

July 19, 1938.

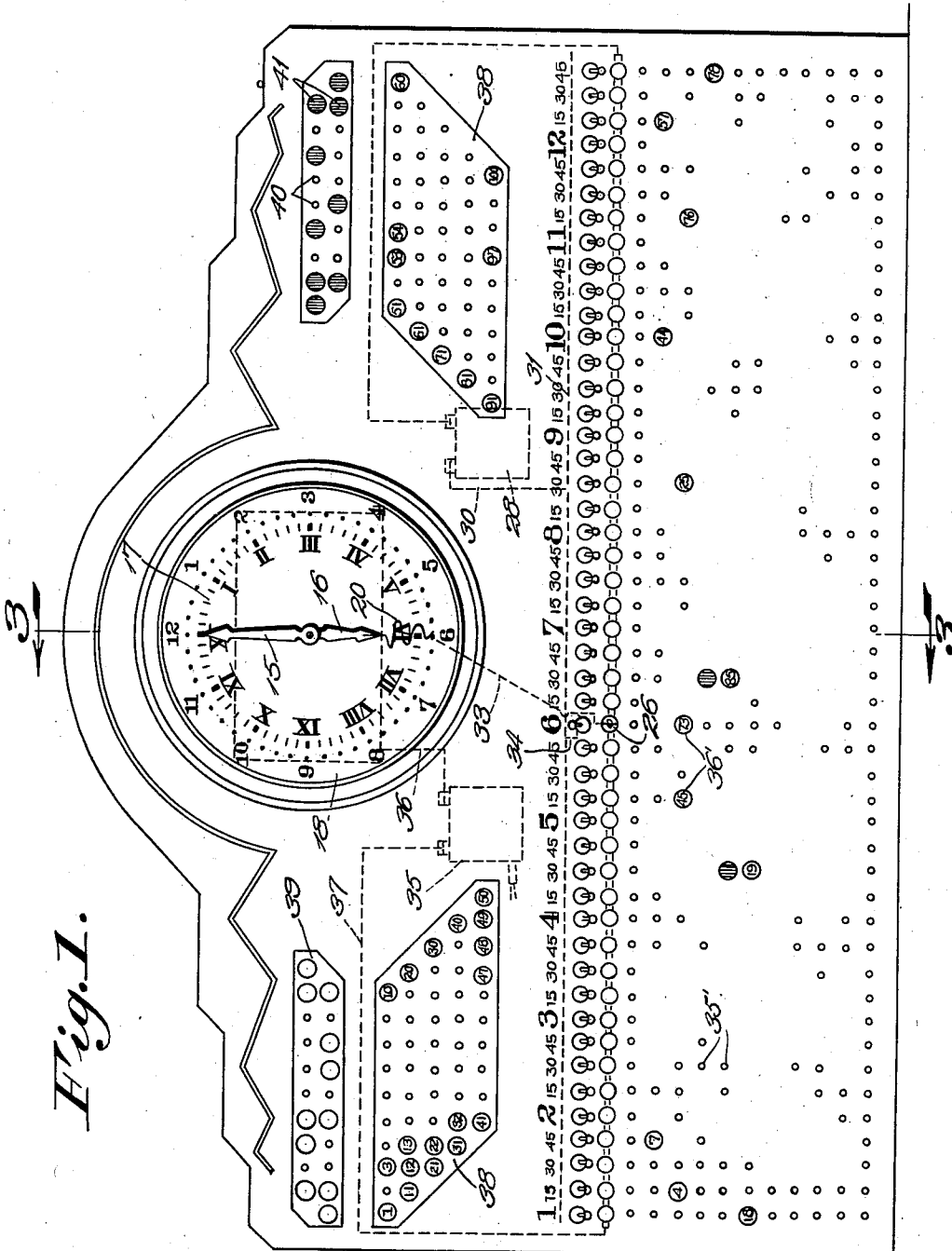
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2,124,490

ELECTRIC CALL BOARD FOR HOTELS

Filed April 28, 1936

3 Sheets-Sheet 1



WITNESS

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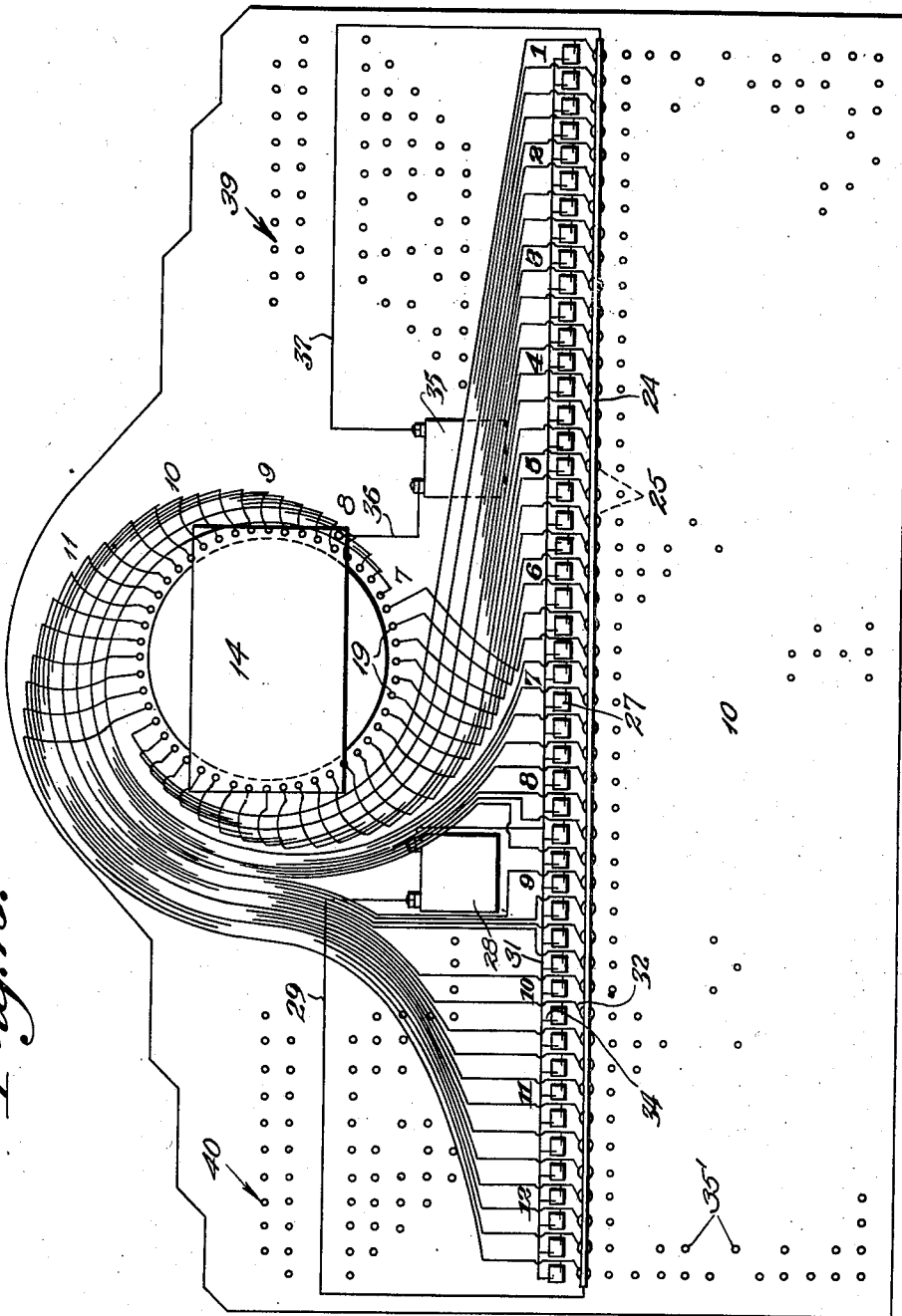
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Fig. 2.



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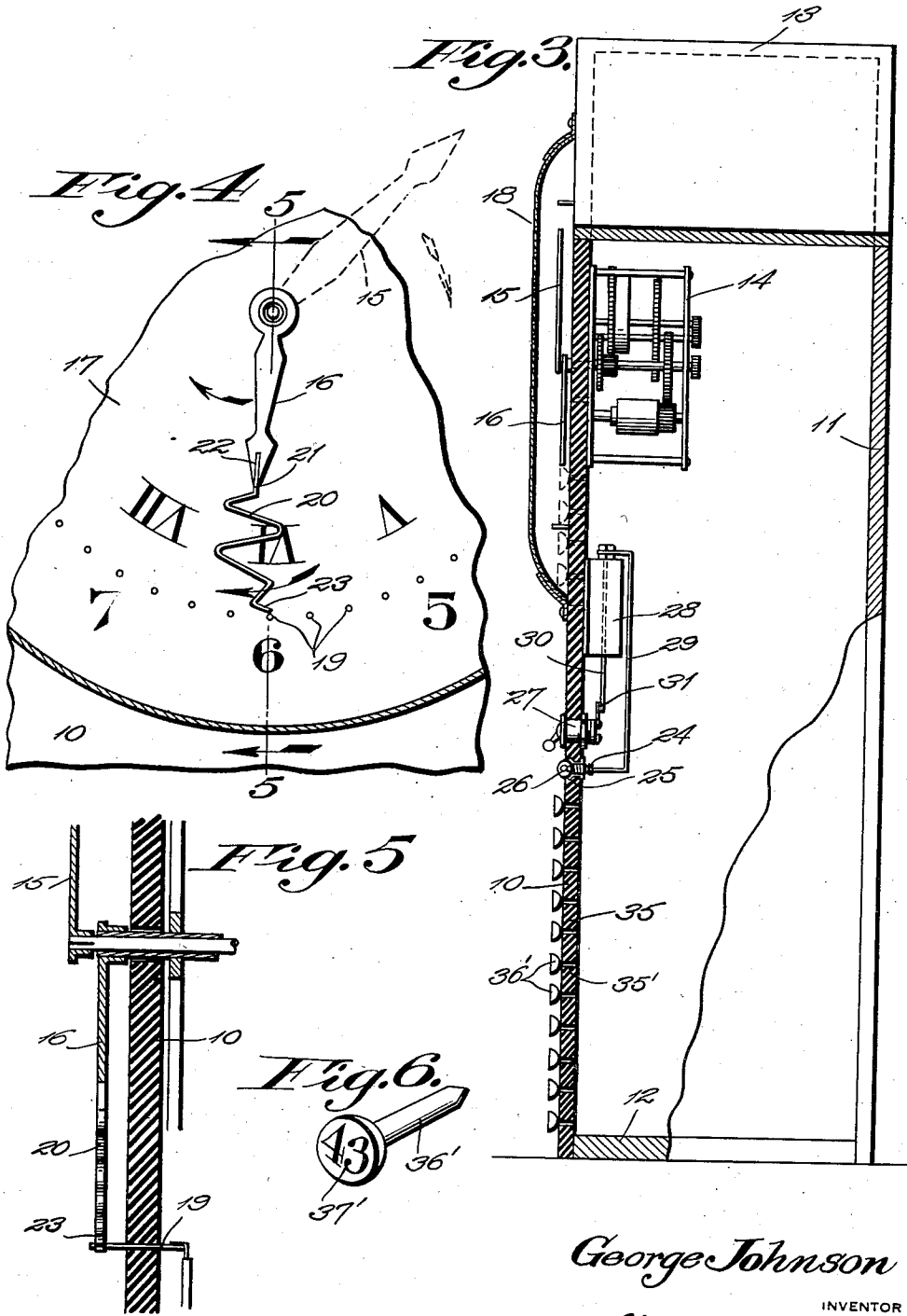
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UNITED STATES PATENT OFFICE

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ELECTRIC CALL BOARD FOR HOTELS

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Application April 28, 1936, Serial No. 76,859

1 Claim. (Cl. 161—2)

This invention relates to electric call boards for hotels and has for an object to provide a device of this character having a series of electric circuits, closed at regular intervals in the movement of a clock, these circuits having respective toggle switches and pilot lights, and a common buzzer whereby, when a circuit is closed by movement of the clock, the buzzer will be operated to call the attention of the clerk and at the same time the associated pilot light will be lighted whereupon the operator may open the toggle switch to disconnect the buzzer and by a glance at the vertical row of pins designating rooms to be called, may call these rooms at the appointed time requested by the guests.

A further object is to provide in a device of this character a novel resilient contact carried by the hour hand of the clock and coacting with stationary switch contacts arranged at fifteen minute intervals around the face of the clock, the resilient contact maintaining wiping engagement with each pin for ten minutes to energize the corresponding pilot light for this length of time and then advance toward the next stationary contact in sequence during a five minute interval of time, the purpose of this being to make sure that the room clerk or person in charge of the call board will have ample time to make the various calls indicated to be made at a predetermined time.

A further object of the invention is to provide a device of this character which will be formed of a few strong simple and durable parts, which will be inexpensive to manufacture, and which will not easily get out of order.

With the above and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming part of this specification,

Figure 1 is a front elevation of an electric call board constructed in accordance with the invention.

Figure 2 is a rear elevation of the call board.

Figure 3 is a vertical section through the call board taken on the line 3—3 of Figure 1.

Figure 4 is a fragmentary front elevation of the clock face and showing the resilient and fixed switch contacts.

Figure 5 is a cross sectional view taken on the line 5—5 of Figure 4.

Figure 6 is a detail perspective view of one of the room designating pins.

Referring now to the drawings in which like characters of reference designate similar parts in the various views, the call board is shown to comprise a casing including a front wall 10, a rear wall 11, a bottom 12, and a top 13. A clock-work mechanism 14 is secured to the rear face of the front wall 10 and preferably the latter is formed of insulating material such as "Bakelite". Arbors of the minute hand 15 and of the hour hand 16 extend through a suitable opening in the front wall 10. A clock dial 17 is inscribed on the front wall and a glass door 18 is disposed on the front wall to house the clock hands and dial.

A plurality of stationary switch contacts in the nature of pins 19 are arranged in a circular series concentric with and inside of the hour designating numerals of the dial. These pins are arranged at fifteen minute intervals apart. A resilient switch contact 20 in the nature of a flat zigzag leaf spring is provided at one end with a flat straight portion 21 which is clamped in a longitudinal kerf 22 formed in the end of the pointer of the hour hand 16. The free end of the resilient contact is inclined obliquely rearwardly from the longitudinal median of the hour hand, as shown at 23.

The lobes of the zigzag spring are so proportioned that the inclined end 23 of the contact will have wiping engagement with each stationary contact pin 19 through a ten minute interval and then will advance toward the next contact pin in sequence during a five minute interval. As a result of the above described construction of the resilient switch contact the electric circuit controlled by this time actuated circuit closer will be energized through a ten minute time period which is sufficient to give the room clerk or other person in charge of the call board to make the appointed room calls.

The front wall 10 below the time controlled circuit closer just described, is provided with a bus bar 24. At equal distances apart throughout the entire length of the bus bar there are formed miniature lamp sockets 25, as shown best in Figure 3, to receive pilot lamp bulbs 26, of the flash light type. There are forty-eight of these bulbs in the row corresponding to the forty-eight fifteen minute time periods throughout each twelve hours.

Directly above each pilot lamp bulb a toggle switch 27 is mounted on the front wall of the call

board. A buzzer 28, common to all of the switches and pilot lights is arranged on the rear face of the front wall, as best shown in Figure 3. A conductor wire 29 connects one terminal of the buzzer with one end of the bus bar 24, as best shown in Figure 1. A conductor wire 30 connects the other terminal of the buzzer with a bus bar 31 which extends parallel to the bus bar 24. One pole of each toggle switch is connected to the associated pilot lamp by a conductor wire 32. The same pole is connected to an associated stationary switch contact pin on the clock dial by means of a conductor wire 33, as best shown diagrammatically in Figure 1. The other pole of the toggle switch is connected to the bus bar 31 by means of a conductor wire 34.

A transformer 35 has one secondary pole grounded to the clock work mechanism by means of a conductor wire 36, while the other secondary pole is connected to the bus bar 24 carrying the pilot lamp bulbs, by means of a conductor wire 37.

Assuming that the resilient switch contact 20 is in wiping engagement with the stationary switch contact pin 19 located at the six o'clock numeral on the clock dial, and that the associated toggle switch 27 is closed, a circuit may be traced from the transformer through the wire 37, bus bar 24, pilot lamp 26, wire 32, wire 33, and stationary switch contact pin 19 grounded by the resilient switch contact 20, and the pilot light will thus glow.

Simultaneously, a circuit may be traced from the bus bar 24, to the wire 29, buzzer 28, wire 30, wire 31, wire 34, switch 27 and wire 33 to the switch contact 19 grounded by the resilient switch contact 20. By opening the switch 27 the buzzer may be silenced while the pilot lamp bulb 32 will continue to glow until the lamp circuit is broken by disengagement of the resilient switch contact from the fixed switch contact.

By now referring to Figures 1 and 3 it will be seen that below each pilot lamp 26, a vertical row of perforations 35' is formed in the front wall 10 of the call board. The perforations receive pins 36', best shown in Figure 6, and each is inscribed with the number of an associated room in the hotel, as shown at 37'. The pins are normally stored in two groups of openings formed on opposite sides of the dials as indicated at 38. A group of openings to receive spare pins is formed in the call board above one of the groups 38, as shown at 39. Also a group of openings is formed in the call board above the other group of openings 38, as indicated at 40 to receive pins 41 colored red, the use of which will now be described.

By again referring to Figure 1 it will be seen that the front face of the call board, above the toggle switches, is inscribed with numerals corresponding to the numerals on the dial and between each two successive numerals the face is inscribed with numerals indicating fifteen minute, thirty minute and forty-five minute intervals of the hour included between said two successive dial numerals.

To operate the call board, the room clerk will remove pins from the groups of openings indicated at 38 and insert them in the openings 35

in the call board which correspond to the time the guest in a certain room has requested that his room be called. For instance, guest in room number 13 may request to be called at 6 o'clock A. M. The room clerk places the pin marked 13 in one of the openings in the vertical row below the pilot light headed by the numeral 6, as shown. He then makes sure that the toggle switch is closed. When the hour of 6 o'clock A. M. arrives, the resilient switch contact 20 will engage the stationary contact pin 19 on the dial and close the time controlled circuit to the pilot lamp bulb, as previously described. At the same time, the associated toggle switch being closed, the buzzer will be energized. The room clerk may now open the toggle switch to disconnect the buzzer and at the same time pick up his telephone and wake the guest if this is the purpose for which the guest in room number 13 was to be called.

Likewise, the room clerk may thereupon call any of the other room numbers designated by corresponding pins in the same vertical row headed by the numeral 6. Due to the pilot light being energized through a ten minute interval the room clerk will have plenty of time to call all of the guests regardless of how many pins are in the vertical row.

The purpose of the red pins is as follows. Suppose a guest wishes to be called at some appointed time in the P. M. hours, that is in the hours between 12 o'clock noon and 12 o'clock night. In such case the room clerk proceeds as just described to insert the corresponding room pins in the row headed by the numeral corresponding to the time the guest wishes to be called, but as a visible warning that the call is a P. M. call, the room clerk will then remove one of the red pins 41 from the group 40 and place it just above the room designating pin. Thus red targets will designate the afternoon or night calls before midnight.

Since the description of the call board has been given as the description of the parts progressed, it is thought that the construction and operation of the device will be understood without further explanation.

What is claimed is:

An electric call board comprising a casing, clockwork mechanism therein, the front wall of the casing having a clock dial inscribed therein, a circular series of stationary pins forming switch contacts in the clock dial, a resilient switch contact having one end secured to the hour hand of the clockwork mechanism and the free end adapted to have wiping engagement with each pin, circuits controlled by the circuit closer formed by the resilient and fixed switch contacts, pilot lights in the circuits disposed in a horizontal row on the casing below the clock dial, a horizontal row of toggle switches in the circuits and disposed on the casing above the pilot lights, indices denoting 12 hours and 15 minute intervals of the hours inscribed on the casing above the toggle switches, and vertical rows of openings in the casing below the pilot lights and in alignment with the pilot lights and toggle switches for receiving reminder pins.

GEORGE JOHNSON.