

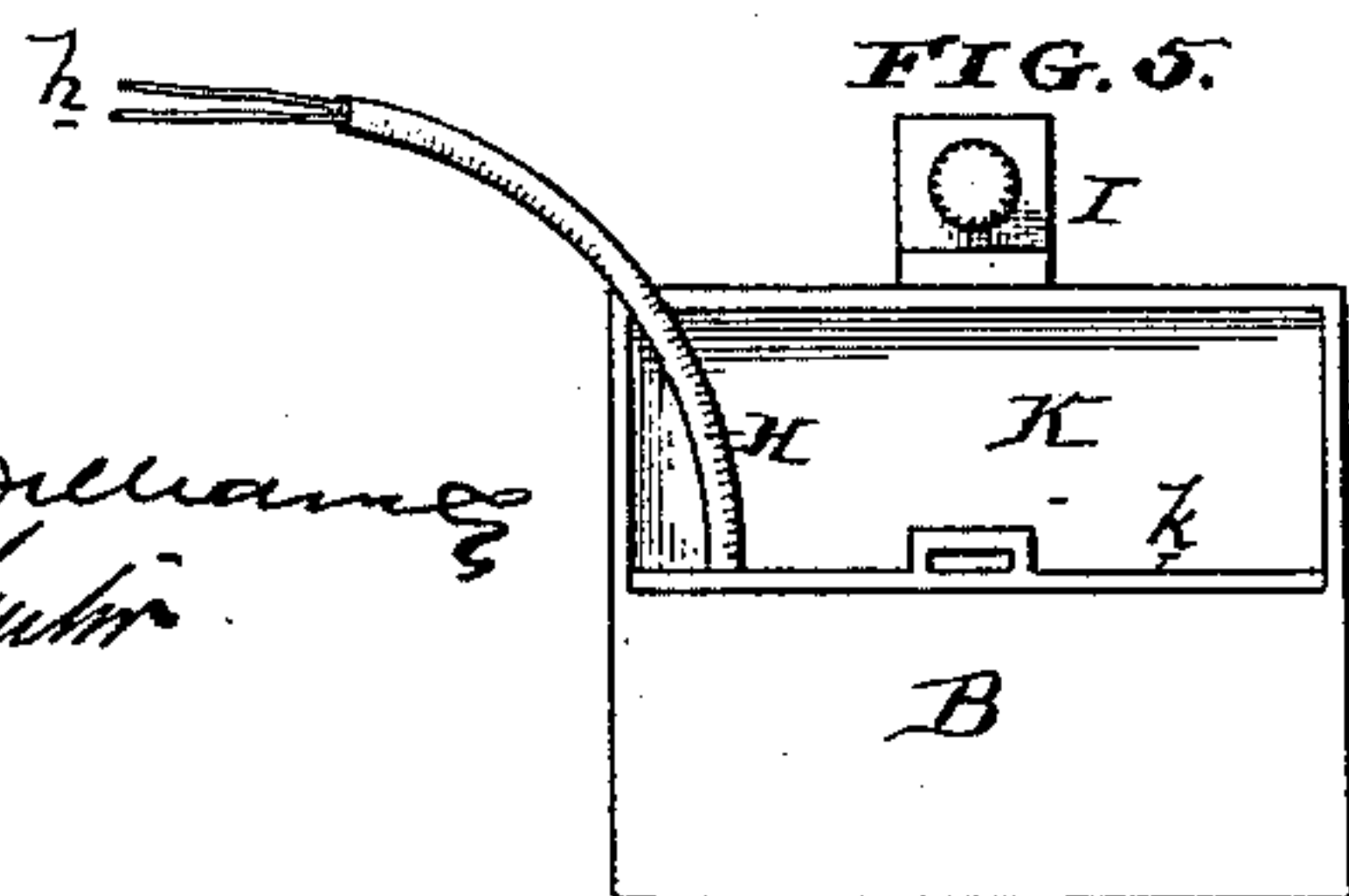
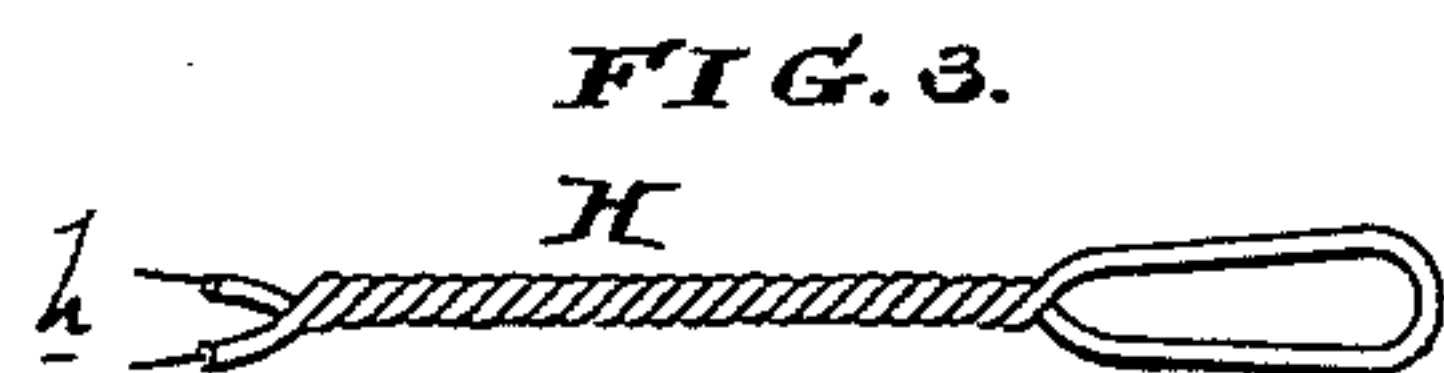
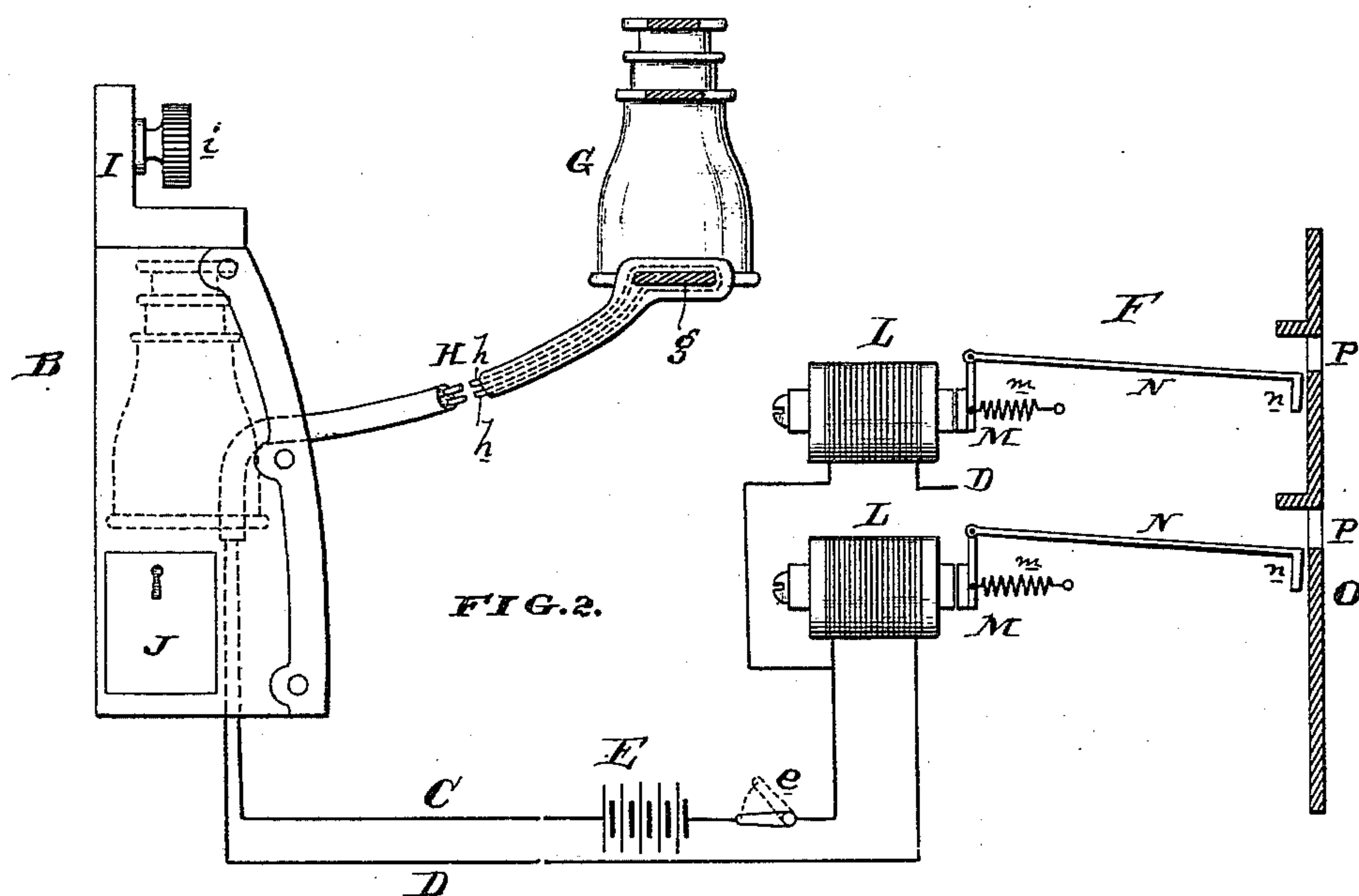
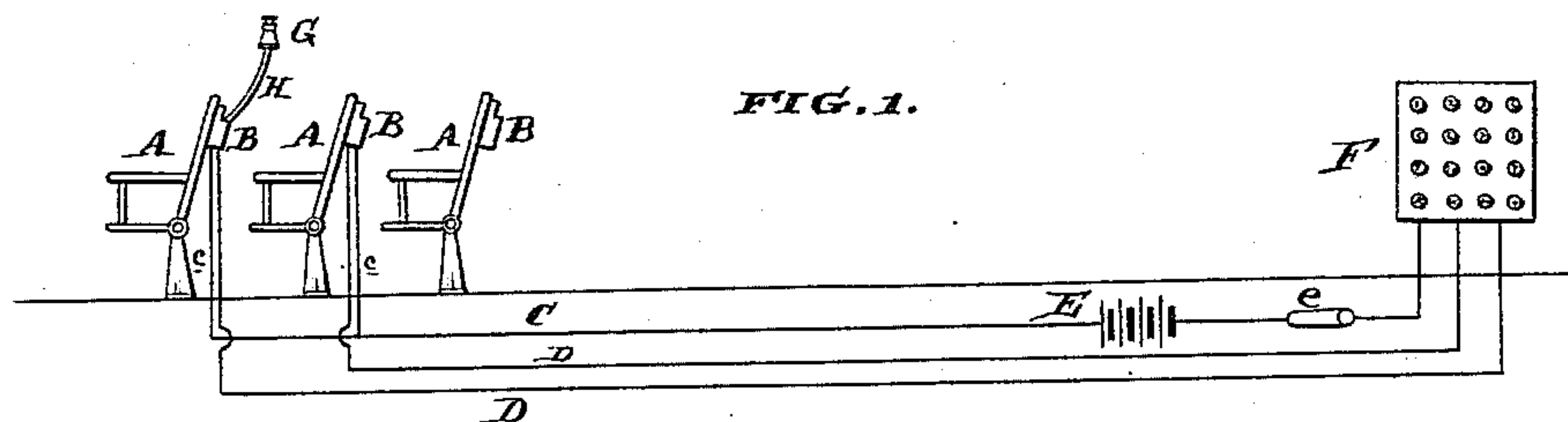
(No Model.)

W. J. HOWEY.

ELECTRIC DETECTING APPARATUS FOR COIN ACTUATED BOXES.

No. 420,070.

Patented Jan. 28, 1890.



WITNESSES:

David S. Williams
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UNITED STATES PATENT OFFICE.

WILLIAM J. HOWEY, OF NEW YORK, N. Y.

ELECTRIC DETECTING APPARATUS FOR COIN-ACTUATED BOXES.

SPECIFICATION forming part of Letters Patent No. 420,070, dated January 28, 1890.

Application filed September 5, 1889. Serial No. 323,076. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. HOWEY, of the city and county of New York, State of New York, have invented an Improvement in Electric Detecting Apparatus for Coin-Actuated Boxes, of which the following is a specification.

My invention has reference to detecting-indicators for opera-glass-dispensing boxes adapted for use in theaters; and it consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

Various methods have been employed for loaning opera-glasses to persons in the audience upon the deposition of a given piece of money, which, by means of suitable devices, operate a lock to release the cover of the receptacle containing the glasses, and such glasses have been usually connected to the box by means of a chain. When not connected, they were liable to be stolen; but when connected the chain was always considered an objectionable feature.

My invention is designed to overcome the existing objections as far as possible by providing unobtrusive means to connect the opera-glasses with the receptacle, and also suitable mechanism to indicate at the office or at some particular place whether or not any of the opera-glasses have been freed or disconnected from the retaining-guard by which they are connected to the box.

In carrying out my invention I provide the box with a flexible electric guard or cord of any suitable construction inclosing within two insulated wires, which encircle some permanent part of the opera-glasses in the form of a loop. These wires may be very fine or composed of a series of hair-wires twisted together, constituting what is commonly known as "flexible conductors." These wires at a point within the box are connected to outgoing and return conductors extending preferably below the floor of the theater, and including a battery and electro-magnet, which latter is located at some distant place, and is adapted to operate an indicator. All of the circuits from the various boxes meet in the same indicator, and an observer before the

said indicator can by a glance ascertain at once whether or not any of the opera-glasses have been severed from the electric guard or cord, and if so which one—that is, from what seat of the theater such opera-glass has been removed. By this means it is evident that the connecting guard or cord between the opera-glasses and the box might be very small and unobjectionable, and yet the proprietor of the glasses need have less fear of the glasses being successfully stolen than if a heavy and more bulky chain were employed. In practice but a single battery is employed for all the circuits of the building. The coin-actuated box has its function in preventing access to the glasses until after the deposition of the money; but this specific construction is not the subject-matter of this application.

In the drawings, Figure 1 is a diagram illustrating the application of my invention to a theater. Fig. 2 is an enlarged view of the apparatus directly constituting my invention. Figs. 3 and 4 show a modified construction of guards and cords at the looped ends; and Fig. 5 is a front elevation of the box for the opera-glasses, with the door open and the guard of the opera-glasses cut off.

A are the seats.

B are the coin-actuated boxes in which the opera-glasses are placed.

G are the opera-glasses.

H are the electric guards or cords leading to the glasses and extending from the interior of the box, as shown in Figs. 2 and 5. This guard or cord consists of any flexible covering and two insulated wires *h*, which are looped at their outer ends around the cross-bar *g* of the opera-glasses, as shown in Fig. 2.

The guards or cords I term "electric guards or cords," because they convey current, and also mechanically act as a guard or retaining-cord.

In Figs. 3 and 4 are shown modified constructions of this guard or cord. In Fig. 3 it consists of an insulated wire looped and twisted upon itself, while in Fig. 4 an insulated wire is looped upon itself and then covered with a textile covering. The boxes B have sliding doors *k*, which are locked, when raised, by a lock I, operated by means of a coin deposited in its upper portion. After op-

erating the lock the coin drops into the drawer J.

K is the interior chamber of the box, in which the opera-glasses are placed, as indicated in dotted lines in Fig. 2, and are held therein until the door *k* is liberated by the deposition of the money and the operation of the handle *i*. The wires *h* of the guard or cord H connect, respectively, with the supply-conductor C and the return-conductor D. In the supply-conductor C is located a battery E and a switch *e* for putting the battery in or out of circuit. The distant ends of the circuits C and D include an electro-magnet L, which attracts an armature M against the action of the spring *m* and actuates a long arm N and an indicator-plate *n*, carried thereby. Arranged in front of the indicator-plate *m* is a rigid plate O, having perforations or openings P. When the armature M is attracted by the magnet, it lowers the plates *n*, so that they are not seen from the front of the indicator F. However, if the circuit CD is broken by severing the guard H, then the spring *m* withdraws the armature M, and the arm N lifts the plate *n* into position in line with the opening P in the plate O, exposing the number or mark arranged upon the face of the plate *n*, and thereby indicating to the manager or person in charge which opera-glass has been severed from its connection with the box.

In practice, the circuit C would be provided with branches *c*, leading to the various boxes, as indicated in Fig. 1; but each of said boxes would have to have its own return-wire D. In the same manner all of the various electro-magnets L would have one terminal connected with the said circuits C, whereas their other terminals would be connected to the different boxes.

It is immaterial to my invention what particular construction of coin-actuated boxes is employed or what particular construction of indicator is used, as it is evident that a variety of forms might be used, all of which would embody the same general features. I therefore do not limit myself to the exact construction herein set out, as the same may be modified without departing from the spirit of the invention.

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

1. The combination of a coin-actuated box with a pair of opera-glasses and a connecting flexible electric guard or cord containing a conductor and connecting said glasses to said box, and an electric indicator in circuit with said conductor.

2. The combination of a coin-actuated box with a pair of opera-glasses and a connecting flexible electric guard or cord containing a conductor and connecting said glasses to the interior of said box through the doorway for the passage of the glasses, whereby both the guard and glasses may be readily inserted or

removed from the box, and an electric indicator in circuit with said conductor.

3. The combination of a pair of opera-glasses, an electric indicator, an electric circuit including the indicator and encircling a portion of the opera-glasses, so as not to be detachable without cutting the circuit, and a source of electric energy in said circuit.

4. The combination of a pair of opera-glasses, an electric indicator, an electric circuit including the indicator and encircling a portion of the opera-glasses, so as not to be detachable without cutting the circuit, a switch for opening or closing the circuit, and a source of electric energy in said circuit.

5. The combination of a chair, an indicator located at a distance from said chair, fixed circuits leading from the indicator to the chair, a source of electric energy in said circuits, a pair of opera-glasses, and a flexible electrical connection between the two circuits, terminating in the chair and inclosing a fixed portion of the opera-glasses.

6. The combination of a coin-actuated box, a pair of opera-glasses connected thereto by a flexible electric conductor, an electric indicator, a circuit leading from the conductor at the box to the indicator, and a source of electric energy for said circuit.

7. The combination of a coin-actuated box, a pair of opera-glasses removable therefrom, a flexible guard or cord connecting the glasses to the box, provided with an outgoing and return circuit, and electric apparatus for indicating when said circuits in the guard or cord are severed.

8. The combination of a series of opera-glasses arranged at distances apart, an electric indicator common to all of the opera-glasses, a branching electric circuit leading from the indicator to all of the opera-glasses and including a source of electric energy, and a separate return-circuit leading from each opera-glass to the indicator, whereby each opera-glass has its own complete circuit.

9. The combination of a series of coin-actuated boxes, a corresponding series of electro-magnets of an indicating apparatus, a pair of opera-glasses for each box and connected thereto by a flexible looped electric conductor, a circuit including one terminal of all of the electro-magnets and one terminal of all of the looped conductors, a source of electric energy for said circuit, a series of separate circuits connecting the other terminals of the looped conductors with the other terminals of the corresponding electro-magnets, and indicating-armatures for said electro-magnets.

10. The combination of a series of coin-actuated boxes, a corresponding series of electro-magnets of an indicating apparatus, a pair of opera-glasses for each box and connected thereto by a flexible looped electric conductor, a circuit including one terminal of all of the electro-magnets and one terminal of all of the looped conductors, a source of electric energy for said circuit, a series of separate circuits

connecting the other terminals of the looped conductors with the other terminals of the corresponding electro-magnets, a switch to open or close all of the circuits, and indicating-armatures for said electro-magnets.

11. The combination of a long flexible electric guard or conductor flexibly connected at one end and containing two insulated electric conductors forming a continuous circuit looped at the free end of the guard, a pair of opera-glasses which object to be handled, having a portion thereof extending through the

loop of the conductors of the electric guard, and an electric indicator electrically connected to the fixed ends of the conductors, actuated by the current in the conductors of the electric guard. 15

In testimony of which invention I have hereunto set my hand.

WILLIAM J. HOWEY.

Witnesses:

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F. A. HOLBROOK.