Sept. 18, 1923. 1,468,321

J. F. NEWSOM

ELECTRIC CONTROL SYSTEM

Filed Sept. 28, 1921

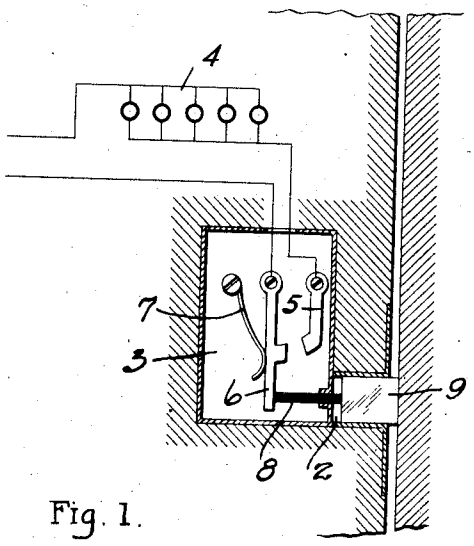


Fig. 1.

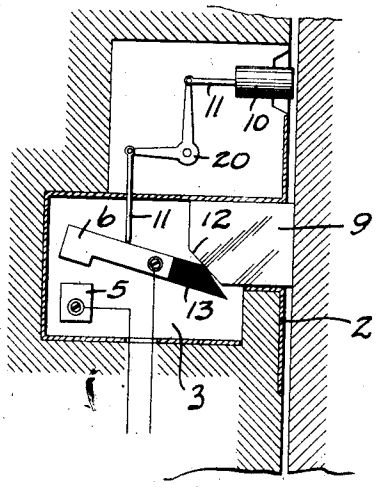


Fig. 2.

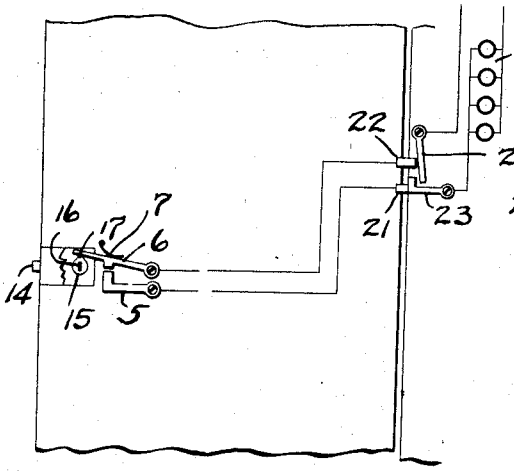


Fig. 3.

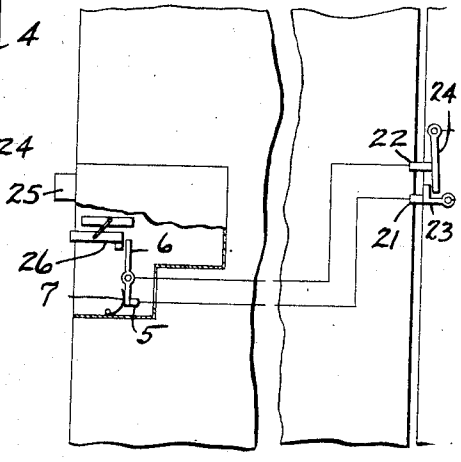


Fig. 4.

WITNESS

H. Sherburne

INVENTOR

J. F. Newsom.

BY

White Prust & Evans.

his ATTORNEYS

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UNITED STATES PATENT OFFICE.

JOHN F. NEWSOM, OF PALO ALTO, CALIFORNIA.

ELECTRIC CONTROL SYSTEM.

Application filed September 28, 1921. Serial No. 503,873.

To all whom it may concern:

Be it known that I, JOHN F. NEWSOM, a citizen of the United States, and a resident of Palo Alto, Santa Clara County, State of California, have invented a certain new and useful Electric Control System, of which the following is a specification.

The invention relates to electric control systems and particularly to a system for controlling electric lighting circuits.

An object of the invention is to provide means operative by the locking of the door from the outside of a room or apartment for opening the electric lighting circuit of the room.

The invention possesses other advantageous features, some of which, with the foregoing, will be set forth at length in the following description where I shall outline in full, that form of the invention which I have selected for illustration in the drawings accompanying and forming part of the present specification. In said drawings I have shown several embodiments of my invention, but it is to be understood that I do not limit myself to such forms, since the invention, as set forth in the claims, may be embodied in a plurality of other forms.

Referring to said drawings.

Figure 1 is a section through the locking side of a door casing showing one form of the system of my invention associated therewith, the drawing being partly diagrammatic.

Fig. 2 is a similar view of a modified form of control device.

Fig. 3 is an elevation of a door showing another embodiment of the system of my invention.

Fig. 4 is a similar view of another modified form of the system.

The system of my invention is particularly designed to open the circuit of the electric lamps in a room when the door of the room is closed and locked from the outside. This system is particularly advantageous in hotels, where the guest frequently leaves his room with the lights burning. With the system of my invention installed, the light circuit is automatically opened as the door is locked from the outside. The system may be embodied in many different forms, and for different characters of locks is necessarily embodied in different forms and in the drawings I have shown it applied to several forms of locks. Further, the control device may be arranged in the door or it may be arranged in the door casing, and the lock may be arranged on the door or in the door casing.

In Figures 1 and 2 I have shown the control device arranged in the door jamb at the lock side of the door in position to be operated by the lock bolt. Arranged in the door casing, adjacent to the bolt aperture in the strike plate 2, is a casing 3, containing a switch arranged in the circuit of the electric lamps 4. The switch shown in Figure 1 comprises a fixed contact 5 and a movable arm 6, normally pressed into engagement with the fixed contact by the spring 7. Engaging the switch arm 6 and extending into the bolt aperture in the casing is a pin 8, preferably made of insulating material. When the bolt 9 is thrown to lock the door from the outside it engages and depresses the pin 8, opening the electric lighting circuit.

In the construction shown in Figure 2, the switch arm 6 is contacted with directly by the bolt 9, which, in this construction, has an inclined end surface 12 which engages with a similarly inclined surface on the insulated end 13 of the switch arm 6, to open the circuit. In the construction shown in Figure 1, a spring is provided for closing the switch as the bolt is withdrawn, but in the construction shown in Figure 2, the switch remains open when the bolt is withdrawn and manually operable means are provided for closing the switch. Disposed in the door casing adjacent the bolt aperture, is a push button 10 connected to the switch arm 6 by the rods 11 and the bell-crank lever 20, depression of the button serving to close the switch. It is to be understood that the circuit may be provided with other control switches, such, for instance, as for closing the circuit when the door is locked, or opening it when the door is unlocked, but the application of these switches is well known by persons skilled in the art and will not be described herein.

In Figure 3 I have shown the application of the system of my invention, to a lock having a single bolt or latch 14, which normally operates as a day latch, but which may be locked in extended position by a key from the outside of the door. In this arrangement I provide means in the lock, which is engaged and actuated by the key, to open the circuit when the key is turned

to lock the door. In the present construction I have shown a disc 15, having a slot 16 therein, into which the key extends. The disc is provided with an extension or projection 17, which, when the key is turned to door locking position, raises the switch arm 6, to open the circuit. This switch is arranged in the door and the circuit must be carried from the door to the door casing, at which point it is connected to the lighting circuit. I have provided contact means which operate, when the door is open, to close the lighting circuit independently of the control switch, and when the door is closed, to close said circuit through the control switch so that the locking of the closed door will open the lighting circuit. Arranged on any suitable edge of the door are two contacts 21 and 22 connected respectively to the two switch parts 5 and 6. In Figs. 3 and 4 these contacts are shown on the hinged side of the door, but it is to be understood that they may be arranged on the lock side of the door or on any other edge. These contacts project from the edge of the door and when the door is closed, engage respectively the movable contact 23 and the fixed contact 24 on the door jamb. When the door is open, contacts 23 and 24 are in engagement, closing the lighting circuit at that point. When the door closes, contact 22 engages the switch arm 24 and opens the circuit at that point, but closes it through the switch associated with the lock.

In Figure 4, I have shown the system applied to a lock having a single latch 25, which serves both as the day latch and the night latch. Locks of this type are usually provided with two pins, one of which when depressed, sets the latch as a day latch and the other of which when depressed, sets the latch as a night latch. When set as a day latch, the door may be opened by turning either the inside or the outside knob and when set as a night latch, the outside knob is locked against rotation so that the door may be opened from the inside only. In the present construction, depression of the pin 26, sets the lock so that it operates as a night latch. The switch arm 6 is associated with the pin 26, so that depression of the pin opens the circuit between the arm 6 and the contact 5. The light circuit is closed, as long as the door is open, by the switch 23—24, but when the door is closed, (the pin 26 being in depressed position), the circuit is opened. When the lock is set for day latch the switch at the lock is closed, so that closing the door does not open the circuit. This is accomplished only when the door is closed and locked.

I claim:—

1. The combination with a door having a lock, of an electric circuit, a switch in said circuit arranged on said door and associated with said lock, means operative by the setting of the lock to locked position for opening said switch, a second switch in said circuit arranged to be closed when the door is open and means operative by the closing of the door for opening said second switch and placing said first switch in the circuit.

2. The combination with a hinged door and a lock therefor, of an electric circuit, a switch in said circuit arranged on said door adjacent said lock and arranged to be opened by movement of the lock to locked position, contacts on the edge of the door, wires connecting said switch with said contacts, a second switch on the door jamb adjacent said contacts, connected in said circuit and normally closed and adapted to be engaged by said contacts on the door to open the second switch and connect the first switch in circuit.

In testimony whereof, I have hereunto set my hand.

JOHN F. NEWSOM.