No. 647,071. Patented Apr. 10, 1900.

R. H. BOARDMAN.

ELECTRIC INDICATOR FOR DOORS.

(Application filed Oct. 12, 1898.)

(No Model.)

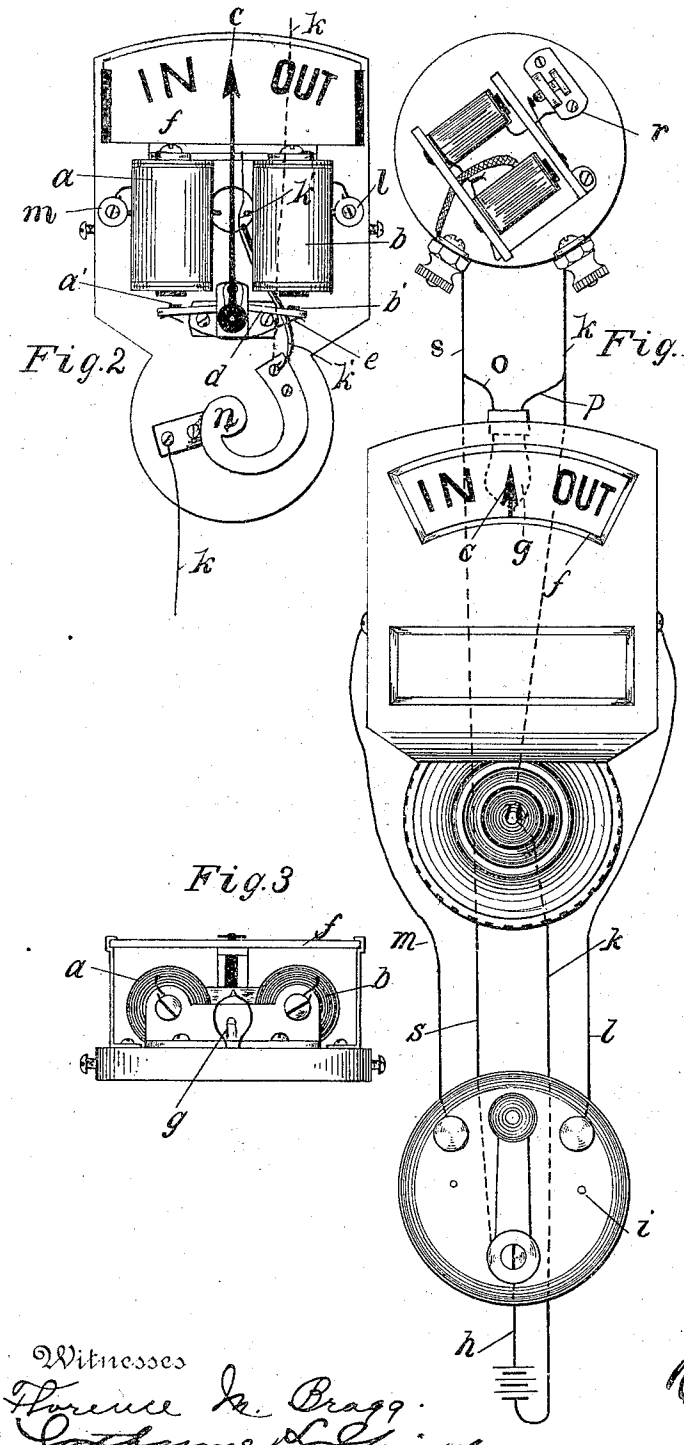


Fig. 2

Fig. 1

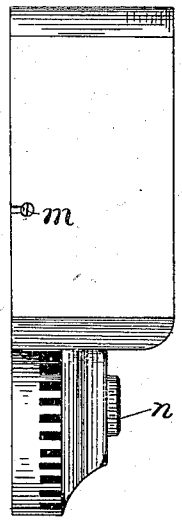


Fig. 4

Fig. 3

Witnesses
Florence M. Bragg.
Catharine L. Quinn.

Inventor
Ralph H. Boardman
by W. E. Simonds
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

RALPH H. BOARDMAN, OF NEW BRITAIN, CONNECTICUT.

ELECTRIC INDICATOR FOR DOORS.

SPECIFICATION forming part of Letters Patent No. 647,071, dated April 10, 1900.

Application filed October 12, 1898. Serial No. 693,302. (No model.)

To all whom it may concern:

Be it known that I, RALPH H. BOARDMAN, a citizen of the United States of America, residing at New Britain, in the county of Hartford and State of Connecticut, have invented a certain new and useful Improvement in Electric Indicators for Doors and the Like, of which the following is a description, reference being had to the accompanying drawings, wherein—

Figure 1 is a face view of a construction embodying said improvement. Fig. 2 is a face view of the two electromagnets made use of, the pivoted pointer, and parts immediately adjacent thereto, with the cover or front plate removed. Fig. 3 is a lower end view of the parts shown in Fig. 2. Fig. 4 is a side view of the box or case which incloses or covers the electromagnets and of the "button" or circuit-closer.

The object of the improvement is the production of an improved electric indicator for doors or the like, adapted to indicate when operated such facts as that the occupant of the room is in or out and the like.

In the accompanying drawings the letters *a* and *b* respectively denote two electromagnets adapted to be energized at proper times, as hereinafter indicated.

The letter *c* denotes a pivoted pointer. Its shaft carries the lever *d*, which in turn carries the two armatures *a'* and *b'*.

The letter *e* denotes a spring whose tendency is to hold the pivoted pointer to a position midway between the two electromagnets.

The letter *f* denotes a plate which bears suitable words—such, for instance, as the word "In" and the word "Out." It will be readily understood that when the pointer points to "In" it is intended to indicate to the observer that the occupant of the room is within, and when the pivoted pointer points to the word "Out" it is intended to indicate to the observer that the occupant of the room is not within. This plate is transparent or translucent, behind which is a small incandescent lamp *g*, branched from the main circuit by wires *o* and *p*, intended to be energized whenever either of the electromagnets is energized, that its light at such times may shine through the plate.

The letter *h* denotes a wire adapted to convey electric energy from a suitable source of such energy to the switch *i*, beyond which the main-line wire is lettered *s*. Said switch is intended to be upon the inside of the door and to be adjusted to the "in" circuit or "out" circuit by the occupant of the room in accordance with the facts.

The letter *k* denotes the return-wire of the circuit.

The letter *l* denotes a wire adapted to convey the electric energy from one contact of the switch to the "in" electromagnet, and the letter *m* denotes a wire adapted to convey the electric energy from the other contact of the switch to the "out" electromagnet. The circuit is intended to be closed by him who approaches the door by pressing upon the button or circuit-closer *n*, let into the return-wire *k*, and it will be readily understood from what follows that when the circuit is closed by pressing upon this button the pointer will be vibrated to indicate "in" or "out," as the occupant of the room may have adjusted the switch.

Should the switch-arm be thrown to contact with the wire *m*, the current will flow from the battery to the switch through the wire *m* and magnet *a*, (thus causing the indicator to point to "Out,") from the magnet through the wire *k'* to the button *n*, and, this being closed, back to the battery by the wire *k*. Only part of the current takes this course. The remaining part goes from the switch through the wire *s* direct to the buzzer *r* and back along the wire *k* through the button to the battery. As long as the button *n* is closed the buzzer or signal will ring and the light *g* will burn, since both are in the circuit above the push-button.

I claim as my improvement—

1. In an annunciator, the combination with two electromagnets, a pointer moved by the armatures, a casing surrounding said magnets and having a translucent or transparent plate over which the pointer moves, and an electric lamp behind said plate in a circuit branched from the main circuit; of the main circuit, a button therein for making and breaking the circuit, a switchboard, two branch circuits running therefrom through

the magnets and thence to the button, and a switch-arm for throwing either of the branch circuits into connection with the main circuit.

2. In an annunciator, the combination with a translucent or transparent plate having words thereon, an electric light behind the plate, a pointer moving over the plate and directing attention to said words, and an electromagnet for swinging the pointer; of a main circuit containing a button and a signal, a branch circuit leading from the light to the main circuit between the button and signal, a second branch circuit leading from the main circuit between the button and signal, through said electromagnet, and back, and means for throwing it into or out of connection with the main circuit, substantially as described.

RALPH H. BOARDMAN.

Witnesses:
ARTHUR B. CASE,
HENRY D. WARNER.