J. G. HARRISON.

COMBINED ALARM AND ELECTRIC LIGHT SWITCH.

APPLICATION FILED MAR. 26, 1912.

1,108,750. Patented Aug. 25, 1914.

Fig 1

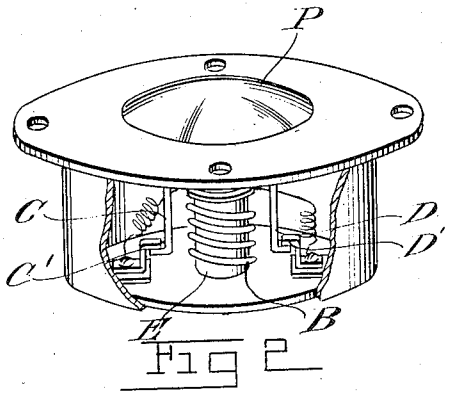
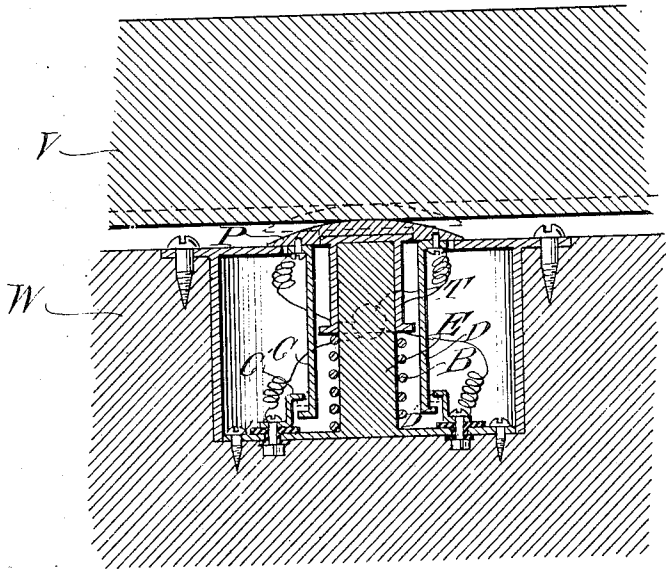


Fig 2



Inventor

James G. Harrison

Witnesses

W. N. Slifer

John A. Donnelly

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

JAMES G. HARRISON, OF GOLDFIELD, COLORADO, ASSIGNOR OF ONE-HALF TO UNA COY HARRISON, OF PARKDALE, COLORADO.

COMBINED ALARM AND ELECTRIC-LIGHT SWITCH.

1,108,750. Specification of Letters Patent. Patented Aug. 25, 1914.

Application filed March 26, 1912. Serial No. 686,450.

To all whom it may concern:

Be it known that I, JAMES G. HARRISON, a citizen of the United States, residing at Goldfield, in the county of Teller and State of Colorado, have invented new and useful Improvements in Combined Alarm and Electric-Light Switches, of which the following is a specification.

The object of the invention hereinafter disclosed is, broadly speaking, to provide a combined alarm and electric light switch.

A more specific object of the invention is to provide a device applicable to those portions of residences, stores, offices, furniture, etc., in which one movable element is found in juxtaposition to an element which is fixed, relative to the movable element which device shall, on undue movement of the movable element, operate to close an electric light circuit and bell circuit.

A further object of the invention is to provide a circuit closer which shall operate only on undue movement of the movable element to which it is juxtaposed and not on movements thereof which are unavoidable such as those produced by accidental displacement, the force of the wind, etc.

A further object of the invention is to provide contacts held apart by the action of a movable member as an abutment, independent means being provided when the movable member fails to act as an abutment, adapted to press the contacts together thereby closing an electric circuit.

In the drawings hereunto annexed, my invention is illustrated in two views.

Figure 1 is a perspective view of the device detached from its support. Fig. 2 is a central vertical sectional view thereof showing the relations thereto of the fixed and the movable members.

Referring to the drawings for a more detailed disclosure of my invention, the same consists of a support or guide E mounted in an opening or depression formed in a fixed member W (Fig. 2). The support projects from a casing 1 fitting the depression and having an annular top partially closing the casing and forming a central opening. Telescopically mounted on the support E through the medium of a sleeve T, is a circular disk P provided with an approximately spherical or a conical surface adapted to contact with the movable element V. The surface of the disk which contacts with the movable member should be of such a contour that it recedes gradually throughout its extent from the center of the disk to the periphery thereof, so that whatever the displacement of the movable member may be, it can be readily moved back to contact with the disk at the center thereof. The disk is pressed away from the support E toward and into engagement with the movable member V by means of a spring B.

The disk P and support E are provided with pairs of contacts, such contacts C and D being carried on the disk P and contacts C and C′ and D and D′ being adapted respectively to close the electric light circuit and the bell circuit when the movable element V is sufficiently displaced to allow the spring B to act to cause engagement of the contacts C—C′ and D—D′ as shown by broken lines in Fig. 2. One of such circuits including conductors 1 and 2 connected respectively to the disk P and contact C′ and the other of such circuits including conductors 3 and 4 connected respectively to the disk P and the contact B′. I have therefore provided a combined alarm and electric light switch which, when applied to a window casing for instance, will permit of reasonable adjustment of the window frame for ventilating purposes without causing the annoyance resulting from the sounding of the alarm or the illumination of the room. This advantage is maintained also when the invention is applied to door casings in which instance, a slight swinging of the door caused, either inadvertently or through the action of the wind, will not operate to close the circuits.

As before stated, the alarm is not given unless the movable member is so unduly displaced as to permit the contacts C—C′ and D—D′ to be forced together by the movement of the spring actuated member P. This function is attributed to the arrangement of parts, whereby, the disk is pressed toward the movable member and to the contour of the face of the disk. Thus, it will be seen that in contradistinction to those devices heretofore employed wherein the contacts are rotated by a friction wheel, a device is provided which needs no nice or fine adjustment and one which will allow for a reasonable displacement of the movable member without closing the circuits.

Having disclosed my invention what I claim is:-

The combination with a fixed member and a movable member, the former being formed with a depression, of a casing secured in said depression, a support fixed in said casing and rising centrally therefrom a sleeve slidably mounted on said support, a disk carried by the upper end of the sleeve, said support limiting the movement of the sleeve and disk in one direction, a spring coöperating with the sleeve to normally actuate the same in the upward direction, spaced independent contacts arranged in pairs, the similar contacts of each pair being carried by the disk and the remaining contacts of each pair by the casing, and independent electric circuits connected to the respective coöperating pairs of contacts, the coöperation of the respective contacts limiting movement of the disk under the influence of the spring.

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

JAMES G. HARRISON.

Witnesses:
SHIRLEY HARRISON,
VALENTINE GETZ.