical connections will be substantially the same as in my prior patent above referred to. The floor of the show-case will be provided with a plurality of metallic strips or plates and the trays are provided with metallic strips or contact points bearing on the metallic strips on the floor, the metallic strips being in the circuit of a battery in which is included an electric alarm bell or other sounding device. The holding devices or retainers are electrically connected in the circuit which is normally open or closed as the construction may determine, and the parts are held by the device which they retain, the withdrawal of which will open or close the circuit, as the case may be, and sound an alarm.

As seen in Fig. 1, the show-case A is of ordinary construction except that the floor B is provided with a plurality of metallic strips B′ A′ which alternate with each other, the strips B′ being connected with one pole of the battery C and the strips A′ connected with the other pole of the battery through the electric bell or other sounding device C′.

The trays E may contain any desired number of the retainers or devices for supporting the articles of jewelry. Each tray is provided upon opposite edges at the bottom with metallic strips F which are designed to rest upon the metallic strips on the floor of the show-case as seen in Fig. 1. All of the retainers or supporters of the tray are electrically connected with the said strips F.

In the form shown in Fig. 2, which is designed more particularly for card jewelry, there is provided a metallic contact H which is electrically connected to the plates F of the tray and a spring contact *h* which is also electrically connected; normally the two contacts touch each other but when a card is placed between them it separates them and breaks the circuit; when the card is removed the spring contact springs against the other contact and the circuit is completed and an alarm sounded.

The construction shown in Fig. 3 is for charms and the like; it comprises a plate J through which passes one end of a spring arm *j* which end is preferably coiled as seen and its portion beneath the bottom of the tray extends for a short distance along said bottom and is electrically in circuit. J′ is the other contact secured to the bottom of the tray upon the under side and with which the spring arm is normally in contact and the circuit completed; when the charm is placed upon

the bent or coiled end and between the same and the plate J it draws the bend of the spring arm away from the contact J′ and breaks the circuit; when the charm is removed the spring arm flies back into contact with the contact J′ and completes the circuit and sounds the alarm.

Another form is shown in Fig. 4 in which a spring arm L is employed which is secured to the bottom of the tray at one end and its other end is split to form a tongue L′ which is extended down through a hole in the bottom of the tray and upon the under side is bent at right angles as seen at *l* and normally is in contact with the wire or contact M, but when an article is placed upon the upper face of the spring arm this tongue is depressed and forced away from its contact and the circuit broken to be completed and the alarm sounded upon the withdrawal of the article. A spring O extended across the top of the tray at right angles to the spring arm is preferably employed as shown to keep the article in contact with the spring arm and to force the latter downward in case the article is not of sufficient weight to accomplish that result.

The above are but some of the various forms which I have devised or which may be devised for carrying out my invention, but they are deemed sufficient to illustrate the principle and to show that I can operate upon either an open or a closed circuit; the kind of circuit depending upon the style or retainer used as will of course be readily understood.

What I claim as new is;—

1. The combination with the show case tray, of a fixed contact and a movable contact arranged to clasp an article between them and the movable contact to be actuated by the article being held and to sound an alarm automatically when such article is removed, substantially as specified.

2. The combination with a show-case-tray, of a fixed contact, and a contact movable with relation to the fixed contact and arranged to be actuated by the article being held and to sound an alarm when such article is removed, and a supplemental spring at right angles to the movable contact for retaining the article upon the movable contact, as set forth.

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

RUDOLPH C. KRUSCHKE.

Witnesses:

AUSTIN N. MCGINDLEY,

LEO BALL.