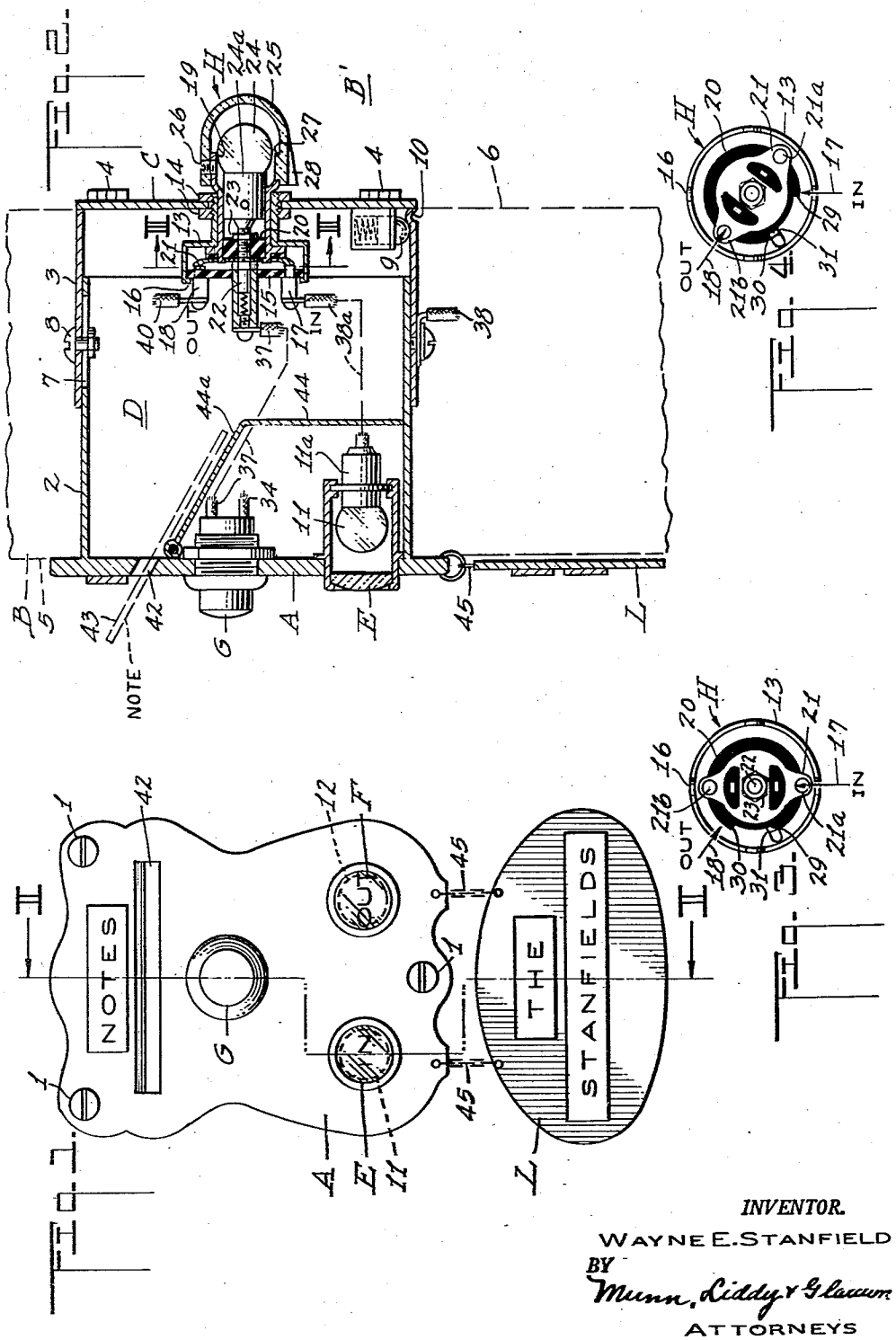
Jan. 13, 1948. W. E. STANFIELD 2,434,442

COMBINED ELECTRICAL INDICATOR AND NOTE RECEPTACLE FOR DOORS

Filed Aug. 6, 1946 2 Sheets-Sheet 1

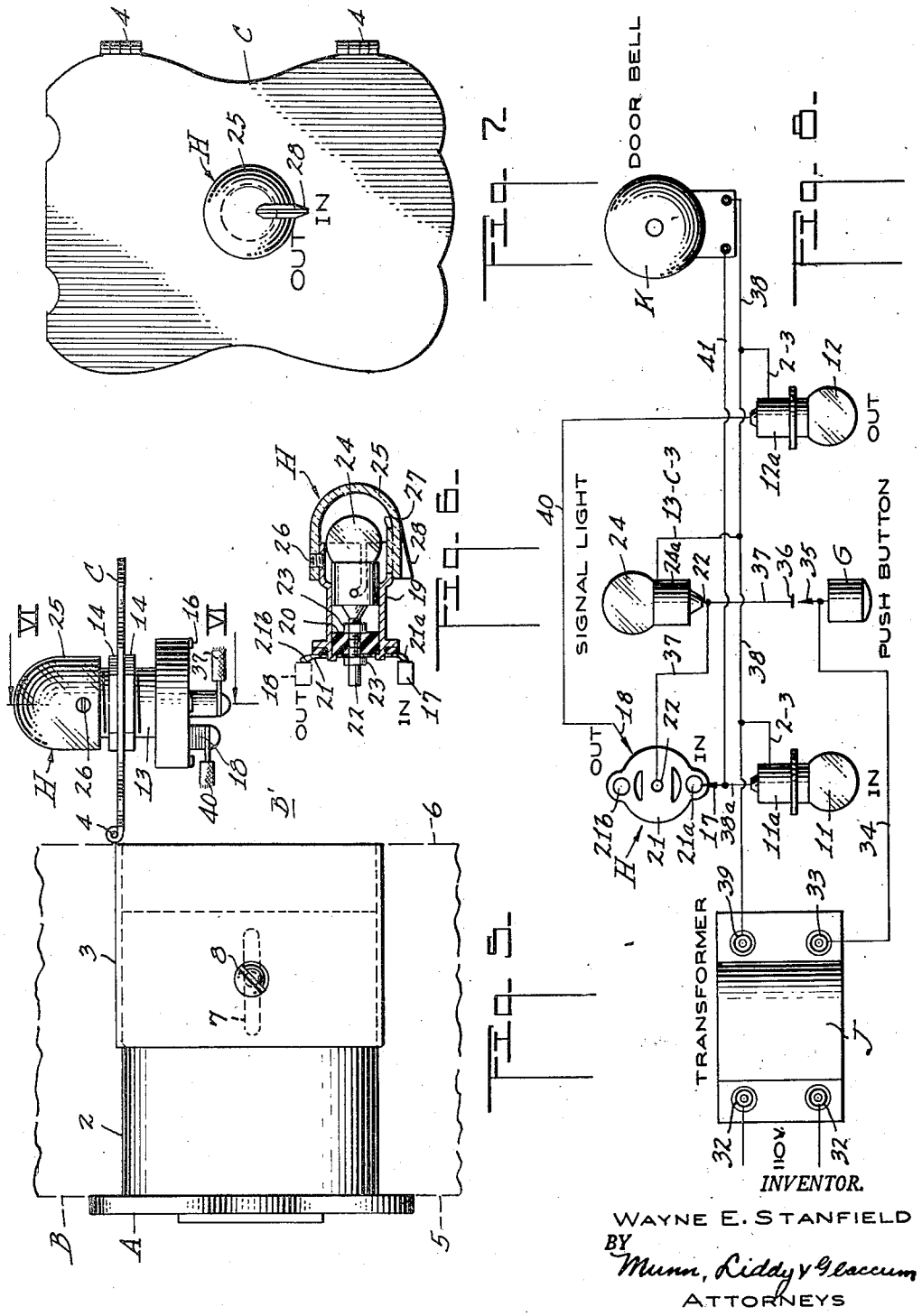


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2,434,442

COMBINED ELECTRICAL INDICATOR AND NOTE RECEPTACLE FOR DOORS

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4 Claims. (Cl. 177—334)

1

The present invention relates to improvements in a combined electrical indicator and note receptacle for doors. It consists of the combinations, constructions and arrangement of parts hereinafter described and claimed.

An object of my invention is to provide an electrical indicator, which may be set manually by the occupants of a house, in such a manner as to indicate to a caller the presence or absence of the occupants when the caller actuates the push button of a door bell.

A further object resides in the provision of a signal that will be illuminated each time the push button is actuated, thus indicating that the circuits are functioning and serving to attract the attention of a person in the house.

It is further proposed in this invention to provide a housing that is arranged to accommodate wires of the electrical circuits, the housing also being designed as a receptacle for a note deposited by the caller.

More specifically described, I propose to mount a plate on the exterior surface of a wall or the like. This plate is provided with a pair of windows, one window having the word "In" displayed therein and the other being provided with the word "Out." An electrical bulb is arranged in each window. When the caller actuates the door bell button, one of the windows will be illuminated, depending upon the presetting of a manual switch by the occupants. This will serve to inform the caller whether or not the occupants are at home.

Another object of my invention is to provide a device of the character described, which may be arranged in walls or the like of various thicknesses. The housing includes telescoping sections that may be readily adjusted so that end plates of the housing may be mounted flush with the exterior and interior walls, respectively, of the wall or the like in which the device is mounted. Although I mention the term "wall," it is obvious that my device may be installed in a door.

It is still further proposed to connect a door bell into one of the circuits so that bell will be sounded only when the "In" bulb is illuminated, thus serving to render the bell inoperative when the device is set to indicate that the occupants are not at home.

Other objects and advantages will appear as the specification continues, and the novel features particularly will be set forth in the claims hereunto appended.

For a better understanding of my invention,

2

reference should be had to the accompanying drawings, forming part of this application, in which:

Figure 1 is a front elevation of my combined electrical indicator and note receptacle for a door;

Figure 2 is a vertical longitudinal sectional view taken along the line II—II of Figure 1;

Figure 3 is an end elevation of the manually-operated switch, as seen from the line III—III of Figure 2, the switch being set to indicate that the occupants are "in";

Figure 4 is a view similar to Figure 3, but with the switch arranged to indicate that the occupants are "out";

Figure 5 is a top plan view of Figure 2 with the interior plate or door moved into open position;

Figure 6 is a vertical section taken through the manually-operated switch per se, the section being taken along the line VI—VI of Figure 5;

Figure 7 is a rear elevation of the interior plate or compartment cover; and

Figure 8 is a wiring diagram illustrating the various electrical circuits.

While I have shown only the preferred form of my invention, it should be understood that various changes, or modifications, may be made within the scope of the annexed claims without departing from the spirit thereof.

In carrying out my invention, I provide an exterior plate A, which is adapted to be fastened to the outside of a wall or the like B by screws 1, or other suitable fastening means (see Figure 1). This plate is provided with a housing section 2 projecting rearwardly therefrom, as disclosed in Figures 2 and 5. Another housing section 3 telescopes relative to the section 2 and has an interior plate or cover C hinged thereto, as at 4. These two housing sections coact with the plates A and C in providing a compartment D.

In order to allow the plates A and C to be disposed flush with the exterior and interior surfaces 5 and 6, respectively, of walls or doors, the housing sections may be adjusted relative to one another. A slot 7 is fashioned in one housing section and a clamping bolt 8 is anchored to the other section, and thus the two sections are held in adjusted position. It will be understood, of course, that the wall or the like is suitably apertured to permit the housing sections to pass therethrough.

Referring to Figure 2, it will be seen that a spring-pressed detent 9 is secured to the interior

or cover plate C. This detent engages with a ledge 10 on the housing section 3 for yieldingly retaining the cover plate closed. Access may be had to the compartment D by opening the cover, as suggested in Figure 5 of the drawings.

The exterior plate A has a pair of windows mounted therein, which are designated generally at E and F. The window E has the word "In" displayed therein, while the window F is provided with the word "Out" (see Figure 1). Electrical bulbs 11 and 12 are disposed in back of the windows E and F, respectively. When the bulbs are illuminated in the manner hereinafter set forth, they will attract attention of a caller and will render the words clearly readable. A push button G is supported by the exterior plate A and is adapted to be actuated by the caller.

Turning now to the interior plate or cover C, it will be noted that a manually-actuated selector switch, indicated generally at H, is carried by this plate. Figures 2 and 5 disclose a switch housing 13, which is secured to the plate C by clamping nuts 14. A block of insulating material 15 is retained in this switch housing by bent-down ears 16. The block carries two terminals 17 and 18, which have been further designated by the words "In" and "Out," respectively, in Figures 2, 3, 4, 6 and 8.

As the specification proceeds, it will be made clear that the "In" terminal 17 controls an electrical circuit that includes the "In" bulb 11, while the "Out" terminal 18 is arranged in a circuit controlling the "Out" bulb 12.

The switch housing 13 has a light socket 19 mounted therein for limited turning movement. A block of insulating material 20 is suitably clamped at one end thereof, as shown in Figures 2, 3, 4 and 6, and this block has a switch arm 21 secured thereto by a centrally-disposed threaded pin 22 and clamping nuts 23. The switch arm 21 is insulated from the socket 19.

A signal light bulb 24 is mounted in the socket 19 and has the central terminal thereof arranged in contact with the pin 22, while the outside metallic terminal of the bulb abuts the interior of the socket.

In Figures 2, 5, 6 and 7, I show a transparent knob 25, which is fastened to the outer end of the light socket 19 by a set screw 26 and key 27. This knob is made of suitable material so as to allow light to pass therethrough when the bulb 24 is illuminated. The knob is formed with a pointer 28 that registers with the word "In" displayed on the cover plate C when the terminal 21*a* of the switch arm contacts with the "In" terminal 17 (see Figure 3). Upon turning the knob 25 until its pointer registers with the word "Out" on the cover plate, the terminal 21B of the switch arm will contact with the "Out" terminal 18 (see Figure 4).

It will be understood that when the terminals 17 and 21*a* are arranged in contact with each other, the terminals 18 and 21*b* are out of contact and vice versa. This is due to the fact that the terminals 17 and 18 are arranged in angular relation with one another, as shown in Figures 3, 4 and 8.

The block of insulation 20 is notched out to define shoulders 29 and 30, which coact with a stop 31 projecting from the switch housing 13. When the shoulder 29 abuts the stop 31, the terminals 17 and 21*a* are in contact (see Figure 3). When the shoulder 30 engages the stop 31, the terminals 18 and 21B are in engagement (see Figure 4).

Referring now to Figure 8, it will be noted that I provide a step-down transformer J having the terminals 32 of its primary coil connected to a source of suitable current, such as 110 volts A. C. One terminal 33 leading from the secondary coil is connected by a wire 34 to a contact 35 forming part of the push button G. The other terminal 36 of the push button is connected through a wire 37 to the pin 22. Accordingly, whenever the push button is pressed by a caller, electricity will flow from the transformer J to the signal light bulb 24. This bulb has its metallic rim 24*a* contacting the socket 19, and the latter is grounded through the switch housing 13, door C and housing section 3 to a return wire 38 (see Figure 2), which leads back to the other terminal 39 of the transformer secondary coil. Thus the signal light bulb is illuminated each time the push button is actuated and likewise current will flow to the switch arm 21.

When the terminal 21*a* is engaged with the "In" terminal 17, as shown in Figures 3 and 8, current will flow from the switch arm 21 and over a wire 38*a* to the central terminal of the "In" bulb 11. The metallic rim 11*a* of this bulb is grounded through the housing sections 2 and 3 to the return wire 38 (see Figure 2). This will result in flashing on the bulb 11 and making the word "In" readable in the window E when the push button G is actuated.

Upon moving the switch arm 21 until its terminal 21*b* contacts with the "Out" terminal 18 (see Figure 4), and the push button is actuated, current will flow from the transformer J to the pin 22, causing the signal lamp bulb 24 to be illuminated. At the same time, current will flow over a wire 40 to the central terminal of the "Out" bulb 12. The metallic rim 12*a* of this bulb is grounded through the housing sections 2 and 3 to the return wire 38. Accordingly, the bulb 12 will illuminate the window F and render the word "Out" clearly readable when the push button is actuated.

In Figure 8, I show a door bell K having one of its terminals connected by a wire 41 to the "In" switch 17. The other terminal of the bell is connected to the return wire 38 leading back to the transformer terminal 39. Therefore, the bell will be sounded each time the "In" window E is illuminated. It should be noted that when the selector switch H is set to indicate "Out," the door bell will not ring upon actuating the push button G. This is due to the fact that separation of the "In" terminal 17 and the switch arm terminal 21*a* renders the bell circuit inoperative.

Figures 1 and 2 disclose a note-receiving slot 42, which allows a note 43 to be inserted by the caller into the compartment D. The legend "Notes" has been placed adjacent to the slot (see Figure 1). Upon opening the cover plate C, the note may be withdrawn from the room-side of the wall or the like B. A partition 44 may be provided for guiding the incoming note away from the push button G and the windows E and F. An inclined top 44*a* of the partition causes the note to gravitate toward the door C.

In order to enhance the general appearance of the indicator and to identify the occupants of the house, I have provided a name plate L. The latter is suspended from the exterior plate A by chains 45.

Having thus described the various structural features of my device, the operation thereof may be briefly summarized as follows:

Assuming that the occupants of the house are

at home and desire to receive callers, the selector switch H is set with its pointer **28** opposite the word "In" on the interior plate C. When a call actuates the push button G, the window E will be illuminated, attracting the attention of the caller, and clearly displaying the word "In." At the same time, the signal light **24** will be illuminated, which serves to attract attention of a person in the room B'. Likewise, the bell K will ring, which will attract attention of a person in another part of the house.

In the event that the occupants are going out, or do not wish to receive callers, the selector switch pointer **28** is set to indicate "Out." Therefore, when the caller actuates the push button, the window F will light up, making the word "Out" readable by the caller. Simultaneously, the signal bulb **24** will be illuminated and will indicate to a person that happens to be in the room B' that a caller is at the door. The door bell K will not sound at this time. The caller may deposit a note in the compartment D, if he so desires.

I claim:

1. In an electrical indicator for a door; a plate arranged on the exterior surface of a wall or the like; a pair of windows mounted in said plate, one window having the word "In" displayed therein and the other being provided with the word "Out"; an electrical bulb disposed in back of each window for illuminating the latter to attract attention and render the words readable; a push button supported on said plate; an interior plate arranged on a room-side of the wall or the like; a selector switch carried by the interior plate and having two positions; an electrical circuit including the push button and the "In" bulb and designed to be closed when the selector switch is moved into one position and the push button is actuated, whereby the word "In" is readable; and a second electrical circuit including the push button and the "Out" bulb and arranged to be closed when the selector switch is moved into its other position and the push button is actuated, whereby the word "Out" is readable.

2. In an electrical indicator for a door; a plate arranged on the exterior surface of a wall or the like; a pair of windows mounted in said plate, one window having the word "In" displayed therein and the other being provided with the word "Out"; an electrical bulb disposed in back of each window for illuminating the latter to attract attention and render the words readable; a push button supported on said plate; an interior plate arranged on a room-side of the wall or the like; a selector switch carried by the interior plate and having two positions; an electrical circuit including the push button and the "In" bulb and designed to be closed when the selector switch is moved into one position and the push button is actuated, whereby the word "In" is readable; a second electric circuit including the push button and the "Out" bulb and arranged to be closed when the selector switch is moved into its other position and the push button is actuated, whereby the word "Out" is readable; and a signal light mounted on the interior plate and connected in both of said circuits so as to be illuminated each time the push button is actuated, thus indicating that the circuits are functioning and serving to attract attention of a person in the room.

3. In an electrical indicator for a door; a plate arranged on the exterior surface of a wall or the like; a pair of windows mounted in said plate, one window having the word "In" displayed therein and the other being provided with the word "Out"; an electrical bulb disposed in back of each window for illuminating the latter to attract attention and render the words readable; a push button supported on said plate; an interior plate arranged on a room-side of the wall or the like; a selector switch carried by the interior plate and having two positions; an electrical circuit including the push button and the "In" bulb and designed to be closed when the selector switch is moved into one position and the push button is actuated, whereby the word "In" is readable; a second electrical circuit including the push button and the "Out" bulb and arranged to be closed when the selector switch is moved into its other position and the push button is actuated, whereby the word "Out" is readable; and a housing extending between the exterior and interior plates to accommodate wires of the electrical circuits.

4. In an electrical indicator for a door; a plate arranged on the exterior surface of a wall or the like; a pair of windows mounted in said plate, one window having the word "In" displayed therein and the other being provided with the word "Out"; an electrical bulb disposed in back of each window for illuminating the latter to attract attention and render the words readable; a push button supported on said plate; an interior plate arranged on a room-side of the wall or the like; a selector switch carried by the interior plate and having two positions; an electrical circuit including the push button and the "In" bulb and designed to be closed when the selector switch is moved into one position and the push button is actuated, whereby the word "In" is readable; and a second electrical circuit including the push button and the "Out" bulb and arranged to be closed when the selector switch is moved into its other position and the push button is actuated, whereby the word "Out" is readable; a housing between the plates to accommodate circuit wires, the housing including telescoping sections, whereby the plates may be disposed on the exterior and interior surfaces, respectively, of walls or the like of various thicknesses.

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