(No Model.)

C. H. PERKINS.

Electric Annunciator.

No. 227,704. Patented May 18, 1880.

Fig 1

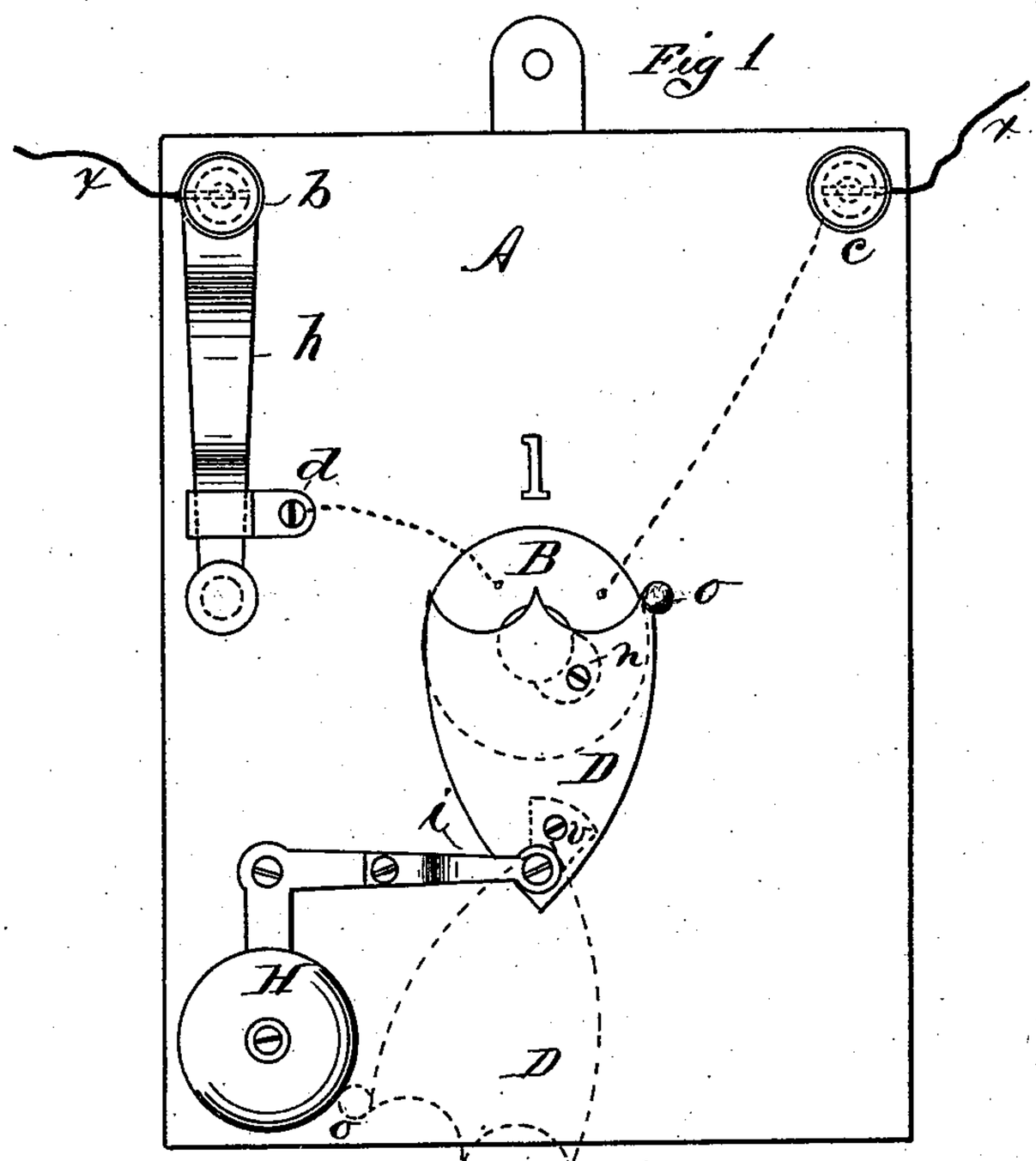
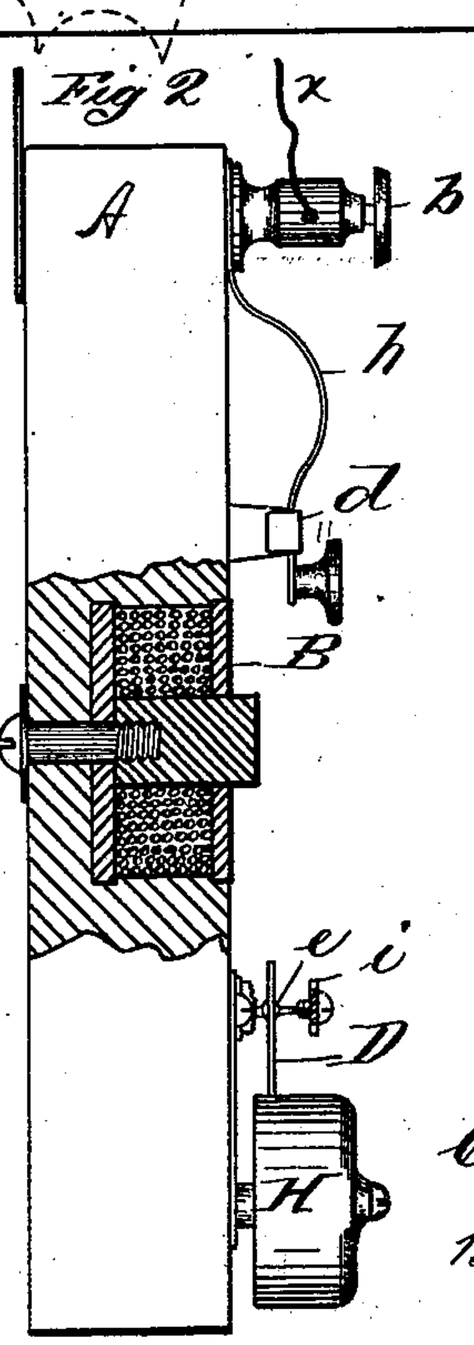


Fig 2



Witnesses
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UNITED STATES PATENT OFFICE.

CLAYTON H. PERKINS, OF HOLYOKE, MASSACHUSETTS, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO HENRY THOMAS, OF SAME PLACE.

ELECTRIC ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 227,704, dated May 18, 1880.

Application filed March 10, 1880. (No model.)

To all whom it may concern:

Be it known that I, CLAYTON H. PERKINS, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Electro-Magnetic Annunciators, of which the following is a specification.

My invention relates to that class of annunciators, used in hotels and other similar places, which are operated by electric impulses; and the object of my invention is the production of an improved annunciator of this class which is operated by a weak current of electricity, which causes an alarm-bell to be rung otherwise than by the action of an electric current upon vibrating armatures, and which is of simple and inexpensive construction.

I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation, showing a portion of an annunciator-case and the parts connected with a single annunciator. Fig. 2 is an edge elevation of said portion of a case, partly in section, and showing the annunciator-plate disengaged from the magnet.

In annunciators of this class as heretofore constructed their operation has required quite a strong electric current, as well for disengaging the annunciator-cover as for ringing the bell, and the failure to maintain a current of considerable strength would result in rendering the apparatus inoperative; also, the construction of such annunciators has been comparatively expensive.

My improved construction, as herein shown and described, is adapted to be controlled by a very weak electric current, is effective in its operation, and can be constructed at small expense.

The case part A is adapted to the reception, within a cavity formed in one side of it, as shown, of an electro-magnet, B, consisting of a single short bobbin and core, as seen in Fig. 2, said bobbin being secured within said cavity by a screw through the back of said case, as shown. The bobbin is adapted to fill said cavity, leaving the outer end of the core of the magnet to project somewhat beyond the face of the case. The ends of the wire wound upon the magnet B are led therefrom, one to a connection-post, *c*, as shown by a dotted line, Fig. 1, and one to a hook, *d*, (shown also by a dotted line on the same figure.) Said hook *d* is secured to the face of case A, and projects therefrom, as seen in Fig. 2. Secured on case A, beneath a second connection-post, *b*, is a spring-lever, *h*, its end having a press-button on it, as shown, and resting against the under side of hook *d*. To the posts *b c* are connected the line-wires *x x*. Below the magnet B, on case A, is pivoted the annunciator-plate D, adapted to oscillate in a plane parallel to the face of case A, on a pivot, *e*, which passes through the lower end of said plate D, and is secured between a suitable bearing-point on the face of case A and an arm, *i*, reaching out from said case. On an upper corner of plate D is fixed a ball, *o*, and fixed on its face next to the magnet B is a metallic block, *n*, and near its lower end, a little to one side of the center, is fixed a second metallic block, *v*. (Both shown in dotted lines in Fig. 1.) Located on the face of case A, in such a position that plate D, swinging on its pivot *e*, will strike against it and cause it to ring, is a bell, H.

The operation of my annunciator is as follows, viz: Connection is made with a battery by the line-wires *x*, and the course of the current of electricity is through post *c*, thence around the magnet B to hook *d*, through spring-lever *h*, to post *b*, to the line-wire. This connection having been made, if plate D be swung up into the position shown in Fig. 1, bringing block *n* against the side of the projecting end of the core of the electro-magnet B, magnetic attraction will cause plate B to remain in said upright position so long as the said circuit remains unbroken; but if the end of lever *h* be pushed away from its contact with hook *d* the magnetic current is interrupted, and plate D drops instantly away from magnet B, swinging with considerable force on its pivot *e*, and, striking bell H, causes it to ring and call attention to the annunciator; but if said bell be not heard the position of plate D, hanging away from the magnet, would indicate a call. The position of blocks *n* and *v* on plate D, one

side of its vertical center line, and the ball *o*, which strikes against the bell, all assist to make the fall of said plate quite rapid enough to cause it to ring bell H distinctly.

The nicely-balanced position of plate D on its pivot, when held against the magnet in an upright position, requires but a very slight magnetic current, and insures the proper operation of the annunciator at the slightest interruption thereof.

The manner of breaking the circuit herein shown illustrates substantially a circuit-breaker which may be located and operated at any convenient point on a line with which my annunciator may be connected.

The plate D may be hinged in front of magnet B, and adapted to fall away therefrom upon breaking the circuit instead of oscillating, as shown, in a plane at right angles to the axial line of the bobbin B.

What I claim as my invention is—

1. The combination, with the plate D, adapted to swing away from magnet B when the electric current is interrupted, of the bell H, substantially as and for the purpose described.

2. The combination of the electro-magnet B, consisting of a single bobbin, the plate D, and the bell H, substantially as and for the purpose set forth.

CLAYTON H. PERKINS.

Witnesses:
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