G. WRIGHT & H. P. BALL.

DOOR LOCK SWITCH.

APPLICATION FILED FEB. 19, 1908.

1,075,955.

Patented Oct. 14, 1913.

Fig. 1.

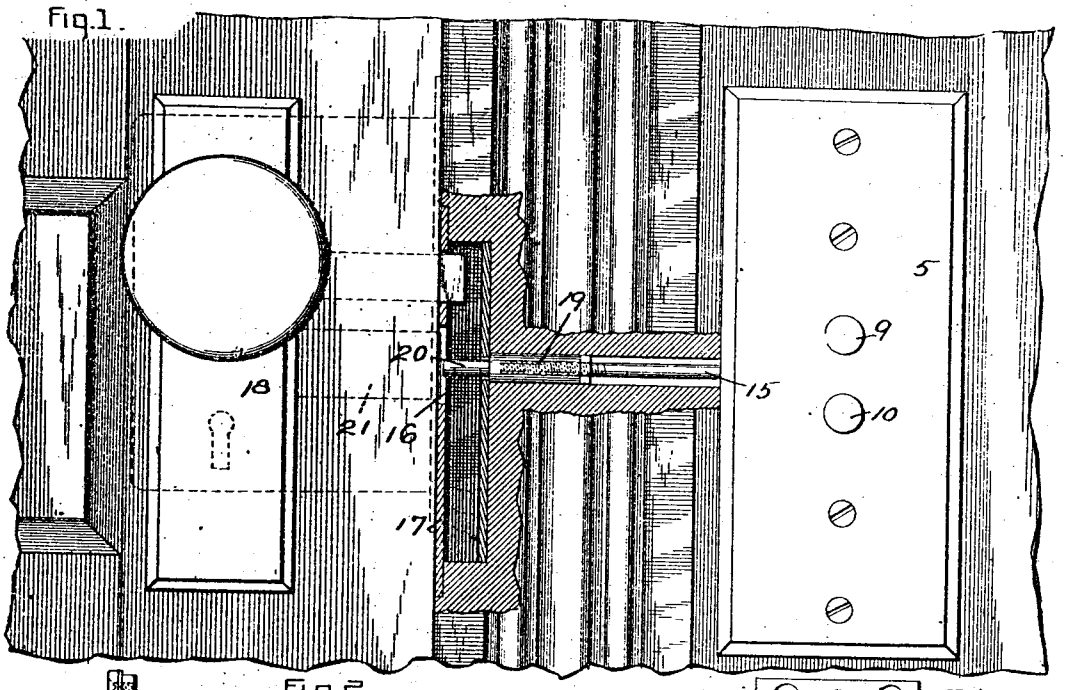


Fig. 2.

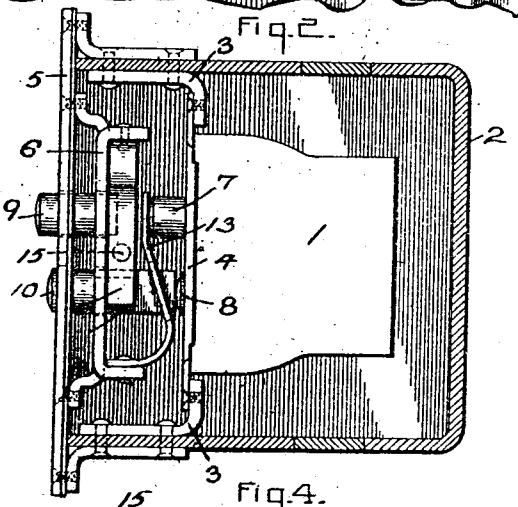


Fig. 3.

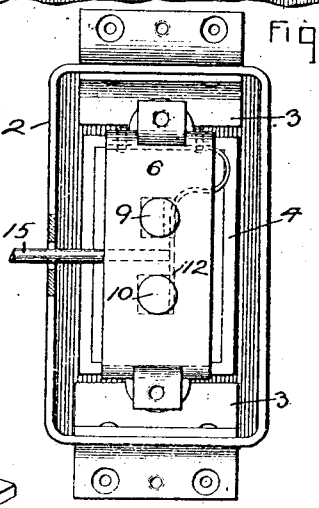


Fig. 4.

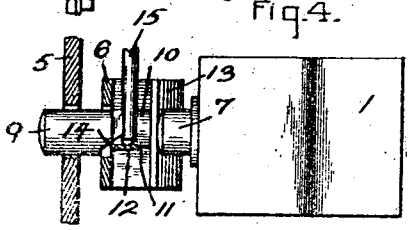
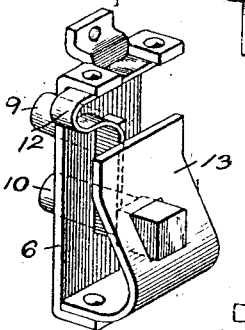


Fig. 5.



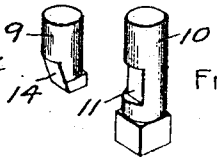


Fig. 6.

WITNESSES.

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UNITED STATES PATENT OFFICE.

GILBERT WRIGHT, OF SCHENECTADY, AND HENRY PRICE BALL, OF NEW YORK, N. Y., ASSIGNORS, BY MESNE ASSIGNMENTS, TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

DOOR-LOCK SWITCH.

1,075,955. Specification of Letters Patent. Patented Oct. 14, 1913.

Application filed February 19, 1908. Serial No. 416,754.

To all whom it may concern:

Be it known that we, GILBERT WRIGHT and HENRY P. BALL, citizens of the United States, residing, respectively, at Schenectady, county of Schenectady, State of New York, and at New York, county of New York, State of New York, have invented certain new and useful Improvements in Door-Lock Switches, of which the following is a specification.

This invention relates to automatic switches for electric lighting circuits, and its object is to insure the turning out of the lights in a room when the door of said room is locked from the outside.

The invention is especially intended for hotel room doors, with a view to preventing unnecessary consumption of current when the occupant of the room omits to turn off the lights before leaving it.

To this end our invention consists in the combination with a two-button switch of any standard make, of two auxiliary push-buttons preferably in line with those in the switch, a device for locking the switch when the lights have been turned on, means for tripping said locking device by hand at will, means for automatically tripping it when the door is locked from the outside, and means for opening the switch when said locking device is tripped in either manner.

Modern hotel door locks have two independant locking bolts, one operated only from the inside of the room and the other only from the outside of the same. Our device is combined with the outside bolt only, leaving the inside bolt free to be operated both in locking and unlocking the door without affecting the switch.

The specific details of construction of which we prefer to make use are shown in the accompanying drawing, in which—

Figure 1 is an elevation of a portion of a door and the adjoining wall of the room, showing the lock and the switch and the intermediate tripping device. Fig. 2 is a vertical sectional elevation of the switch. Fig. 3 is a front view of the same, with the face-plate removed. Fig. 4 is a horizontal sectional view. Fig. 5 is a perspective view of the auxiliary push-buttons, the detent spring and the operating spring; and Fig. 6 shows the auxiliary push-buttons in perspective.

The two-button switch 1 may be of any standard make suitable for controlling the lighting circuit of the room. It is mounted in a box 2, preferably by means of brackets 3 secured to the inside of the box in position to receive the face-plate 4 of the switch. The box is provided with a flush-plate 5, to the rear side of which is secured a bridge 6. Two holes are made in the flush-plate and the bridge, preferably in line with the push-buttons 7 8 of the switch, and in said holes are located the auxiliary push-buttons 9 10. The latter is always in contact with the button 8, and when pushed in, as shown in Fig. 2, it operates to turn on the lights. In one side of this push-button 10 is a recess forming a shoulder 11, and secured to the bridge is a detent, preferably the flat spring 12, adapted to snap into said recess and engage with said shoulder when the button is pushed in; as shown in Figs. 2, 4 and 5. This locks the switch in the closed position, with the lights on.

When the detent is disengaged from the button 10, the lights will be automatically extinguished by a strong spring 13, one end of which is secured to the bridge 6 while its free end bears upon the dark push-button 7 of the switch, and constantly tends to push the same inward.

Two devices are provided for tripping the detent and permitting the spring 13 to put out the lights. One of these devices is the trip-button 9 preferably constructed and arranged as shown, that is to say, with a shank having a beveled surface 14 standing adjacent to one edge of the detent spring, so that when said button is pushed in the beveled surface will wedge the spring out of the recess in the button 10, thereby releasing it from the shoulder 11. This trip-button, therefore, affords provision for extinguishing the lights by hand at the will of the occupant of the room. The buttons 9 and 10 are preferably provided with squared shanks where they pass, one through the bridge and the other through the bridge and spring 13, in order to prevent them from rotating and thereby throwing the shoulder 11 and the bevel 14 out of operative relation to the detent spring. The other means for disengaging said detent spring from the push-button 10 is the tripping-rod 15, whose end lies adjacent to the detent, preferably between the two auxiliary push-buttons. The rod runs out through a

hole in the side of the box 2 and terminates at the bolt hole 16 in the striking-plate 17 of the door lock 18; the box 2 being let into the wall of the room adjacent to the door, as shown in Fig. 1. We prefer to make the tripping-rod adjustable in length, preferably by tapping it into a sleeve 19, which has a projection 20 extending to the bolt hole 16, and adjacent to the end of the outside bolt 21.

When the occupant of the room goes out, and shuts and locks the door, the bolt 21 is shot through the bolt hole 16 and forces the tripping-rod lengthwise, causing it to push the detent spring off the shoulder 11 and thereby release the push-button 10 and permit the spring 13 to throw in the dark button 7 and extinguish the lights. Upon reëntering the room, the occupant can turn on the lights again by means of the push-button 10, and when the detent snaps into the locking recess in said button it also restores the tripping-rod to its operative position. So long as the occupant of the room remains in it, he can control the lights by means of the two auxiliary push-buttons, quite independently of the door lock.

What we claim as new and desire to secure by Letters Patent of the United States, is—

1. The combination with a two-button switch, of an auxiliary push-button in line with one button of said switch, a detent for locking said auxiliary button when the switch is closed, a trip-button for releasing said detent, and independent tripping means adapted to be actuated by a door bolt.

2. The combination with a two-button switch, of an auxiliary push-button in line with one button of said switch and provided with a recess, a detent spring adapted to engage with said recess, a trip-button adapted to disengage said spring from said recess, and a tripping-rod having one end adjacent to said detent spring.

3. The combination with a two-button switch, of an auxiliary push-button in line with one button of said switch, and provided with a recess, a detent spring adapted to engage with said recess, a trip-button having a beveled surface adapted to engage with said spring and disengage it from said recess, and a tripping-rod having one end adjacent to said detent spring.

4. The combination with a two-button switch, of a box for containing the same, a flush-plate for said box, a bridge secured to said plate, auxiliary push-buttons supported in said plate and bridge, a detent adapted to lock said switch closed, a spring tending to open said switch, and a tripping device capable of operation by a door bolt.

5. The combination with a two-button switch, of a box for containing the same, a flush-plate for said box, a bridge secured to said plate, an auxiliary push-button supported in said plate and bridge in contact with one of the switch buttons, a detent spring secured to said bridge and adapted to engage with said auxiliary push-button, a spring supported on said bridge and bearing upon the other switch button, a trip-button supported in said plate and bridge and having a beveled surface adjacent to said detent spring, and a tripping-rod having one end adjacent to said detent spring, and extending out through the wall of said box.

In witness whereof I, GILBERT WRIGHT, have hereunto set my hand this 13th day of February, 1908, and I, HENRY P. BALL, have hereunto set my hand this 15th day of February, 1908.

GILBERT WRIGHT.
HENRY PRICE BALL.

Witnesses to Wright:
HELEN ORFORD,
BENJAMIN B. HULL.

Witnesses to Ball:
W. F. WALLACE,
H. T. BROWN.