(No Model.)

N. F. STODDARD.

ELECTRICAL CUT-OUT.

No. 369,889. Patented Sept. 13, 1887.

Fig. 1.

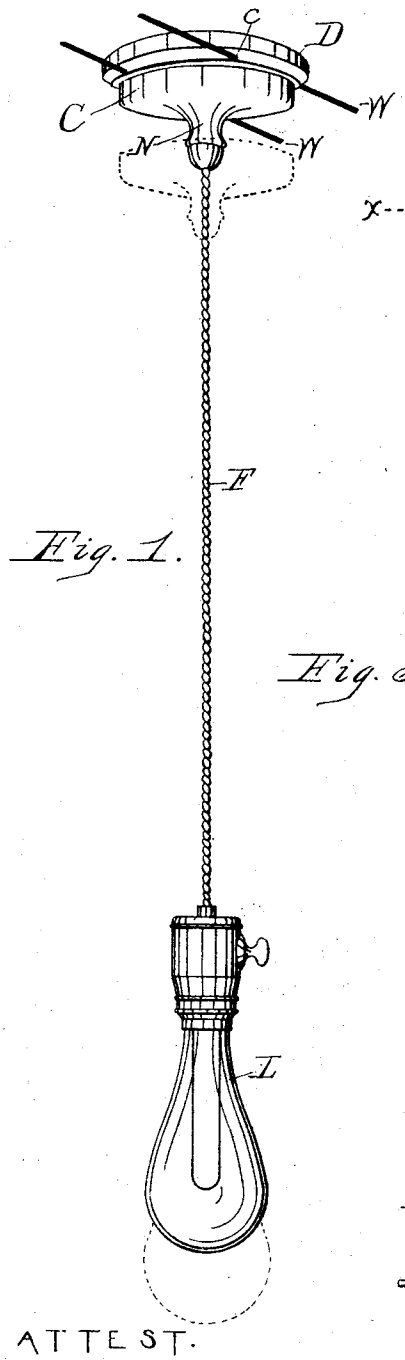


Fig. 2.

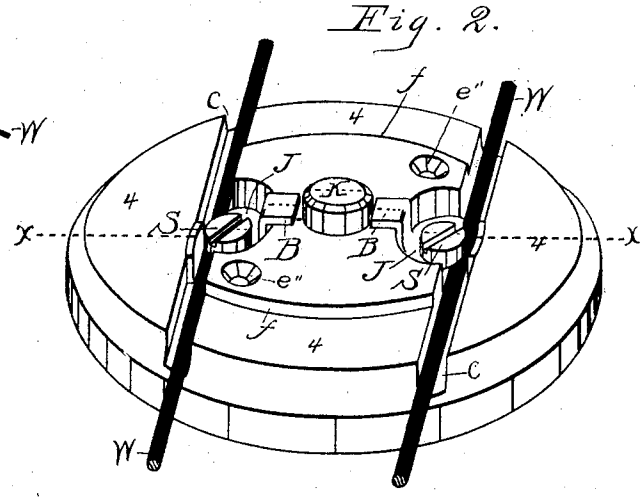


Fig. 3.

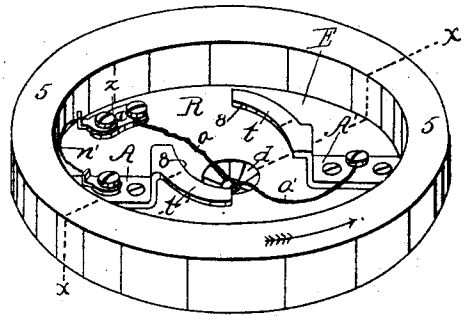


Fig. 4.

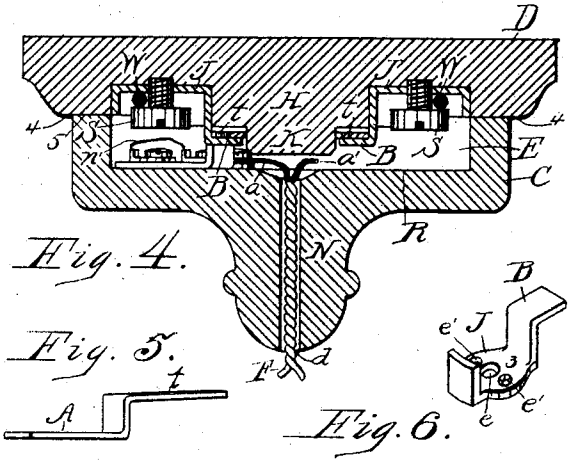


Fig. 5.

Fig. 6.

ATTEST.

C. W. Russell

B. F. Wheeler

INVENTOR.

Walton F. Stoddard

By Roscoe B. Wheeler

atty

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

NOLTON F. STODDARD, OF DETROIT, MICHIGAN, ASSIGNOR TO THE MARKLE ENGINEERING COMPANY, OF SAME PLACE.

ELECTRICAL CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 369,889, dated September 13, 1887.

Application filed April 2, 1887. Serial No. 233,400. (No model.)

To all whom it may concern:

Be it known that I, NOLTON F. STODDARD, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Electrical Cut-Outs; and I do 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 form a part of this specification.

My invention in electrical devices relates especially to that class known as "electrical cut outs."

The object of my invention is to so construct the shunt-circuit that it may be readily attached to or withdrawn from the main or an electric circuit in which one or more lights are included, being so constructed that when cutting off a shunt-circuit the lamp may be removed with the wires of said shunting circuit.

The device being intended especially for that class known as "incandescent lamps," any one of the lamps with its shunting-circuit may be readily detached from the electric circuit for its removal, or in case of its failure to operate or in case it presents an abnormal resistance to the passage of the current from any cause. By my arrangement the removal of the cap to which the shunt-wire and fusible wire are attached disconnects said parts from the electrical circuit, and said parts may be readily reintroduced into said circuit when the conditions necessary for successful operation are restored, as will be hereinafter fully set forth.

With reference to my said invention, I will proceed to describe the respective parts, as shown in the accompanying drawings, in which—

Figure 1 is a perspective of my device attached to the wires of an overhead circuit. Fig. 2 is an enlarged perspective of the base inverted. Fig. 3 is an enlarged perspective of the detachable cup or cap, showing manner of connecting the lamp or shunting wires thereto. Fig. 4 is a section taken on dotted lines *x x* of Figs. 2 and 3, showing said parts coupled, as also shown in Fig. 1. Figs. 5 and 6 are enlarged details.

D represents a wooden circular base having on its under face a central hub, H, with circular edges *f f*. I also form in the under face of the base two parallel channels, *c c*, crossing the base. Said channels are made sufficiently large to freely receive the wires W of a circuit. At about midway of the length of the channels I let into the base-block a set of contact-posts, J J, which are made fast to the base. Said contact parts are provided with an internally screw-threaded hole, *e*, (see Fig. 6,) which receives the clamping-screws S, whereby said contact parts are securely connected to the wires W of an electrical circuit, said wires being forced against the base 3 of each contact, as shown in Fig. 4. The facing edges of the contact parts are provided with the angular or elbow-shaped arms B B, the horizontal or free end portions of which are located below the under face of the head H of the base, as shown in Figs. 2 and 4. *e''* are screw-holes through the base for the insertion of screws to attach the back of the base to a wall or ceiling.

Projecting from the center of the hub H of the base is a wooden post, K, which I locate between the free ends of the contact-arms B B, and which extends slightly below the under face of the arms B B, as shown in Fig. 4.

In Fig. 3 I show the rosette or cup C, which is made preferably of wood, having in its upper face the cupped-out portion or chamber E, which is made sufficiently large to receive freely the hub H of the base-block.

On the bottom R, within the chamber E, I locate the contact-brackets A A'. Each bracket is provided with an elevated circular or curved arm, *t*. (See Figs. 3 and 4.)

Z is a clamping-contact or auxiliary support, from which leads the fusible wire *m'*, having its opposite end attached to the base of the contact A. (See Fig. 3.)

The under face of the cup is provided with the central neck or handle, N, through which I form the hole *d*, leading into the center of the chamber. Through said hole I pass the shunting-strand F, which is composed of the

shunt-wires *a a'*, wound about each other. To the lower end of said wires I attach the incandescent lamp L, as shown in Fig. 1. The upper ends of the shunt-wires pass into the chamber E. The wire *a*, I attach to the clamp Z; the wire *a'* to the base of the contact A', as clearly shown in Fig. 3.

The parts are to be operated as follows: The base D being attached to the wall or support and wires of an electric circuit, as shown in Fig. 1, to attach the lamp and shunt-wires the cup C is grasped by the neck N and brought facing the base D, so as to cause the arms *t t* of the contacts A A' of the cup to surround the post K of the base. Then by slightly turning the cup C in the direction indicated by the arrow in Fig. 3 the arms *t t* will be caused to pass back of the arms B B of the contacts on the base D engaging therewith, whereby the cup C and lamp L are firmly held and connected to the base. The free ends of the arms *t t* are bent slightly upward, as shown in Fig. 5, thus allowing the ends to pass freely behind the arms B B of the contacts attached to the base, and as the cup is rotated, as before stated, the incline of the arms *t t* forces the annular face 5 of the cup against the face 4 of the base D, as clearly shown in Fig. 4, thereby drawing said cup firmly against the base and holding the lamp suspended, as shown in Fig. 1. When the parts are thus united, the circuit is as follows: The electrical current or a portion from one of the wires W passes through a contact, J B, then by an arm, *t*, to contact A' and wire *a'* through the lamp L along the wire *a* to contact Z, from said contact through the fusible wire *n'* to the contact A through the arm *t*, thence through the arm B along the contact J to the opposite circuit-wire W; or the current may be through said parts in an opposite direction.

To remove the cup C the operator grasps the neck N and rotates it (in an opposite direction to that indicated by the arrow in Fig. 3) until the arms *t t* are withdrawn from the arms B B, when the cup and lamp will drop, as shown by dotted position of Fig. 1, being detached from the base D, thus separating the shunt-circuit from the light or electrical circuit. The current has a free passage through the shunt-wires until said current becomes abnormal from any of the causes well known to those skilled in the art, when the wire *n'* is fused, thereby breaking the current through the lamp, thus avoiding accident.

The object of the projecting button or wooden post K is to prevent either of the arms *t* of the cup from crossing the contact-arms B B when attaching the cup C to the base D, as it will readily be seen that such contact would form a short circuit through the arm *t*. The arms *t t* are curved at 8, so as to freely pass around the button K when coupling the cup to its base.

It will be observed from the foregoing construction that should either of the shunt-wires become disconnected from the contacts, or in case the wire *n'* is fused, said parts may at once be detached from the circuit, handily repaired, and readily introduced or connected to the wires of an electrical circuit.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the base having the central post, the circuit-wires, the contacts attached to said base, said contacts having means of engagement with the circuit-wires, the cup having the neck with passage through it, a set of contacts located in said cup, having curved arms adapted to engage with and to be removed from the contacts of the base, a set of shunt-wires, their lower ends being adapted to receive a lamp, said wires passing through the neck of the cup, one of the wires being attached to one of the contacts, the other being attached to an auxiliary contact, and a fusible wire connecting the auxiliary contact to the contact A, as and for the purposes specified.

2. The combination of the base having on its under face the slots *c* and the central post, K, the contacts J B, attached to said base, the wires W and screws S, the wooden cup, the contacts A A', attached to said cup, each contact having the curved arm *t*, the shunt-wire *a'*, attached to the contact-wire A' and passing through the neck of the cup, the contact *a*, attached to the auxiliary contact Z and passing through the neck of the cup, the fusible wire *n'*, having one end attached to the auxiliary contact, the other end to the contact A, the lower ends of the shunt-wires adapted to be coupled to an incandescent lamp, as and for the purposes set forth.

3. In combination with the base having the central wooden post, the wires W, the contacts attached to said base, and a shell or cup having two contacts attached thereto, said contacts having means of engagement with the contacts of the base, and an auxiliary contact attached to the cup having a shunt-wire passing therefrom out of the cup, and the shunt-wire attached to the contact A' passing also out of said cup, the fusible wire connecting the auxiliary contact to the contact A and light L, substantially as specified.

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

NOLTON F. STODDARD.

Witnesses:
B. F. WHEELER,
R. B. WHEELER.