Nov. 9, 1926. 1,606,404

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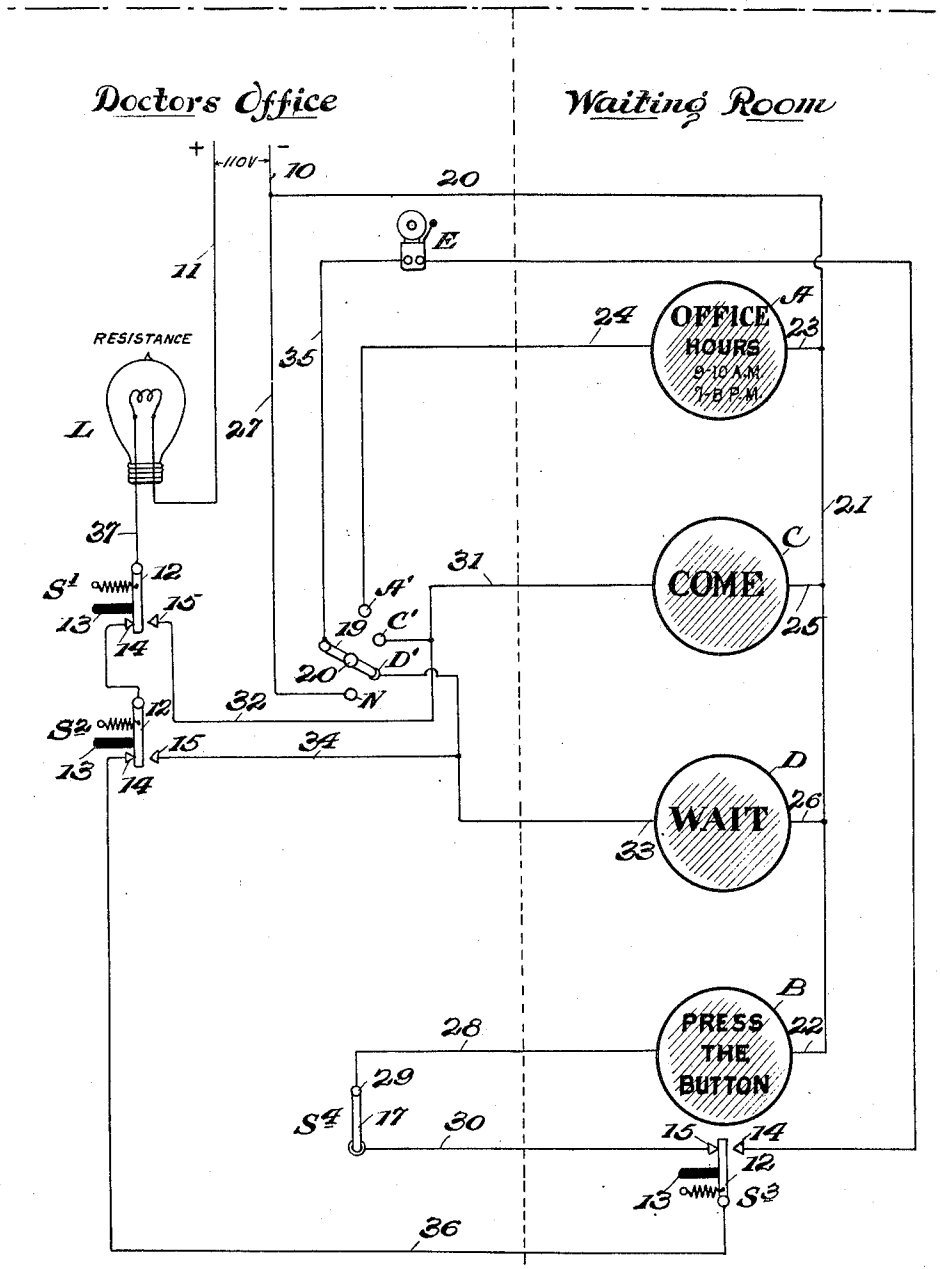
Filed July 28, 1922



WITNESSES

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Patented Nov. 9, 1926. 1,606,404

UNITED STATES PATENT OFFICE.

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ELECTRIC WIRING SYSTEM FOR SIGNALS.

Application filed July 28, 1922. Serial No. 578,138.

This invention relates to an electric wiring system for "answer-back" signals.

The present wiring system is primarily adapted for offices of physicians, dentists and the like and has for its object to provide a system whereby visual and audible signals may be utilized for indicating to patients or customers in an accurate manner the wishes of the physician or other occupant of the office in which this system may be installed.

It is a further and important object of the invention that the system be adapted to be selectively operated whereby the physician or other occupant of an office may at any time previous to the moment of a patient or customer calling set or arrange the system so that his wishes will be indicated to the patient or customer upon the patient or customer announcing his arrival.

A still further object of the invention is that the system be entirely automatic in operation and reliable.

Other objects will hereinafter appear.

The invention is illustrated by way of example in the accompanying drawing in which the figure represents a diagrammatic view of the present wiring system and arrangement of the different units or elements employed.

Referring to the drawing more particularly, A, B, C and D represent name plates or signs which should be arranged in any manner desired and should be positioned in the waiting room of the office in which the present wiring system is installed. These name plates may consist in an ordinary lens supported within the proper socket or casing and beneath the lens an electric light is mounted so that upon energizing the electric light the lens is illuminated. The name plate A should have printed thereon the words "Office hours" and also the hours during which the occupant of the office will be present; the name plate B may have printed thereon "Please press the button" or other words having the same meaning; the name plate C might have written or printed thereon the word "Come," and the name plate D the word "Wait."

I further employ a resistance light L and switches S^1, S^2, S^3, S^4 and S^5. I also employ a bell E or other audible signal. The wires 10 and 11 may be connected to any suitable source of electric current supply, preferably direct current, and the voltage equal to that usually employed for electric light service. The lights employed beneath the name plates A, B, C and D may be of a low voltage and the light L may be of 110 volt type. The switches S^1, S^2, and S^3 are alike and each switch comprises a depressible strip of metal or contactor 12, a push button 13 and the two contacts 14 and 15. This particular type of switch is employed in order to obtain the objects of the present invention. The first pair constitutes a master switch, the last an individual push button switch.

The switch S^4 may consist in a base plate 16 and a pivoted switch arm 17. The switch S^5 consists in a base plate 18, a pivoted switch arm 19 having a handle 20 and adapted to be brought into engagement with the contacts A′, D′, C′ and N.

The feed wire 10 is connected through the wires 20, 21 and 22 to one side of the lights beneath the name plate B. The wire 21 is extended and connected at one side of the light beneath the name plate A as at 23. A wire 24 has its one end connected to the one side of the light beneath the name plate A and its other end connected to the contact point A′ of the switch S^5. The wire 21 is also connected to the one side of the lights beneath the name plates C and D as at 25 and 26 respectively and is further connected through the wire 27 with the contact point N of the switch S^5. The remaining side of the light beneath the name plate B is connected to the wire 28 to a contact point of the switch S^4 as at 29 and the switch arm 17 of the switch S^4 is in turn connected through wires 30 with the contact point 13 of the switch S^3. The remaining side of the light beneath the name plate C is connected through wire 31 to a wire 32 and the wire 32 has its one end connected to the contact C′ of the switch S^5 and its other end connected to the contact 15 of the switch S′. The remaining side of the light beneath the name plate D is connected through wires 33 and 34 to the contact point D′ of the switch S^5. The wire 33 is also connected to the contact point 15 of the switch S^2. A wire 35 extends between one side of the bell E and the switch arm 19 and the other side of the bell E is connected to the contact 14 of the switch S^3 as shown. The contact point 14 and switch S^2 are connected to the switch arm 12 by a wire 36 and the contact point 14 of the switch S′ is connected to the

switch arm 12 of the switch S^2 as shown. The switch arm 12 of the switch S' is connected to one side of the light L through the wire 37 and the other side of the light L is connected to the feed wire 11, as shown.

The wires 11, 37, 36, 28, 22, 21, 20 and 10 are herein regarded as the normally closed circuit, the switches S', S^2, S^3 and S^4 being so set as to normally close the circuit and continuously energize the signal B. The wire 35 and the wires 24; 32, 31; and 34, 33 leading from the selector switch S^5 to the remaining signals A, C and D are regarded as parts of normally open circuits in which the wire 36 and the pair of switches S' and S^2 are included upon operation of the switch S^3 when the selector switch is appropriately set. The wires 32 and 34 extending from the connections 31 and 33 to the contacts 15 of said pair of switches are portions of the foregoing normally open circuits.

The operation of the present invention is as follows: Assuming that the pair of switches S' and S^2 is supported or located in an office within convenient reach of the occupant of the office and that the push button switch S^3 is located in the waiting room of this office. The selector switch S^5 should also be located within the office. Now if the arm 19 of the switch S^5 is turned so that it engages contact A' it will connect the wires 24 and 35. The switch S^4 is closed. Depression of the button 13 of the switch S^3 the name plate A will illuminate the signal A and the patient will be informed of the office hours of the doctor. The circuit then operative comprising the wire 11, lamp L, switches S' and S^2, wire 36, switch S^3, wire 35, switch S^5, wire 24 to the light beneath the name plate A and from thence through the wires 21 and 20 and to the feed wire 10. Also during this interval the bell E would be operated thus announcing to the occupant of the office that a patient or customer has called. Now the occupant of the office may indicate to the patient or customer to "wait" or "come" by pressing either of the buttons S^2 or S', respectively. Assuming that he desires the patient to come into his office and presses the button 13 of the switch S' then the current will travel from the switch S' through wire 32 to the light beneath the name plate C and from thence through the wires 21 and 20 to the feed wire 10. If the occupant of the office had pressed button 13 of the switch S^2, then the current would pass through the wire 33 to the light beneath the name plate D and from thence through the wires 21 and 20 to the feed wire 10.

As previously stated, the switch S^4 should be closed during the presence of the occupant of the office and with this switch closed the current will travel from the feed wire 11 to the light L through the switches S' and S^2 and from thence through the switches S^3 and S^4 and then through the light beneath the name plate B and through the wires 21 and 20 to the feed wire 10. The name plate B having printed thereon the words "Please press button" will therefore be illuminated at all times.

Should the occupant of the office desire to leave his desk or other location where the switches S', S^2 and S^5 are located and desire to set the system so that his wishes will be indicated upon a customer or patient closing the switch S^3, then he may operate the switch S^5 so that the free end of the switch arm 19 may contact with either the contact point D' or C'. If contact point D' is engaged by the switch arm 19 then upon a person closing the switch S^3 the bell E will ring and the current will travel through the switch arm 19 through the wire 34 and thence through the light beneath the name plate D and continue through the wires 21 and 20 to the feed wire 10. If the switch arm 19 is brought to engage the contact arm C' then the current will travel through the wires 32 and 31 through the light beneath the name plate C and from thence through the wires 21 and 20 to the feed wire 10.

If the switch arm 19 of the switch S^5 is positioned as shown in the drawing then upon a person closing the switch S^3 the current will travel from the light L through the switches S', S^2, S^3, bell E, wire 35, switch S^5 thence through the wires 27, 21 and 20 to the feed wire 10. Only the bell E will be operated with this arrangement, that is assuming that the switch S^4 has been opened. The customer or patient will, of course, hear the bell ringing and if no response is made he will assume that no one is present in the office. This manner of notifying a patient or customer may be utilized. However, it is better if the switch S^5 is operated so that the arm 19 will connect the wires 24 and 35 and then upon the customer or patient closing the switch S^3 the bell E will be energized and the current will flow through the lights beneath the name plate A and thus illuminate this plate and notify the customer or patient of the office hours of the occupant of the office. With this arrangement the switch S^4 may be closed and thus always suggest to the patient or customer to press the button 13 of the switch S^3.

While I have shown the general and preferred form of the name plates, switches and a resistance employed in carrying out my invention, I here wish it to be understood that I am not to be so limited as indicated by the appended claims.

What I claim is:

1. In a call system for an office and an associated waiting room a plurality of two-

way switches biased to one circuit closing position two of said switches being in said office and one at said wating room, a normally closed circuit serially including the normally closed contacts of all of the said switches and a signal at said waiting-room instructing operation of the switch at said room, an audible signal in said office, a circuit therefor including serially the normally open contact of the switch at the waiting-room the normally closed contacts of the two switches in said office and a selective switch and a pair of branches including a pair of directing signals indicating "come" and "wait" respectively and separate contacts of said selective switch, whereby either of said directing signals may be connected in series with said audible signal, permitting operation of the switch at said waiting-room to close the circuit to said audible signal and to the selected one of said directing signals, a branch circuit for each of said directing signals including respectively the normally open contact of said two-way switches in said office, whereby operation of one of said switches opens the circuit closed by said waiting room switch and closes the circuit to the other of said directing signals.

2. In a signal system between two separated stations, a plurality of two-way switches biased to one circuit closing position, two of said switches being in one of the stations and one at the other of the stations, a normally closed circuit serially including the normally closed contact of all of said switches and a signal at said other station instructing operation of the switch in said other station, an audible signal in said one station, a circuit therefor including serially the normally open contact of the switch in said other station, the normally closed contacts of the two switches in said one station and a selective switch, and a pair of branches including a pair of directing signals indicating "come" and "wait" respectively and separate contacts of said selective switch, whereby either of said directing signals may be connected in series with said signal permitting operation of the switch in said other station to close the circuit through said audible signal and to the selected one of said directing signals, a branch circuit for each of said directing signals including respectively the normally open contact of said two-way switches in said one station, whereby operation of one of said switches opens the circuit closed by said other station switch and closes the circuit to the other of said directing signals.

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