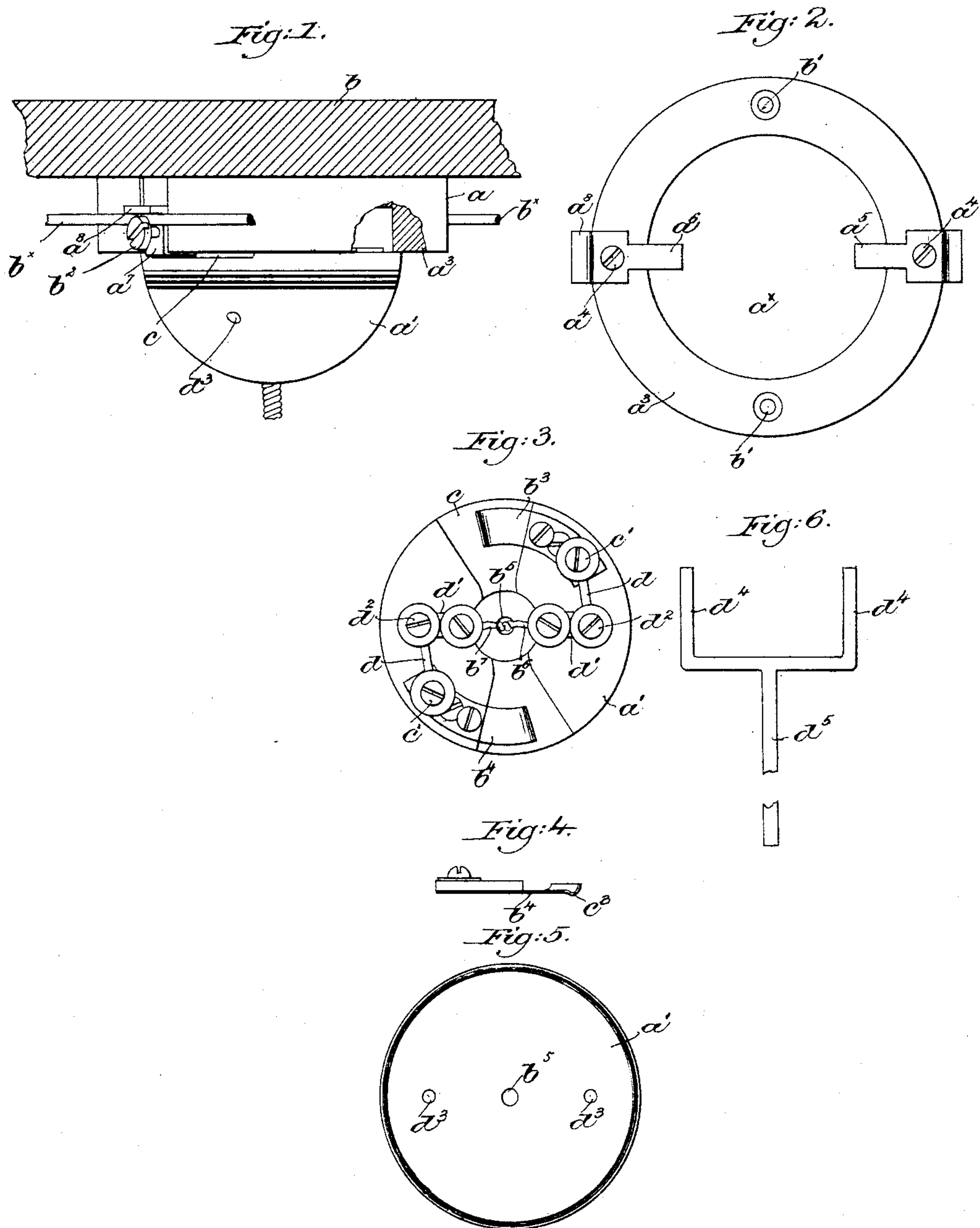


(No Model.)

J. L. KIMBALL & H. C. WIRT.
ELECTRIC CUT-OUT.

No. 402,249.

Patented Apr. 30, 1889.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES L. KIMBALL AND HERBERT C. WIRT, OF BOSTON, MASSACHUSETTS.

ELECTRIC CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 402,249, dated April 30, 1889.

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To all whom it may concern:

Be it known that we, JAMES L. KIMBALL and HERBERT C. WIRT, both of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Electric Cut-Outs, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention relates to electric cut-outs or switches such as used in incandescent-lamp circuits, and has for its object to provide an efficient, simple, and cheap cut-out.

15 In accordance with our invention a hollow base is provided with contact-arms having their inner ends extended within the hollow base, and having their outer ends located outside the base, and to which the line-wires are secured, as will be described.

20 The inner ends of the contact-arms referred to have co-operating with them substantially flat contact-pieces secured to the upper face of a cap or rosette, the said contact-pieces engaging the contact-arms on the base when the rosette is placed in position to complete the circuit through the incandescent lamp suspended from the said cap or rosette as by branch wires, having their ends passed through a hole in the said rosette and connected to terminals joined to the contact-pieces on the rosette by fusible strips or wires. The ends of the contact-pieces on the rosette are bent to form springs, which constitute a locking device, by which the contact-arms on the base are securely locked in contact with the contact-pieces on the rosette against accidental displacement, whereby a sure and reliable electrical connection is maintained.

40 In factories, high halls, and other places where cut-outs are secured to the ceiling it frequently happens that it is very inconvenient to use a ladder such as now commonly employed to remove the rosette and its attached lamp. To overcome this objectionable feature we have provided a key (herein shown as a rod) having two forks to engage two holes in the rosette, so that by turning the rod the rosette may be disconnected from its base and the lamp repaired, or the fusible strip renewed and the rosette then replaced, while the operator remains upon the floor.

The particular features in which my invention consists will be pointed out in the claims at the end of this specification.

Figure 1 is a side elevation, partially broken out, of a cut-out attached to a sufficient portion of a ceiling to enable our invention to be understood; Fig. 2, an under side view of the hollow base removed; Fig. 3, a top or plan view of the rosette or cap removed; Fig. 4, a detail of one of the contact-pieces; Fig. 5, an under side view of the rosette, and Fig. 6 a detail of the key.

The cut-out or switch consists of the base *a* and the cap or rosette *a'*, both preferably made of wood. The base *a* is made hollow, as at *a^x*, leaving an annular rim, *a³*, to which are secured, as by screws *a⁴*, on substantially diametrically-opposite sides of the said rim, metal strips having their inner ends extended into the hollow base to form contact-arms *a⁵* *a⁶*, the outer ends of the said metal strips being extended beyond or outside of the hollow base, and, as herein shown, turned upward, as at *a⁷*, and then outward, as at *a⁸*. The hollow base *a* is secured to the ceiling or wall *b* by screws inserted through holes *b'* in the rim *a³*, and the line-wires *b^x* are secured in electrical connection with the metal strips by binding-screws *b²*, inserted through holes in the metal, *a⁷*, and into holes in the rim *a³*. The contact-arms *a⁵* *a⁶* have co-operating with them contact-pieces *b³* *b⁴*, secured to the upper flat face of the cap or rosette *a'*, provided with a central opening, *b⁵*, through which the branch wires *b⁶* *b⁷* are extended, the said branch wires being secured to the terminals of an incandescent lamp. (Not shown.) The upper face of the rosette is provided, as shown, with a diametrical groove or slot, *c*, and the contact-pieces *b³* *b⁴*, which are secured to the said rosette by screws *c'*, are extended over the said groove or slot, and are concaved, as at *c³*, (see Fig. 4,) to form a locking device for the contact-arms *a⁵* *a⁶*, which are passed under the contact-pieces when the rosette is attached to its base, the said rosette being suspended by the said contact-arms, and being locked to the said base against accidental derangement by the spring contact-pieces. Each contact-piece is secured by a fusible strip or wire, *d*, to a terminal

plate, d' , secured to the rosette by screw d^2 . The rosette is provided on its under side, as herein shown, with two holes, d^3 , into which are extended the forks d^4 on a rod, d^5 , constituting a key, which in practice will be of sufficient length to permit the rosette to be attached to and detached from its base while the operator stands on the floor.

Our improved cut-out is efficient in operation and simple and cheap in construction.

We claim—

1. The combination, with the hollow base having a rim, metallic strips $a^5 a^6$, secured to said rim, and having their inner ends extended into said hollow base to form contact-arms, and having their outer ends extended outside of the said rim, and to which the line-wires are secured on the outside of the said base, of the rosette provided on its upper face with contact-pieces $b^3 b^4$, to engage said contact-arms, terminals secured to the upper face of the said rosette, a fusible strip connecting each terminal with a contact-piece, and branch wires connected to said terminals, and to which an incandescent lamp may be connected, substantially as described.

2. The combination, with the hollow base having an annular rim, metallic strips $a^5 a^6$, secured to said rim, and having their inner ends extended into said hollow base to form contact-arms, and having their outer ends extended outside of the said rim, and to which the line-wires are secured outside the said base, of the rosette provided on its upper face with contact-pieces $b^3 b^4$, to engage said con-

tact-arms, and having their ends bent or concaved, as at c^3 , to form a lock for said contact-arms, terminals secured to the upper face of the said rosette, a fusible strip, d , connecting each terminal with a contact-piece, and branch wires connected to said terminals, and to which an incandescent lamp may be connected, substantially as described.

3. The combination, with the hollow base having an annular rim, and provided with metallic strips secured to said rim, and having their inner ends extended into said hollow base to form contact-arms, and having their outer ends extended outside of the said rim, and to which the line-wires are secured outside the said base, of the rosette provided on its upper face with contact-pieces to engage said contact-arms, terminals secured to the upper face of the said rosette, a fusible strip connecting each terminal with a contact-piece, and branch wires connected to said terminals, and to which an incandescent lamp may be connected to be suspended from the said rosette, and a key to engage and disengage the rosette from its base, whereby the suspended lamp may be removed from the floor of the building, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAMES L. KIMBALL.
HERBERT C. WIRT.

Witnesses:

JAS. H. CHURCHILL,
FREDERICK L. EMERY.