No. 700,585. Patented May 20, 1902.

D. VIAL, FILS.

ELECTRIC ALARM.

(Application filed July 31, 1901.)

(No Model.)

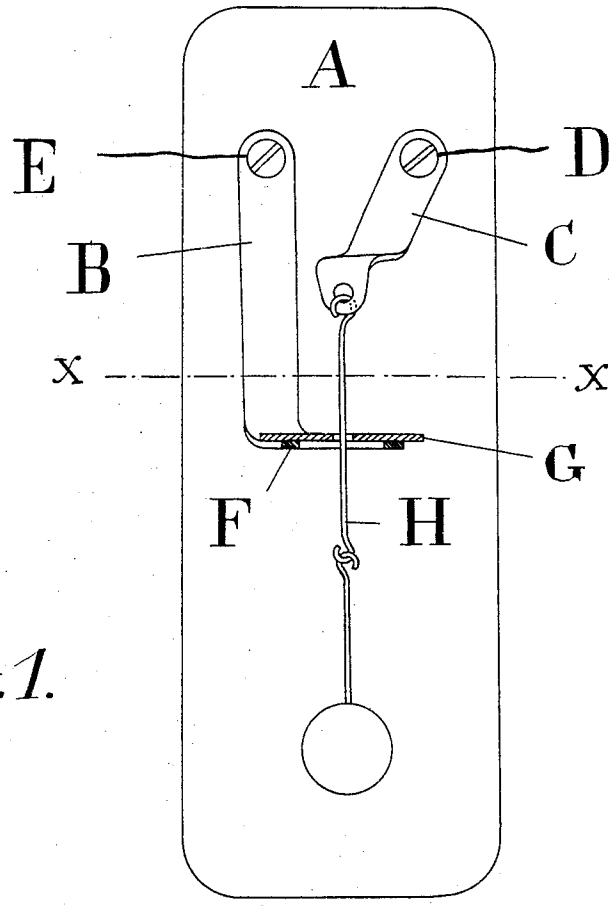


Fig. 1.

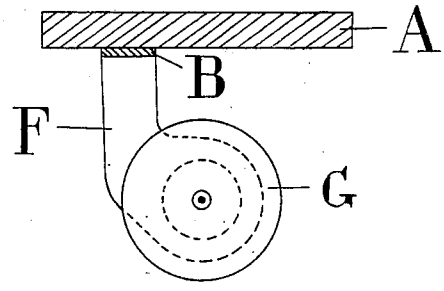


Fig. 2.

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UNITED STATES PATENT OFFICE.

DENIS VIAL, FILS, OF LYONS, FRANCE.

ELECTRIC ALARM.

SPECIFICATION forming part of Letters Patent No. 700,585, dated May 20, 1902.

Application filed July 31, 1901. Serial No. 70,331. (No model.)

To all whom it may concern:

Be it known that I, DENIS VIAL, Fils, a citizen of the Republic of France, residing in Lyons, France, have invented certain new and useful Improvements in Circuit-Closing Devices, of which the following is a specification.

This invention relates to circuit-closing devices adapted for use especially in electric burglar-alarm systems; and the object of the invention is to provide a device of this class which may be applied to the door or other movable part of the building, which operates by the swinging of a pendulum, which does not require great care in setting up, and which is not affected by sagging of the door or other displacement, which is simple and reliable in action, and which automatically cuts off the current after use. For this purpose the invention consists in the combination of two contact-pieces, one above the other, a washer, of conducting material, supported on the lower contact-piece, and a compound pendulum suspended from the upper contact-piece, the upper member of said pendulum being made of conducting material and passing through said washer and the lower member being connected thereto below the washer.

In the accompanying drawings, Figure 1 is a front view; and Fig. 2, a section on line *x x*, Fig. 1, of a circuit-closer constructed according to my invention.

Similar letters of reference indicate corresponding parts.

In the drawings, A indicates the base or support, and B C the lower and upper contact-pieces, respectively, said base being made of insulating material and the contact-pieces of conducting material. The conducting-wires D E of the electric circuit are connected in any suitable manner to the contact-pieces. The contact-piece B has a horizontal portion F with an opening located below the upper contact-piece C, and from said upper contact-piece is suspended a compound pendulum, of which the upper member H is made of conducting material and passes through said opening and through a smaller opening of a washer G, also of conducting material, supported freely movable on the part F. The lower member of the pendulum is pivoted to the upper member H below the washer and carries the pendulum-bob.

The device is applied to the door or other movable part of the building by screwing the base A thereto. The motion of the door upon opening causes the pendulum to swing, whereby the upper member H is brought into contact with the washer, the circuit being thereby closed momentarily and passing in the course E B F G H C D. Upon the return swing of the pendulum the current is interrupted momentarily while the member H is passing across the the opening of the washer, and when said member contacts with the other side of the washer the circuit is again established. As the pendulum swings from side to side the circuit is thus intermittently opened and closed.

The compound pendulum secures the longer contact at each closing of the circuit than would be the case if a simple pendulum having a continuous rigid rod were employed. When approaching rest, the washer is automatically left in central position relatively to the pendulum-rod, the oscillations becoming so short that the pendulum-rod does not contact with the washer, whereby the circuit is permanently broken, the pendulum finally coming to rest and hanging centrally through the hole in the washer.

It is obvious that when applying the device to the door great care is not necessary, as it is not required that the device be applied in absolutely vertical position, as the pendulum when once set in motion and allowed to come to rest automatically centers the washer, so that the circuit is broken when the pendulum is at rest. Sagging of the door or any slight displacement of the device from any cause does not affect its operation in the least, and the same furnishes a simple and reliable means of closing the circuit of electric burglar-alarms.

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

A circuit-closing device, consisting of two contact-pieces, one above the other, a washer of conducting material supported on the lower

contact-piece, and a compound pendulum suspended from the upper contact-piece, the upper member of said pendulum being made of conducting material and passing through said washer and the lower member being connected thereto below the washer, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

DENIS VIAL, FILS.

Witnesses:

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