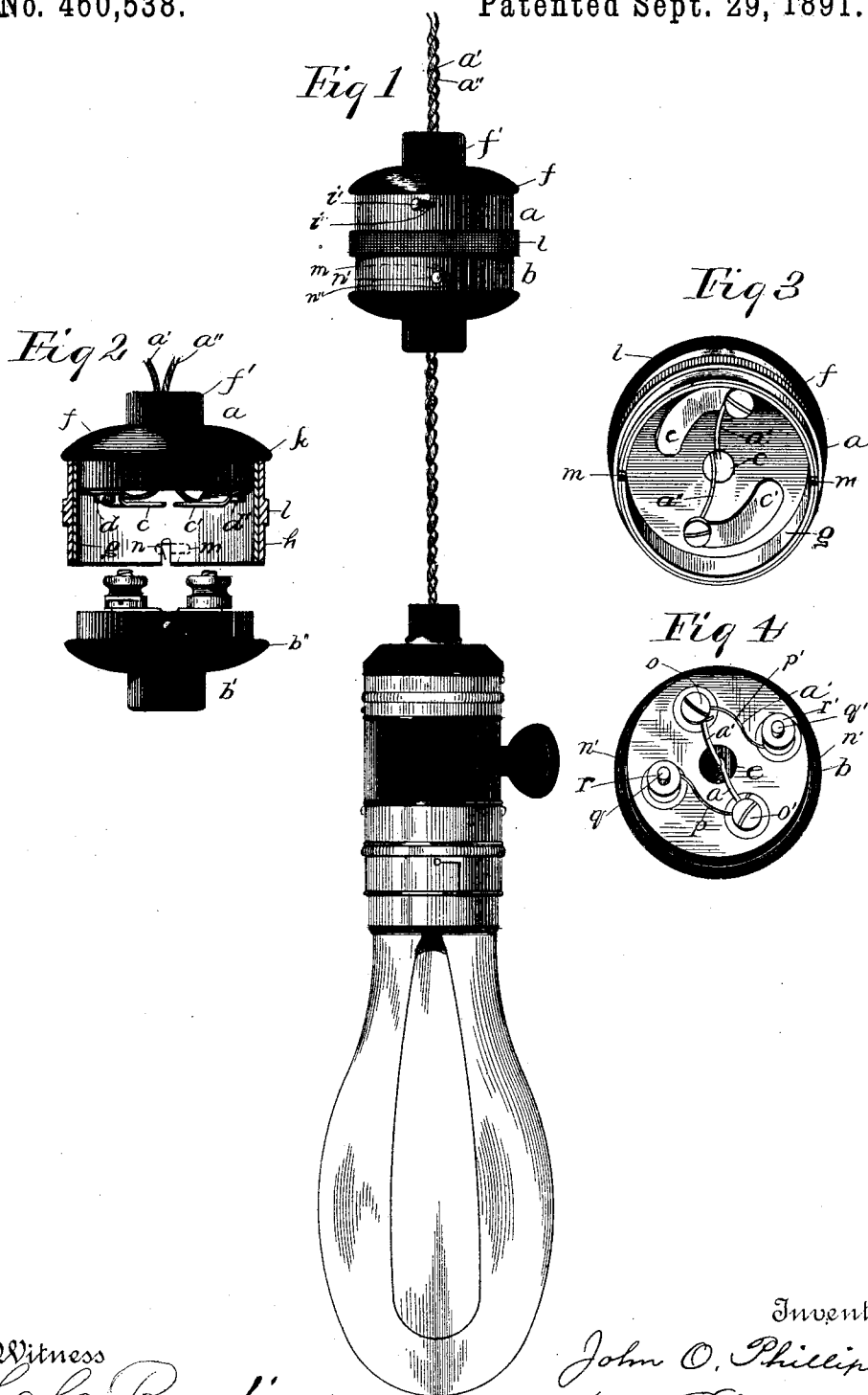


(No Model.)

J. O. PHILLIPS.
THERMAL CUT OUT.

No. 460,538.

Patented Sept. 29, 1891.



Witness
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UNITED STATES PATENT OFFICE.

JOHN OTIS PHILLIPS, OF NEW YORK, N. Y.

THERMAL CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 460,538, dated September 29, 1891.

Application filed January 6, 1891. Serial No. 376,909. (No model.)

To all whom it may concern:

Be it known that I, JOHN OTIS PHILLIPS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Thermal Cut-Outs; and I do hereby 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.

My invention relates to a pendent thermal cut-out especially adapted to incandescent lamps, and my purpose is to provide a device which will obviate the necessity of the laborious operation of going to the ceiling in order to detach the wires or of having to perform the tedious operation of unscrewing one of the sections for this purpose.

A further object of my device is to provide a thermal cut-out with mechanism which will enable it to be more quickly detached, so that the wires of a lamp can be shifted from one circuit to another in a much shorter time than has hitherto been obtainable in devices of this kind; and a still further object, generally, is to provide an exceedingly cheap, simple, durable, and more easily operated thermal cut-out than those hitherto in use.

With these purposes in view my invention consists in the peculiar features and combination of parts more fully described hereinafter, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents an exterior side view of my complete device, showing it as applied to an incandescent lamp; Fig. 2, a similar view showing the parts detached, and Figs. 3 and 4 perspective end views of the sections detached.

The reference-letters *a* and *b* represent two detachable sections provided with double-pole connections. The section *a* is connected with the main circuit by wires *a'* and *a''*, and these wires are electrically connected to the spring contact-points *c c'* by means of screws *d d'*. The contact-points are located upon opposite sides of the central inlet *e*, and are separated from each other, as usual in double pole cut-outs. These contact-points *c c'* are secured to a gutta-percha, hard rubber, or similar non-conducting cap *f*, provided with

a sleeve *f'*, through which the wires *a' a''* pass to the main line. A rigid brass band *g* is fastened to the circumference of the cap, and this band is surrounded by a movable band *h*, provided with slots *i* and pins *i'*, which hold it in place and permit it to have a limited rotary movement for locking and unlocking the opposite section, as will presently be described. The cap *f* has an annular ledge *k*, which enables it to be grasped in the operation of turning the exterior band *h*. This band is provided with an annular milled embossment *l*, adapted to be grasped by the fingers in the turning operation, and it is further provided with oppositely-located angular slots *m*, one side of which coincides with the open slots *n* in the rigid interior band *g*, while the other side of the slot extends at right angles to the slots *n*. The opposite section *b* is provided with headed pins *n'*, which are arranged to drop into the transverse slots *n*, and are locked therein by a partial rotation of the exterior band *h*, which brings the projections *n''* over the mouths of the slots *n*. The section *b* has a convex surface on the exterior, and is provided with a central sleeve *b'* and annular flange *b''*, and the general exterior appearance of this section is the same as the cap *f* of the opposite section, thereby giving the entire device a neat appearance, as well as adding to the facility with which it can be manipulated. It is provided with double-pole connections *o o'*, to which the lamp-wires are attached, and fuses *p p'* extend from these to the contact-points *q q'*. The contact-points are adapted to come in sliding contact with the spring contact-points *c c'* upon the opposite section, and they are threaded and provided with thumb-nuts *r r'*, which bind the ends of the fuses *p p'*. Hence by having the double fuse there is double the safety, and a superior cut-out is thereby produced.

In using my device when it is in locked adjustment the operator grasps the milled annular embossment *l* with one hand and the flange *b''* of the opposite section *b* with the other hand, and then turns the two sections in opposite directions. This movement moves the exterior band *h* the length of the longitudinal slots *m* and *i*, thereby withdrawing the projections *n''* from over the mouths of

the transverse open slots *n* and permitting the sections to come immediately apart. They can be as readily coupled together by simply placing the section *b* within the opposite section, and then pressing it so that the pins *n'* and *i'* can be moved sidewise into the longitudinal slots *m i*. The spring contact-points *c c'* keep the pins *n'* pressed strongly against the projections *n''* and hold the sections together without other assistance.

The slot-and-pin connection being old and well known to the art, a more detailed description of its construction and operation is not considered necessary.

15 Having thus described my device, what I claim as new, and desire to secure by Letters Patent, is—

1. A pendent thermal cut-out composed of two sections having end caps or pieces consisting of non-conducting material, in combination with a band rigidly secured to one of said pieces, a rotary band embracing the rigid band, double-pole and double-thermal connections located within said sections, and pins 25 operating within interlocking slots, in the

manner and for the purpose substantially as described.

2. As a new article of manufacture, a pendent double-pole thermal cut-out consisting of the combination of two detachable sections 30 having similar non-conducting end pieces, one of which is provided with a band rigidly secured thereto, fastening-pins, and a movable band embracing the rigid band, said movable band having slots through which said pins 35 pass and a milled annular embossment thereon located around the center of the band, a cap-piece provided with double-thermal connections, poles adapted to engage double connections on the interior of the opposite 40 section, and pins upon said cap-pieces adapted to enter slots in the rigid band, all arranged to operate in the manner and for the purpose substantially as described.

In testimony whereof I affix my signature in 45 presence of two witnesses.

JOHN OTIS PHILLIPS.

Witnesses:

A. A. MCCREARY,
JAMES A. COONEY.