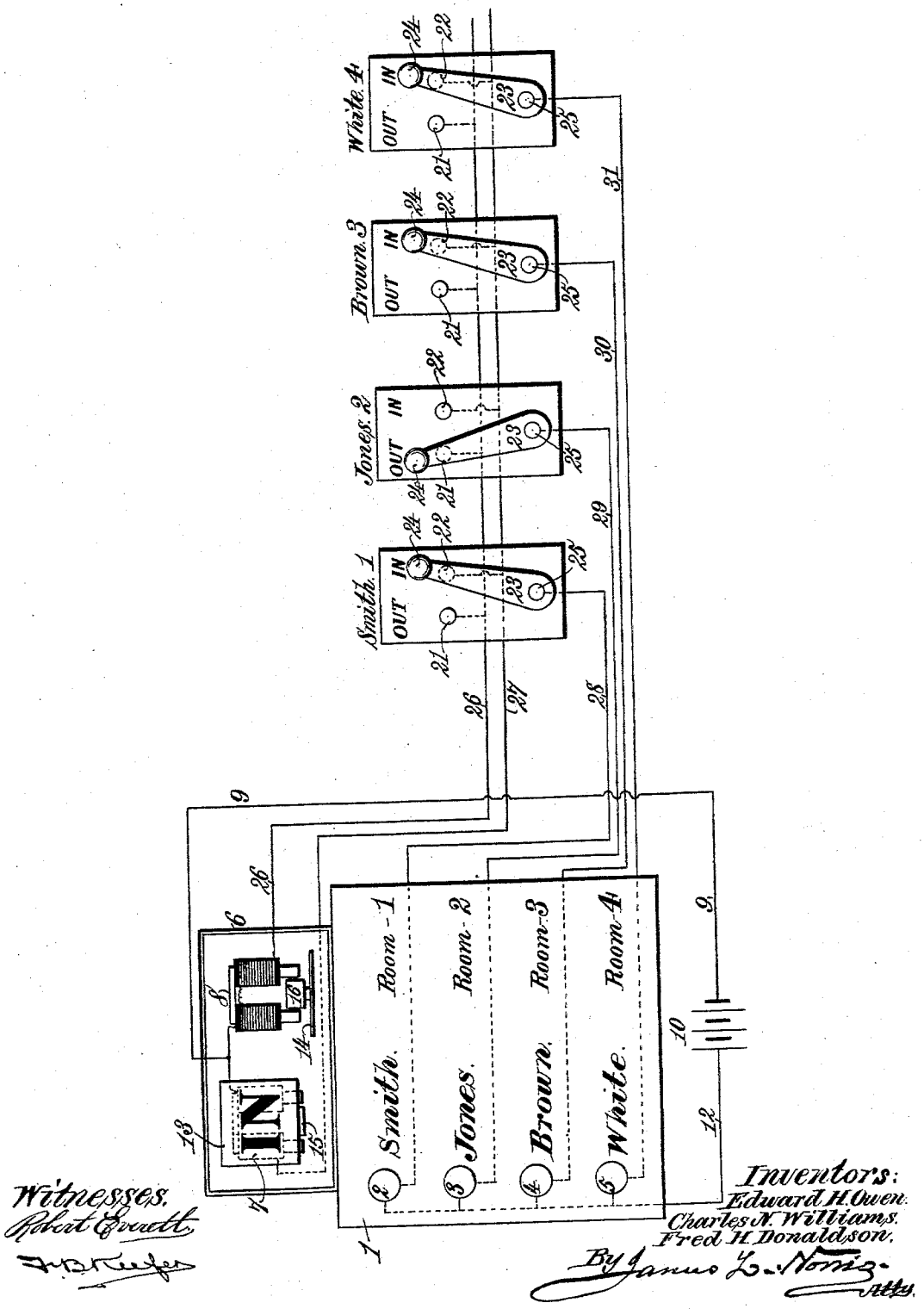
(No Model.)

E. H. OWEN, C. N. WILLIAMS & F. H. DONALDSON.

ANNUNCIATOR SYSTEM.

No. 589,747. Patented Sept. 7, 1897.



Witnesses.
Robert Everett
F. B. Tuttle

Inventors:
Edward H. Owen.
Charles N. Williams.
Fred H. Donaldson.
By James L. Norris.
Atty.

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

UNITED STATES PATENT OFFICE.

EDWARD H. OWEN, CHARLES N. WILLIAMS, AND FRED H. DONALDSON, OF GARVANZA, CALIFORNIA.

ANNUNCIATOR SYSTEM.

SPECIFICATION forming part of Letters Patent No. 589,747, dated September 7, 1897.

Application filed June 18, 1897. Serial No. 641,371. (No model.)

To all whom it may concern:

Be it known that we, EDWARD H. OWEN, CHARLES N. WILLIAMS, and FRED H. DONALDSON, citizens of the United States, residing at Garvanza, in the county of Los Angeles and State of California, have invented new and useful Improvements in Annunciator Systems, of which the following is a specification.

This invention relates generally to annunciators or signal systems; and the chief object of the present invention is to provide an electric annunciator or signal system whereby a person calling at the entrance or some other part of a building can by simply operating a contact device or push-button obtain certain information from any one of several more or less distant places or points.

The invention also has for its object to provide novel means which enables a person at a certain place or point to conveniently and instantly ascertain if any one of a number of persons occupying apartments, offices, or rooms at more or less distant places or points is present or absent—that is to say, is "in" or "out," &c., as the case may be—thereby saving to the owners of buildings elevator-service and other wear and tear, as well as time and labor to inquiring persons and occupants.

The apparatus or system comprises electromagnetically-operated signs or visual signals in a circuit common to and each susceptible of being operated by a current through any one of a series of switches at more or less distant points or places. The switches are electrically connected with the electromagnets of the signs or visual signals and with parts of contact devices or push-buttons corresponding in number with the number of switches. The contact devices or push-buttons are located in juxtaposition to the electromagnetically-operated signs or visual signals and are in a circuit which includes an electric generator and the electromagnets in such manner that any one of the switches may be adjusted to operate any one of the signs or visual signals when the electric circuit is completed by operating the contact device or push-button corresponding to the adjusted switch.

The invention is illustrated by the accompanying drawing, in which the figure is an elevation of sufficient of an apparatus or system to enable our invention to be clearly understood.

In order to enable those skilled in the art to make and use our invention, we will now describe the same in detail, referring to the drawing, wherein—

The numeral 1 indicates a board or frame or any construction suitable for the purpose in hand, and which for convenience of description we will term a "push-button board." This board is provided with a plurality of push-buttons 2, 3, 4, and 5, each composed, as usual, of normally-separated parts which can be placed in electrical connection to complete the circuit by simply pressing upon or touching the exposed heads or outer ends of the push-buttons. The push-button board is arranged in juxtaposition or proper relation to an annunciator signal-box 6, containing, as here shown, two electromagnets 7 and 8, electrically connected by a conductor-wire 9 with a battery or electric generator 10, which is electrically connected by a conductor-wire 12 with one part of the contact-pieces or push-buttons of the board or frame 1.

The signs or visual signals 13 and 14 are mounted upon armatures 15 and 16, each pivoted between the poles of one of the electromagnets the same, or substantially the same, as described and shown in Patent No. 579,075, issued to us March 16, 1897, whereby the signs or visual-signal devices will be moved or swung into and out of view when the electromagnets are vitalized and devitalized. The push-button board and the annunciator signal-box are arranged in operative connection with a plurality of switches 17, 18, 19, and 20, located at more or less distant points or places—as, for instance, in apartments, offices, or rooms of a building. The switches, as here shown, are composed of switchboards or supports each provided with two contact-pieces 21 and 22 and a switch arm or lever 23, having a knob or handle 24 at one end and mounted on a pivot 25 at the other end, whereby we provide what may be termed a "two-point" switch. The contact-pieces 21

of all the two-point switches are electrically connected by a conductor-wire 26 with one pole of one of the electromagnets, and the contact-pieces 22 of all the switches are electrically connected by a conductor-wire 27 with one pole of the other magnet in such manner that all of the two-point switches are common to and in the same circuit as the electromagnets, so that it is possible for any one of the switches to be set to operate any one of the signs or visual signals, as will hereinafter appear. The pivots 25 of the switch arms or levers 23 are electrically connected, respectively, with the push-buttons 2, 3, 4, and 5 by conductor-wires 28, 29, 30, and 31, by which means the electric circuit can be completed by operating any one of the push-buttons. The push-buttons are located in proper relation to diacritical marks which, as here represented, are composed of the names of persons occupying, respectively, the apartments, offices, or rooms in which the two-point switches are located. These switches may also be designated or distinguished by diacritical marks consisting of names corresponding with the names placed on the push-button board in proper relation to the push-buttons. The two contact-pieces of each switch are accompanied by characters or words corresponding to similar characters or words on the signs or visual-signal devices 13 and 14 for the purpose of imparting information to the person operating any one of the push-buttons. In the present instance the contact-pieces 21 and 22 of each two-point switch are arranged in proper relation, respectively, to the words "Out" and "In," and therefore the signs or visual-signal devices 13 and 14 are provided, respectively, with similar words. We wish it clearly understood, however, that as regards the diacritical marks on the push-button board and the characters or words arranged with relation to the contact-pieces of the two-point switches other characters, designs, figures, or words may be employed without altering the spirit of our invention.

The annunciator or signal apparatus or system described and shown is susceptible of use for many purposes unnecessary to specifically mention; but we will now describe one special use for which the system or apparatus is well adapted and for which it was particularly designed—to wit, to enable a person calling at the entrance or other part of a building to conveniently and instantly ascertain if the occupant of any one of the apartments, offices, or rooms in the building is absent or present or "in" or "out." For this purpose it is only necessary for the caller to press upon or operate the contact-piece or push-button on the push-button board which is designated or distinguished by the name of the person called upon. For instance, assuming that Smith occupies room No. 1 and a caller desires to ascertain if Smith is or is not present in his room, and assuming that Smith has adjusted his switch arm or lever to make contact with the contact-piece 22 for the purpose of advising a caller that he is "in" or present in his room, the caller simply operates the push-button 2, which completes the electric circuit through the conductor 28, the pivot 25, the switch arm or lever 23, the contact-piece 22, the conductor-wire 27, the electromagnet 7, and the battery. The electromagnet 7 is thus vitalized and instantly attracts the armature 15, which swings the sign or visual-signal device 13 into view, and as this sign or signal device bears the word "In" the caller obtains the desired information, and, if desired, proceeds to the room of Smith.

The number of contact-pieces or push-buttons and switches may be increased to any required extent for the purpose in hand.

While we have illustrated and described an annunciator containing but two visual-signal devices (bearing the inscriptions "In" and "Out") and have indicated but two contact-points on the switches electrically connected with the visual signals, we desire to have it understood that we are not limited to this number of visual signals and contact-points on the switches, as it is obvious that they may be correspondingly increased in number without affecting the principle and spirit of our invention. If desired, an ordinary call-bell, one or more, may be introduced into the circuit to be used, for instance, to indicate to the user the position of his switch; but as this is obvious we do not consider it necessary to illustrate the same.

The details of construction of the various parts may be modified without altering the spirit of our invention, and therefore

What we claim is—

1. In a signaling system, the combination with a suitable support of a plurality of pushes and push-button contacts arranged upon said support and associated with marks, or words, which identify each one of a series of distant points, a series of separate wires, one from each push-button being led to one of the distant points, a series of switches at said points, each switch consisting of a conducting-arm, to the pivotal support of which one of the separate wires is led, and two contact-pieces each of which is associated with a different character, or word, two independent wires each of which is common to the contact-pieces associated with the same word or character, two series of branch wires, one series connected to one contact-piece at each point and to one of the two wires and the other series to the second contact-piece and second wire, a signaling apparatus having signals responsive to both the contact-pieces at the distant points and a source of electric energy, substantially as described.

2. In a signaling system the combination with a suitable support of a plurality of pushes and bush-button contacts, a series of separate wires one from each push-button to one of a series of distant points, a series of switches at said points each comprising a conducting-

arm to the pivotal support of which one of the separate wires is connected, two contact-pieces on each switch-base with either of which the arm can engage, two or more independent wires having branch connections to all the contact-pieces on one side and the other to all those on the other side of the switch-arm, two or more independent signaling devices each comprising an electromagnet and a visual signal operated by it, the winding of each magnet being connected to one or the other of the independent wires, and a generator of electric energy connected to each of the push-button contacts, substantially as described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

EDWARD H. OWEN.
CHARLES N. WILLIAMS.
FRED H. DONALDSON.

Witnesses:
WILLIAM M. VAN DYKE,
HARFIELD T. CHRISTIAN.