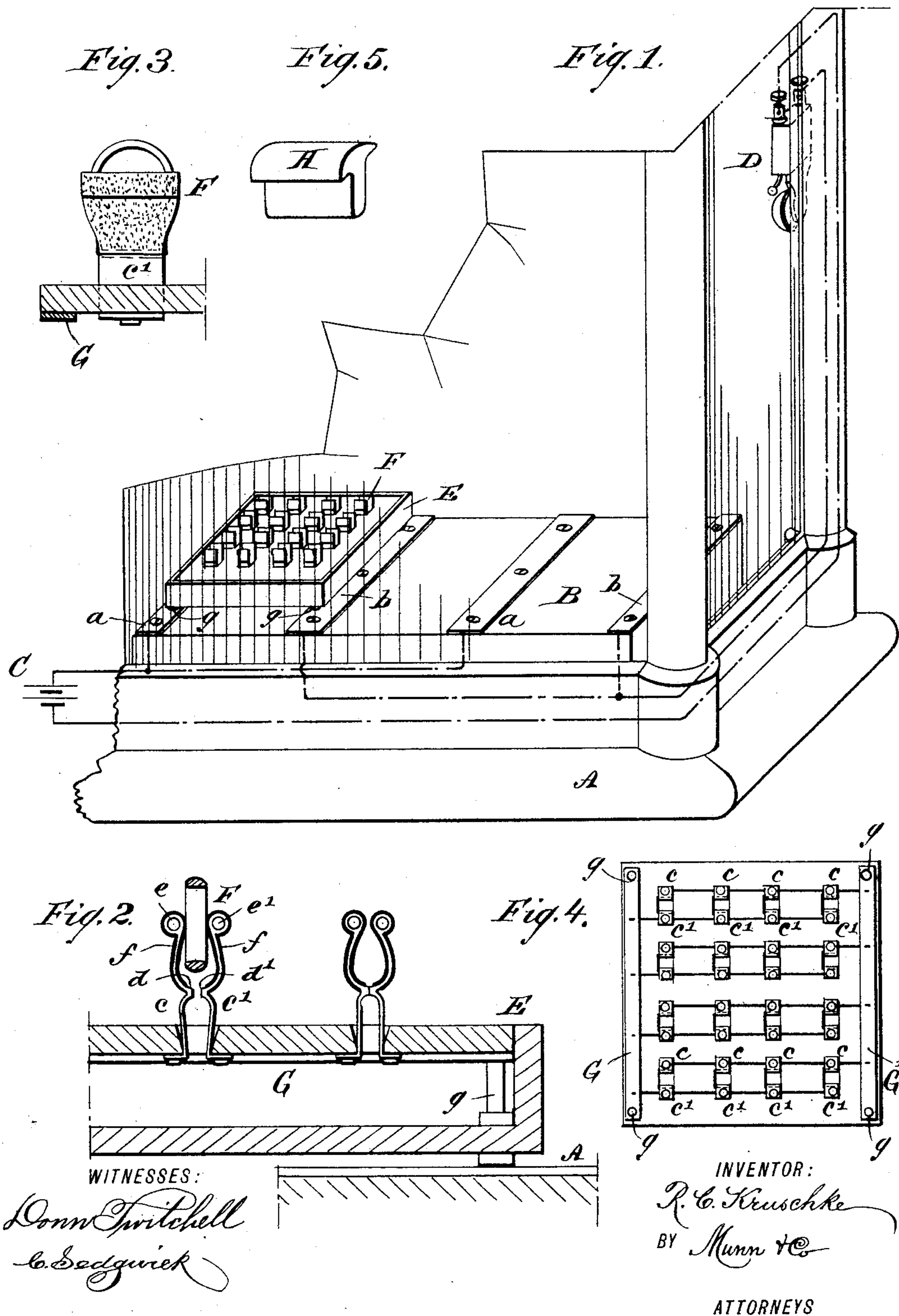


(No Model.)

R. C. KRUSCHKE.
ELECTRIC SHOW CASE ALARM.

No. 460,019.

Patented Sept. 22, 1891.



UNITED STATES PATENT OFFICE.

RUDOLPH C. KRUSCHKE, OF DULUTH, MINNESOTA.

ELECTRIC SHOW-CASE ALARM.

SPECIFICATION forming part of Letters Patent No. 460,019, dated September 22, 1891.

Application filed December 1, 1890. Serial No. 373,107. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH C. KRUSCHKE, of Duluth, in the county of St. Louis and State of Minnesota, have invented a new and Improved Electric Show-Case Alarm, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a perspective view showing a portion of the show-case with my improvement attached. Fig. 2 is an enlarged longitudinal section of a portion of the tray. Fig. 3 is an enlarged side elevation of one of the spring-clips for holding jewelry. Fig. 4 is an inverted plan view of the tray, and Fig. 5 is a perspective view of a plug for holding the clips open.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to provide a simple and effective electrical alarm for attachment to show-cases, for detecting the absence of an article from the tray of the show-case.

My invention consists in the combination, with the case provided with a number of metallic strips upon the floor thereof, of one or more trays provided with spring-clips for holding articles, the said spring-clips being connected electrically in multiple arc and held open by the articles contained by the tray, the tray being furnished with contact-points bearing on the metallic strips on the floor of the show-case, and the metallic strips being in the circuit of a battery, in which is included an electric alarm-bell, all as will be hereinafter more fully described.

The show-case A is of the ordinary construction, except that its floor B is provided with a number of metallic strips *a b*, which alternate with each other, the strips *a* being connected with one pole of a battery C, and the strips *b* being connected with the other pole of the battery through the electric bell D. The tray E, which is designed to contain the articles displayed in the show-case, is furnished with a number of spring-clips F, each formed of a pair of curved springs *c c'*, extending upwardly from the top of the tray and provided with contact-points *d d'* and with rounded ends *e e'*. The springs *c c'* are oppositely arranged with respect to each other, and their upper ends, as far down as the contact-points, are provided with a covering *f* of plush,

leather, or other insulating material. The top of the tray upon its under surface is provided at opposite ends with metallic strips G G'. The strip G is connected electrically with all of the springs *c'* of the tray, and the strip G' is connected electrically with all of the springs *c*, thus connecting all the springs in multiple arc.

When the clips F are all filled, the contact-points *d d'* are separated and prevented from touching, as shown in Fig. 2; but when an article is removed from any one of the clips, the contact-points *d d'* come together and close the electric circuit of the tray, so that when the tray is replaced in the case A and the studs *g*, projecting from the strips G G', touch the strips *a b*, the circuit of the battery C will be closed and the bell B will give an alarm, showing that an article is absent from one of the clips.

Where the goods to be displayed are insufficient to entirely fill the tray, blocks H are inserted in the vacant clips, thus keeping the points *d d'* out of contact.

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

1. The combination, with a show-case tray, of two similar spring-clips oppositely arranged with respect to each other, and supports adapted to hold articles for display and constructed to form an electrical contact with each other when the articles are removed from the clips, substantially as specified.

2. The combination, with a show-case, of an electric alarm, a battery, and a removable tray provided with circuit-closing devices adapted to be operated automatically when articles are removed from the tray, and electrical connections with the tray whereby the alarm is given when the tray is replaced in the show-case, substantially as specified.

3. The combination, with the show-case A and tray E, of the alarm-bell B, the metallic strips *a b*, the battery C, the clips F, contained by the tray and adapted to hold articles for display, and the wires connecting the strips *a b* with the battery C, substantially as specified.

RUDOLPH C. KRUSCHKE.

Witnesses:

JOSEPH B. COTTON,
HOMER B. DIBELL.