No. 665,943. Patented Jan. 15, 1901

J. H. TRUMBULL.

ELECTRIC CUT-OUT.

(Application filed Apr. 2, 1900.)

(No Model.)

Fig. 1

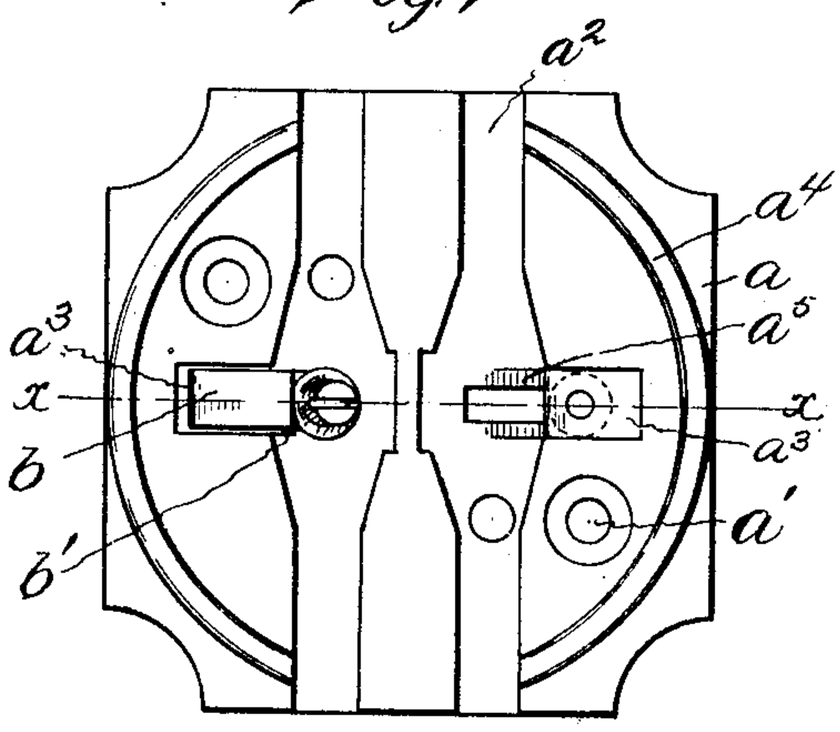


Fig. 2

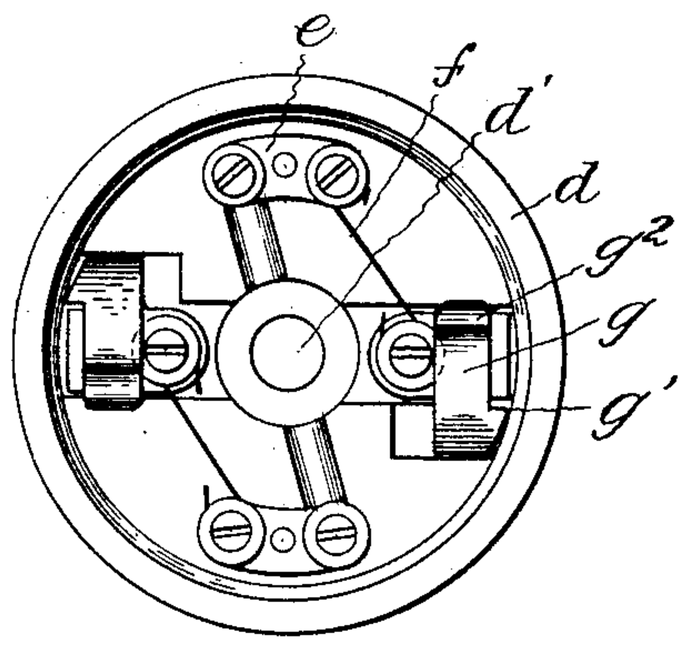


Fig. 3.

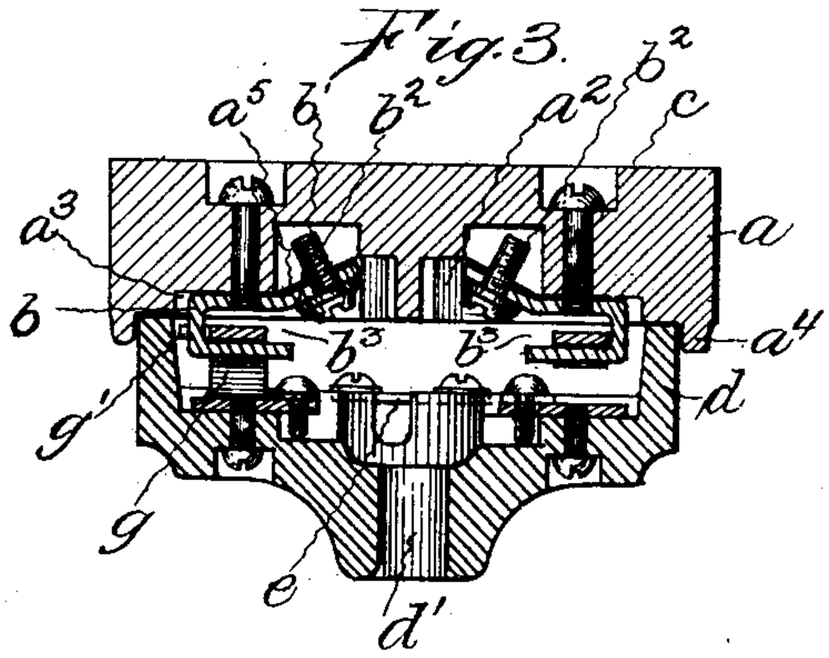
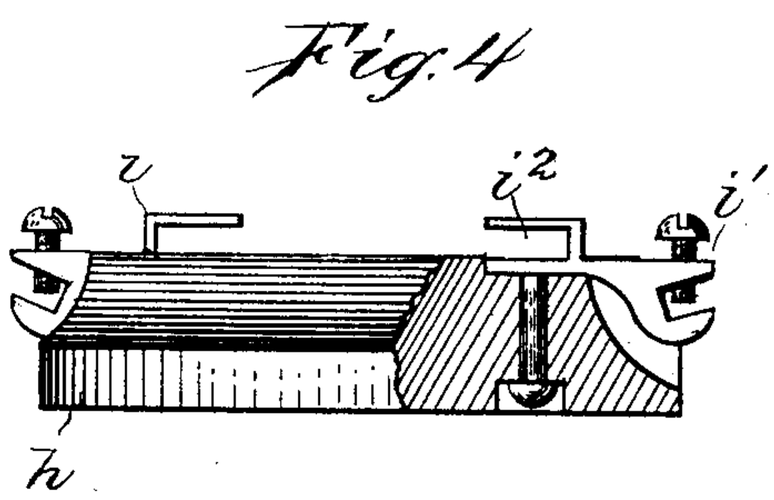


Fig. 4



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UNITED STATES PATENT OFFICE.

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ELECTRIC CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 665,943, dated January 15, 1901.

Application filed April 2, 1900. Serial No. 11,055. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. TRUMBULL, a citizen of the United States, and a resident of Plainville, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Electric Cut-Outs, of which the following is a specification.

My invention relates to the general class of cut-outs in which a lamp or the like is automatically cut out from the main line on the application of too great a current, the device herein shown for the purpose of illustrating the invention having the branch wires, or those directly connected with an incandescent lamp or like part, supported by the cap of the cut-out, which also bears a fusible connection between the main and branch wires.

One form of device in which my invention may be readily embodied is illustrated in the accompanying drawings, in which—

Figure 1 is a top or plan view of the base of the cut-out. Fig. 2 is a view of the cap looking toward the inside thereof. Fig. 3 is a detail view, in central vertical section, through the device; and Fig. 4 is a view of the base of a cut-out, showing a modified form of the invention.

In the accompanying drawings the letter a denotes the base of the cut-out, that may be made of porcelain or any other suitable material and of any desired form, the base having holes a', in which are located screws for the purpose of securing the base in place, as to a ceiling or like part, the holes being countersunk in the usual manner for the reception of the head of the screw. The base has grooves a^2, through which the main wires pass, and recesses a^3 for the reception of contact-loops. A circular rib a^4 may also be located on the base for the purpose of holding the cap in proper position during the operation of securing it in place. Contact-loops b are secured to the base, each contact-loop having a portion located in one of the recesses a^3, a bent portion b' of the contact resting on the sloping surface a^5 of the base. Screws c pass through the base and into the contact-loop for the purpose of securing it in place, and a binding-screw b^2 is provided for the purpose of connecting a main wire to the contact, the wire being clamped between the head of the screw and the contact. The bent portion b' of the contact is preferably so formed as not to lie flat on the surface b^2, but may lie in contact with such surface at one end.

A cap d is formed of porcelain or like desirable material and of a shape to fit within the rib a^4 on the base, the cap being hollow, as is usual in devices of this class. A central opening d' is formed in the cap, through which the branch wires extend to the inside of the cap, where the end of each wire is secured to a fuse-clamp e. To the opposite end of each fuse-clamp is connected a fuse f, the opposite end of the fuse being connected with contact-arms g. Each of these contact-arms is provided with a shoulder g', adapted to abut against the edge of a contact-loop, the end g^2 of each arm being bent to form a lock. The contact-arms are made of spring metal, and as they are passed through the contact-loops this bent end g^2 forms a spring-lock to prevent rotation of the cap except when a sufficient force is applied for this purpose.

The contact-loops b are open on one side, as at b^3, forming what may be termed an "open" loop, and this forms an essential feature of my invention.

By making the loop with one side open a much cheaper form of construction is provided than in prior contacts in which a hole is formed through the contact, the construction simply requiring the bending of a flat piece of metal to the proper form. Supplemental holes for the passage of wires, when desired, are provided in the passages a^2; but these form no part of the invention and may be provided or omitted, as desired.

In the form of the device shown in Fig. 4 the base h is preferably of circular form, the contact-loops i being located in a recess in the base, one end i' of the loop being located outside the periphery of the base for the reception of the main-line wire, and the loop proper, i^2, being located within the circumference of the base, the loop, however, being of the open form, as shown in the other figures of the drawings.

While I have shown herein a form of contact-loop which readily embodies my invention, it is obvious that this precise form may be departed from to a certain extent and yet

come within the scope of my invention, and I do not desire to limit myself to the precise form herein shown and described.

My invention is shown and described herein in connection with two forms of cut-out now in common use—that is, with a cleat cut-out and with a molding cut-out, in either form, however, the contact having the two branches forked to form the loop open at one side. In the form used with the molding cut-out the forked branches extend toward the arm or shank to which the wire is secured, while with the cleat cut-out the two branches extend away from the arm or shank to which the wire is secured, the construction of the two forms of cut-out necessitating such a formation of the forked open loops, and it is obvious that the invention of the open loop, in combination with the other parts, formed by two forked branches is present in either structure.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an electric cut-out, in combination, a base, contacts secured to the base and each consisting of a piece of metal bent to form a loop open on one side and having means of attachment of a line-wire, a cap for the base, and contact-pieces on the cap adapted to pass between the branches of the loop so that the flat face of each contact-piece on the cap engages the flat inner surface of the outer branch of the loop for securing the cap to the base, said contact-pieces having their ends bent to provide shoulders that engage the farther side edges of the outer arms of the loop to lock the parts in engagement, branch-wire attachment-plates on the cap, and fuse-wires connecting the attachment-plates with the contact-plates.

2. In an electric cut-out, in combination, a base, contacts secured to the base and each consisting of a single piece of metal bent to form an inwardly-opening loop and an attaching-foot extending outward from the open side of the loop, said contacts each having means for attachment of a line-wire, a cap for the base, and contact-pieces on the cap adapted to pass between the branches of the loop so that the flat face of each contact-piece on the cap engages the flat inner surface of the outer branch of the loop for securing the cap to the base, said contact-pieces having their ends bent to provide shoulders that engage the farther side edges of the outer arms of the loop to lock the parts in engagement, branch-wire attachment-plates on the cap, and fuse-wires connecting the attachment-plates with the contact-plates.

3. In an electric cut-out, in combination, a base, contacts secured to the base and each consisting of a single piece of metal bent to form a loop open on one side and having means of attachment of a line-wire, a cap for the base and contact-pieces on the cap adapted to pass between the branches of the loop so that the flat face of each contact-piece on the cap engages the flat inner surface of the outer branch of the loop for securing the cap to the base, a lock on the outer ends of each of said contact-pieces on the cap, a stop on each of said contacts adapted to engage the opposite edge of the base-contact from the lock, branch-wire attachment-plates on the cap, and fuse-wires connecting the attachment-plates with the contact-plates.

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