W. H. FITCH.

CIRCUIT CLOSING DEVICE FOR DOORS.

APPLICATION FILED MAR. 7, 1913.

1,077,877. Patented Nov. 4, 1913.

Fig. 1.

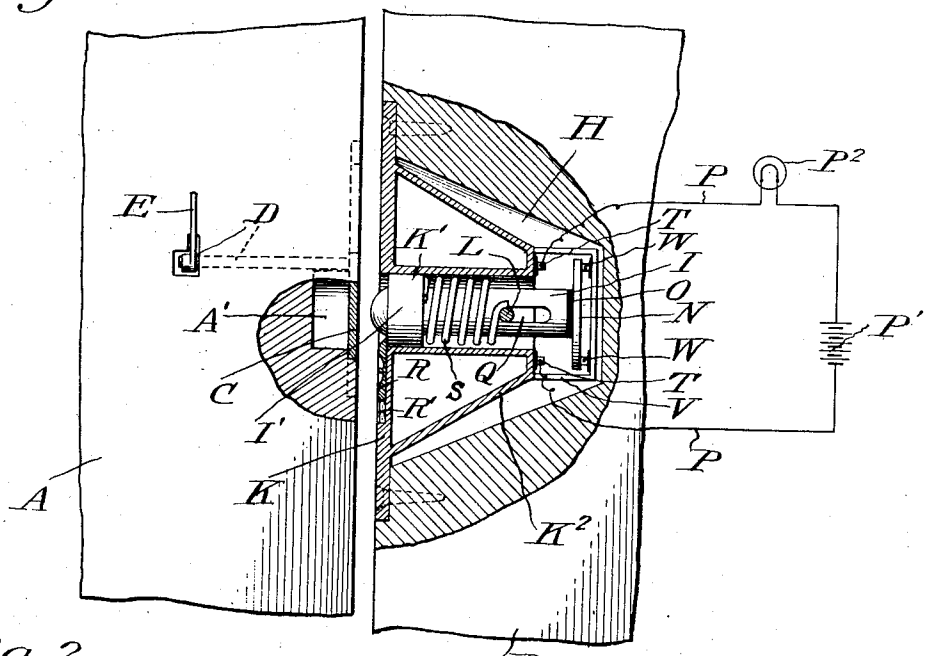


Fig. 2.

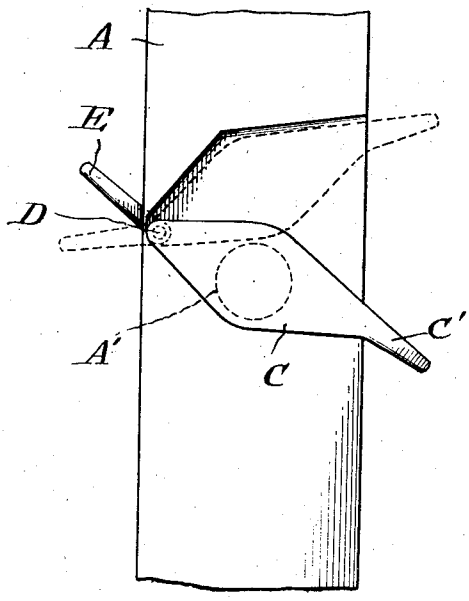
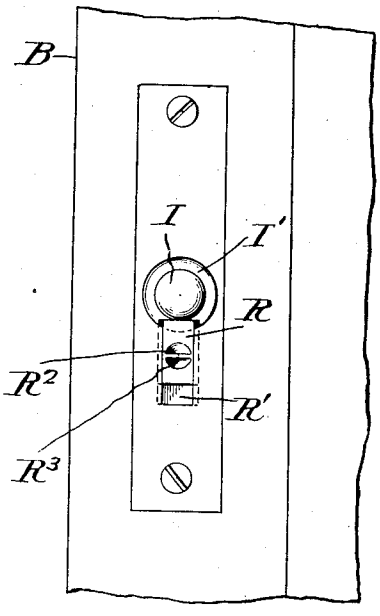


Fig. 3.



WITNESSES

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CIRCUIT-CLOSING DEVICE FOR DOORS.

1,077,877. Specification of Letters Patent. Patented Nov. 4, 1913.

Application filed March 7, 1913. Serial No. 752,652.

To all whom it may concern:

Be it known that I, WILLIAM H. FITCH, a citizen of the United States, residing at Forth Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Circuit-Closing Devices for Doors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which from a part of this specification.

This invention relates to new and useful improvements in circuit closing devices for use in connection with doors and so arranged that the lights may be turned on when the door is open or closed as the case may be.

The invention comprises a simple and efficient device of this nature having various details of construction, combinations and arrangements of parts which will be hereinafter fully described, shown in the accompanying drawings and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a side elevation, parts being shown in section, showing the application of my invention to the door and jam. Fig. 2 is an edge view of the door showing a pivotal plate attached thereto, and Fig. 3 is a detail view of the edge of a door jamb with a circuit-closing apparatus seated therein.

Reference now being had to the details of the drawings by letter, A designates a door and B a jamb. Said door is provided with a recess A′ in the edge thereof and C is a plate pivotally mounted upon a rock shaft D which is mounted in a hole in the door, and a lever E is fixed to the inner end of said rock shaft and affords means for rocking the same when it is desired to cause the plate to be raised to the position shown in dotted lines in Fig. 2. A contracted end C′ of said plate projects beyond one face of the door and affords means whereby the plate may be raised from the opposite side from the one through which the lever E projects. When the plate C is at its lowest limit, as shown in solid lines in Fig. 2, it normally closes the recess or hole A′ and forms an abutting surface for the push rod presently to be described.

The jamb of the door is recessed as at H, and K is a plate which is countersunken in the edge of the jamb and has a tubular extension K′ in which the push rod I is mounted, having a plate N fastened to the inner end thereof with suitable insulation O intermediate said plate N and the push rod I. Said rod I is guided in its longitudinal movement through the medium of the pin L mounted in the slot Q. A coiled spring S is interposed between the head I′ of said push rod and the rod L and tends to normally throw the push rod to its farthest outer limit. Terminals T are mounted upon the arms K^2 integral with said shell and to which the wires P are connected which are in circuit with a battery P′ and a light P^2. Insulated terminals W are mounted upon the frame V which projects from the arms K^2 and against which terminals W the plate N is adapted to contact when at its inner limit.

Referring to Figs. 1 and 2 of the drawings will be seen a slide R movable within the slot R′, the walls of the latter being undercut, and R^2 designates a cross-piece in a recess R^3, which cross-piece forms a convenient means for the thumb and finger of an operator when it is desired to move the slide longitudinally within the slot in which it is mounted for the purpose of bringing the plate R up to the position shown in Fig. 3 of the drawings, in which position the push rod is held retracted under tension of the spring in an inoperative position when the electric wiring is connected to the terminals T but in operative position in the event of the wiring being connected to the terminals W when the conditions are reversed.

The operation of the device will be readily understood and is as follows:—The parts being adjusted as shown in Fig. 1, when the plate C comes in contact with the projecting end of the push rod and overcomes the tension of the coiled spring S, as the door is closed, the slide R will fall by gravity within the slot in which it is mounted and out of contact with the head of the push rod, thus leaving the apparatus in condition to operate when the door is opened. As the door is opened, the spring will throw the push rod out and the plate N coming in contact with the terminals T will cause the lamp P^2 to

be lighted. The closing of the door will cause the circuit to break by the inner thrust of the push rod breaking the circuit. In the event of it being desired to hold the push rod in its inoperative position, the slide R may be thrown up to the position shown in the drawings, thereby holding the push rod at its innermost limit. Assuming the door is closed and the plate R is at its lowest throw and it should be desired to cause the lamp to be lighted without opening the door, the operator by manipulating the lever E may cause the shaft D to rock and the plate C to be raised to the position shown in dotted lines in Fig. 2, which will allow the coiled spring to throw the push rod out so that the plate N will contact with the terminals T, thus closing the circuit. After the plate C is raised to allow the push rod to be thrown out, it will be held in a raised position by the rod and, when the door is opened, the plate C will fall to the position shown in solid lines in Fig. 2 in readiness to cause the push rod to be thrown in when the door is again closed and which would break the circuit. Should it be desired to reverse conditions, causing the light to be turned on when the push rod is forced to the position shown in Fig. 1, it may be done by connecting the wires to the terminals W.

What I claim to be new is:—

1. A circuit-closing apparatus for doors, comprising a spring-pressed rod adapted to be mounted within a hole in the jamb of a door and having an insulated plate at the inner end, a slide for holding the rod at its farthest inner limit against the pressure of the spring, terminals in circuit with a battery and against which terminals said plate is adapted to contact to close the circuit when the rod is released from the slide, a door having a recess therein, and a plate pivoted to the door and normally closing said recess, said plate forming an abutment surface for the spring-pressed rod, as set forth.

2. A circuit-closing apparatus for doors, comprising a spring-pressed rod adapted to be mounted within a hole in the jamb of a door and having an insulated plate at the inner end, a slide for holding the rod at its farthest inner limit against the pressure of the spring, terminals in circuit with a battery and against which terminals said plate is adapted to contact to close the circuit when the rod is released from the slide, a door having a recess therein, a plate normally closing said recess and forming an abutment surface for the spring-pressed rod, a rock shaft mounted in said door and to which said plate is fixed, and a handle fixed to said rock shaft.

3. A circuit-closing apparatus for doors, comprising a spring-pressed rod adapted to be mounted within a hole in the jamb of a door and having an insulated plate at the inner end, a slide for holding the rod at its farthest inner limit against the pressure of the spring, terminals in circuit with a battery and against which terminals said plate is adapted to contact to close the circuit when the rod is released from the slide, a door having a recess therein, a plate normally closing said recess and forming an abutment surface for the spring-pressed rod, a rock shaft mounted in said door and to which said plate is fixed, said plate provided with a handle which projects beyond the edge of the door, as set forth.

4. A circuit-closing apparatus for doors, comprising, in combination with the jamb with a recess therein, a tubular shell, a spring-pressed push rod within said shell, a plate at the inner end of the push rod and insulated therefrom, terminals in circuit with a battery and light, a slide for holding said push rod at its farthest inner throw out of contact with said terminals against the pressure of the spring, a door with a recess therein, a plate pivotally mounted upon the door and adapted to normally close said recess and form an abutment surface for said rod, as set forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIAM HUBERT FITCH.

Witnesses:
K. V. JENNINGS,
C. B. AYRES.