

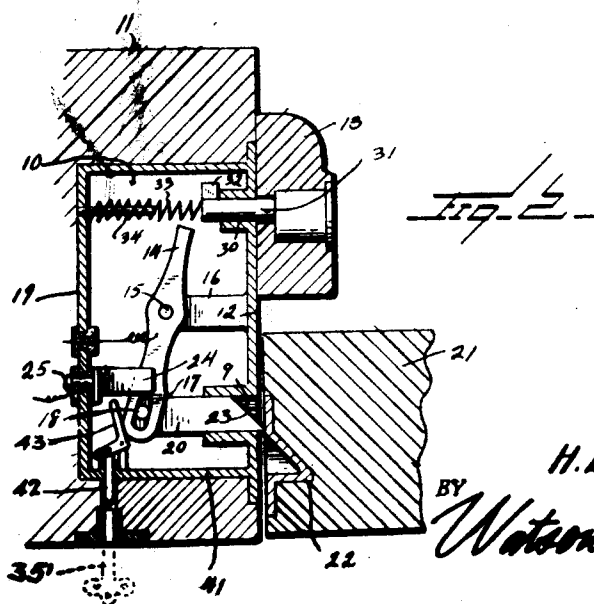
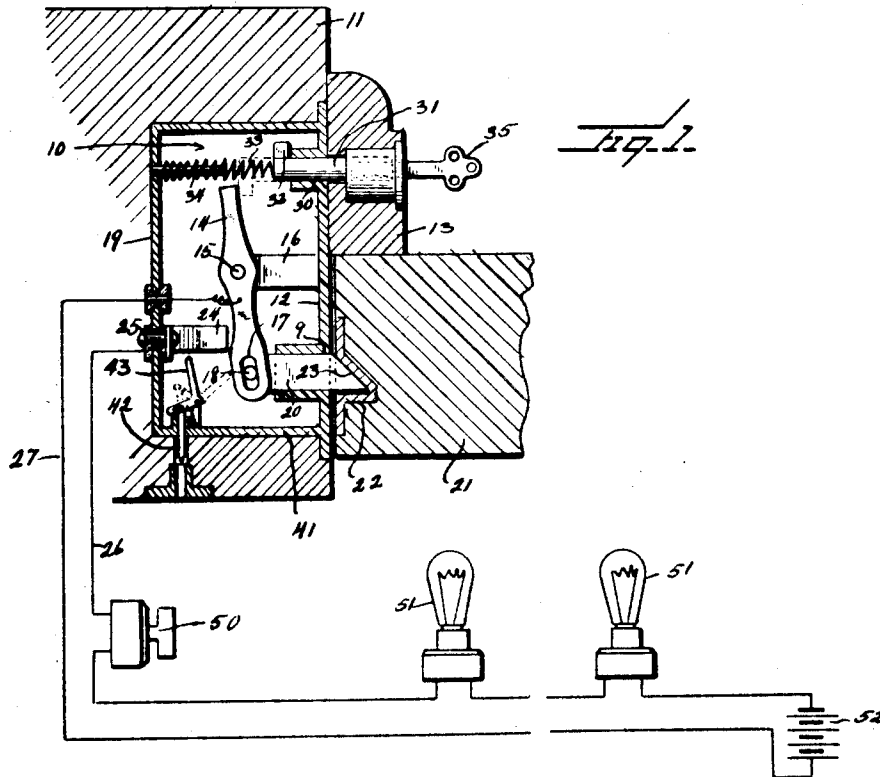
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H. B. BRADEY

CIRCUIT CLOSER

Filed March 18, 1924



INVENTOR.

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## UNITED STATES PATENT OFFICE.

HARRY B. BRADEY, OF YACOLT, WASHINGTON.

CIRCUIT CLOSER.

Application filed March 18, 1924. Serial No. 700,121.

*To all whom it may concern:*

Be it known that I, HARRY B. BRADEY, a citizen of the United States, residing at Yacolt, in the county of Clarke and State of Washington, have invented certain new and useful Improvements in Circuit Closers, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to certain improvements in signal devices and has relation more particularly to a device of this general character especially designed and adapted for use in connection with doors, windows, and 15 the like and it is an object of this invention to provide novel and improved means whereby the opening of a door, window, or the like results in the automatic closing of the circuit of an electric signalling instrument. 20 Another object of this invention is to provide a device of this character having novel and improved means located adjacent the inner and outer door or window frames whereby the device may be rendered operative or inoperative, together with additional means to break the circuit and prevent functioning of the device when the first named means is operative.

30 An additional object of the invention is to provide a device of this character which may be employed to illuminate automatically the interior of a building previous to entry, or which may be used as a signal device to be placed upon a door or window to cause a visual or audible alarm or both to function, thus warning of the opening of said door or window. 35

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved signal device whereby certain important advantages are attained and the device rendered simpler, less expensive, and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth. 40

The novel features of my invention will hereinafter be definitely claimed.

50 In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein it will be understood that various changes and modifications may be made as to the detailed construction and arrangement of parts without departing from the spirit of the invention 55

as hereinafter claimed, and in which drawings:—

Figure 1 is a sectional and plan view of the complete device in the operative position: 60

Figure 2 is a similar view showing the switch mechanism in the closed position.

As disclosed in the accompanying drawings, 10 denotes a metal casing or housing set within the door frame 11 and having its vertical front plate 12 flush with the face of the frame and partly underlying the buffer strip 13. A movable switch blade 14 is arranged within the casing 10 and supported on pivot 15 of arm 16. The blade 14 is provided adjacent to one end with a slot 17 engaging the pin 18 provided near the inner end of bolt 20. 65 70

The outer end of bolt 20 is projected through the opening 9 in the plate 12 into the path of the door 21 and fits into a keeper 22 set in the edge portion of said door. Bevel faces 23 on the projecting end of bolt 20 and within the keeper 22 cause the bolt to be given an inward sliding movement from its projected position when the door is opened. 75 80

An electric contact 24 is secured to the inner face of the rear plate 19 of the casing and is insulated therefrom. This contact is adapted to engage the switch blade 14 when said blade is shifted by the inward movement of bolt 20 and to maintain it in the shifted position. An insulated binding-post 25 connects the contact 24 at a point without 85 90 the casing with the wire 26 of an external electric circuit. The other wire 27 of the circuit is led through the plate 19 and secured to the blade 14.

Adjacent to the outer edge of the plate 12 of the casing 10 is provided an opening 30 which is extended through the buffer strip 13. A stem or shank 31 extends within the casing 10 through opening 30 and the inserted end portion of the stem is provided with a radial extension or lug 32. The stem 31 has both rotational and longitudinal movement and is adapted to engage, through the lug 32, an end portion of the blade 14, and to impart movement thereto. Such movement is transmitted to the opposite end portion of the blade and results in a breaking of the electrical engagement of the blade with the contact 24 and a forcing of the bolt 20 into its projected position within the keeper 22. A spring 33 is mounted within the casing on the guide 34 and bears against 105 110

the inner face of the stem to maintain said stem in an outwardly projected position where the lug 32 takes up against the plate 12. A person leaving the building is enabled, by means of this mechanism, to place the device in an operative condition by imparting the necessary movements to stem 31 through key 35 adapted to fit into the outer end of said stem.

Slidably disposed through the inner side plate 41 of the casing 10 is a rod 42 having its inner end portion operatively engaged with an arm of the bell crank lever 43. Upon pushing the rod 42 inwardly, the lever 43 will contact with and impart motion to the blade 14 to move said blade from "on" to the "off" position. Thus, a person, having entered the building and closed the door, is enabled to place the device in an operative condition from the interior. In order to do this, however, I provide a structure, as is particularly illustrated in the accompanying drawings, wherein the requisite inward movement of the rod 42 will be made through the instrumentality of a key, indicated by broken lines at 35' in Figure 2.

The external electric circuit which the device operates to close may contain any suitable instruments such as the switch 50 and lights 51. Energy for the circuit is furnished by the dry cell or storage battery 52.

The operation of my novel device, when set, is such that the opening of the door will cause the switch blade contact to close, and said contact will remain closed until the device is again set by the means provided within or without the building.

I claim:—

1. A circuit closer comprising a movable member and a stationary casing, said casing containing a stationary contact and a movable contact, a bolt operatively engaged with the movable contact, said bolt projecting in the path of the movable member when the

movable contact is out of engagement with the stationary contact, said movable member being adapted to contact with and move the bolt in a direction to bring the movable contact into engagement with the stationary contact, a stem mounted in a wall of said casing for rotational and longitudinal movement, said stem being provided at its inserted end with a lug and having its opposite end projecting outwardly of said casing and provided with operating means, said stem being adapted to contact with and impart movement to said movable contact, and means within the casing for normally maintaining said stem out of contact with the movable contact, and additional means for moving the movable contact out of engagement with the stationary contact and projecting the bolt into the path of travel of the movable member.

2. A circuit closer for use in connection with a relatively stationary member and a movable member, comprising a casing carried by the stationary member, a slidable bolt within the casing adapted to be projected therebeyond, the movable member having a recess normally receiving the bolt and acting to retract the bolt when the movable member is moved, a contact stationarily mounted within the casing, a pivoted contact having one end operatively connected with the bolt and adapted to be brought into engagement with the stationary contact when the movable member is moved, and resetting means comprising a key-controlled stem longitudinally slidable and rotatable through one side of the casing and terminating in a lug adapted to be brought into engagement with the other end of the pivoted contact for moving it out of engagement with the stationary contact and projecting the bolt.

In testimony whereof I hereunto affix my signature.

HARRY B. BRADEY.