

(No Model.)

J. KING.
ELECTRIC ANNUNCIATING PUSH BUTTON.
No. 494,337. Patented Mar. 28, 1893.

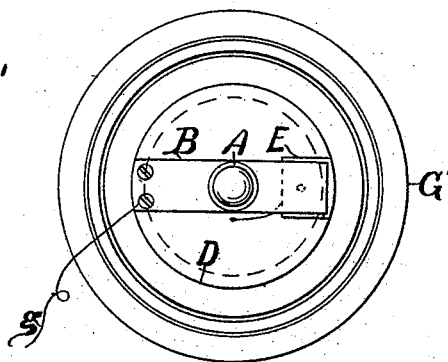
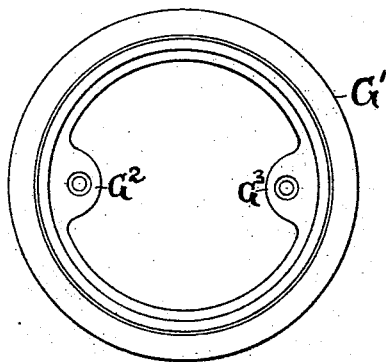
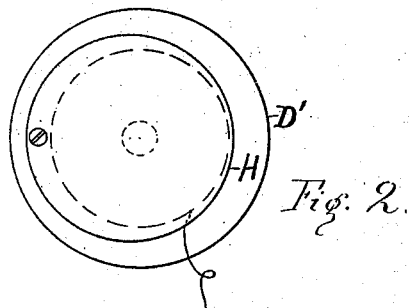
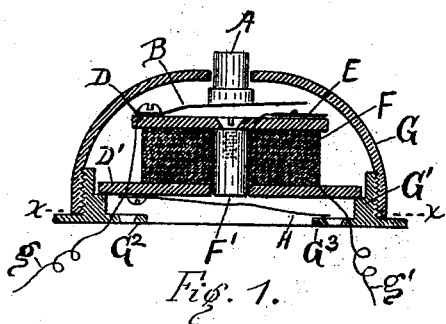


Fig. 3.

Fig. 4.

Witnesses
Walker Wagner
Wm Zimmerman

John King Inventor
By his Attorney W.B. Mortimore

UNITED STATES PATENT OFFICE.

JOHN KING, OF CHICAGO, ILLINOIS.

ELECTRIC ANNUNCIATING PUSH-BUTTON.

SPECIFICATION forming part of Letters Patent No. 494,337, dated March 28, 1893.

Application filed June 24, 1892. Serial No. 437,853. (No model.)

To all whom it may concern:

Be it known that I, JOHN KING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented certain new and useful Improvements in Electric Annunciating Push-Buttons; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying
10 drawings and letters of reference marked thereon, making a part of this specification.

The object of my invention is to provide a simple and practical electric annunciating push-button whereby when the bell rings a
15 vibratory sound in the push-button will announce the fact to the person using the same.

In the accompanying drawings Figure 1 is a vertical central section of my annunciating push-button. Fig. 2 is a view from the
20 bottom in line *xx* of Fig. 1. Fig. 3 is a top view of the base of the case or cover of my improved push-button with the contents and cap or top part of the cover removed. Fig.
25 4 is a top view of my improved push-button with the cap or top part of the cover removed.

Similar letters indicate like parts in all the figures.

In the construction of my improved push-
30 button A, is the button or push, adapted to be depressed for the purpose of closing the electric circuit.

B is the contact spring supporting the button A and is attached at one end to the insulating head D, and connected to one of the
35 wires of the circuit.

E is the contact point connected to the other wire of the circuit; D, an insulating head of the magnet, F, being an electro-magnet constructed in the usual manner; D', an
40 insulating head of the magnet F, adapted to support the same, and being supported at the outer edge by the base piece G', forming part of the casing or cover G G'.

45 F' is the core of the magnet F, extending through the insulating head D'.

H is the armature of the magnet F, and is preferably made of sheet iron in the form of

a disk and attached at one side to the insulating head D', and having sufficient spring
50 to retract the same from contact with the magnet core when the circuit is broken.

It is obvious that the manner of constructing the armature is not material, but that it may be in any suitable form adapted to the
55 purpose.

g g' are the wires of the circuit.

G is the top or cap of the covering or case, and G' is the base of the same, adapted to support the whole in position and to be attached to a wall, or wherever desired, by
60 means of the screw lugs G² G³.

The operation of my improved annunciating push-button is as follows: The button A being depressed causes the spring B to connect with the contact point E, thereby closing the circuit and placing the electro-magnet F in circuit with the bell. The closing and breaking of the circuit occasioned by the action of the bell cause the armature H
70 to be attracted by the magnet F and retracted synchronously with the movements of the bell, thereby producing a buzzing sound which will indicate that the bell is ringing, although it may not be within hearing distance.
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Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an electric annunciating push-button the combination of a base piece adapted to support an electro-magnet, an electro-magnet supported thereby in the line circuit, spring terminals mounted upon said magnet, a button for closing said terminals, and an armature for said magnet located within said base piece and adapted to produce a resonating sound when caused to vibrate by a make and break device in the same circuit, substantially as described.
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2. In an electric annunciating push-button the combination of a base piece provided with a recess, and a shoulder adapted to receive and hold secure the insulating head of an electro-magnet, and an electro-magnet supported thereby in the line circuit; spring
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terminals mounted thereon, a button for closing the terminals, an armature for said magnet located within the recess of said base piece and adapted to vibrate synchronously
5 with an electric bell in the same circuit, substantially as described.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses,

JOHN KING.

Witnesses:

LEWIS K. CURLETT,
JOHN P. BOWMAN.