

No. 839,636.

PATENTED DEC. 25, 1906.

P. PETERS.
ELECTRIC CUT-OUT SWITCH.

APPLICATION FILED FEB. 20, 1906.

FIG. 1.

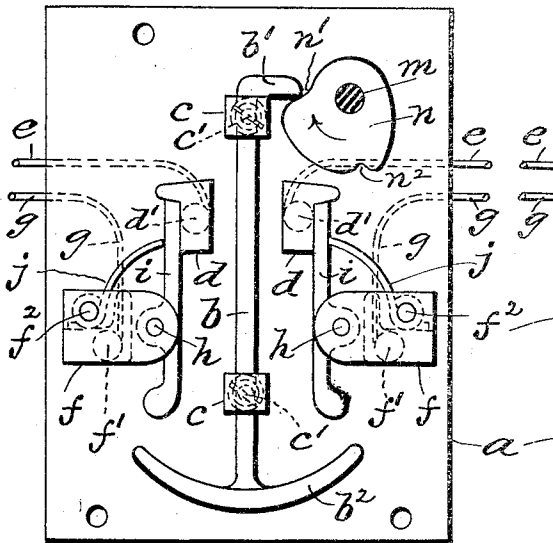


FIG. 2.

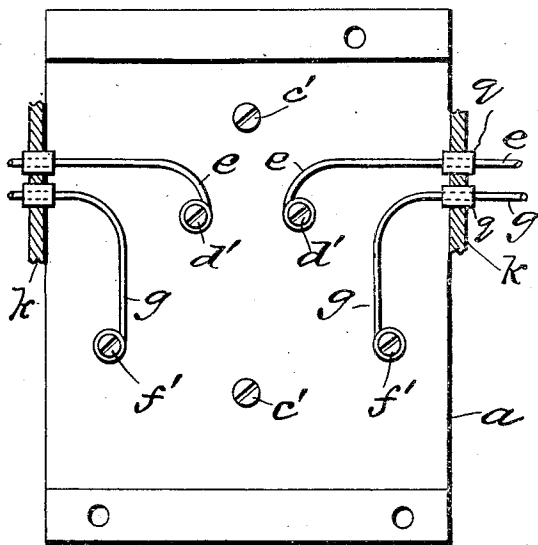
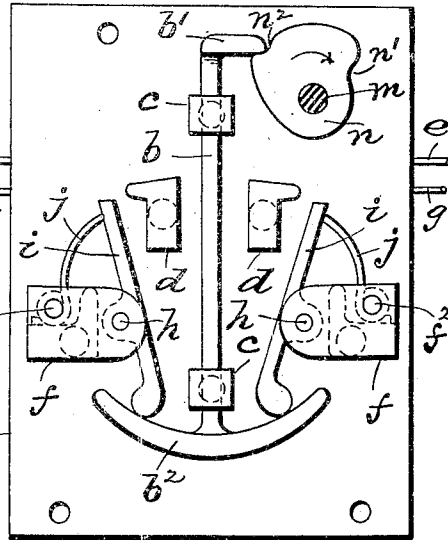


FIG. 3.

WITNESSES.

Geo. D. Campbell
E. J. Garrison.

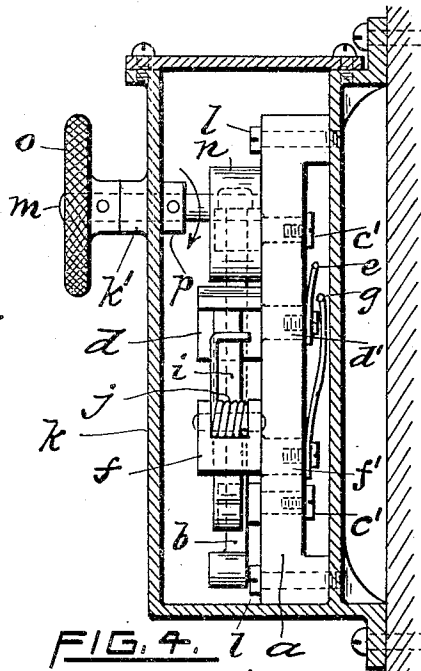


FIG. 4.

INVENTOR.

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UNITED STATES PATENT OFFICE.

PETER PETERS, OF PAWTUCKET, RHODE ISLAND.

ELECTRIC CUT-OUT SWITCH.

No. 839,836.

Specification of Letters Patent.

Patented Dec. 25, 1906.

Application filed February 20, 1906. Serial No. 302,087.

To all whom it may concern:

Be it known that I, PETER PETERS, a subject of the King of Great Britain, residing at the city of Pawtucket, in the county of Providence and State of Rhode Island, have invented a certain new and useful Improvement in Electric Cut-Out Switches, of which the following is a specification.

My invention relates to a device employed in electric lighting for the purpose of switching on or off the current in the wires of a lamp-circuit from the main circuit.

The invention consists of the novel construction, arrangement, and combination of parts, as hereinafter described, and specifically set forth in the claims.

In the accompanying sheet of drawings, Figure 1 represents a front elevation of my improved electric cut-out switch, showing the normal position of parts when the full charge of lighting-current is on. Fig. 2 is a similar view showing the normal position of parts when the lighting-current is off. Fig. 3 is a rear elevation of the cut-out switch, showing the wire connections to the relative binding-posts of the main circuit and lamp-circuit, respectively; and Fig. 4 is a view of a metallic box secured to a street-pole and said box being in section to show my improved cut-out switch mounted therein.

Like reference characters indicate like parts in the several views of the drawings.

The metallic parts of my improved cut-out switch are mounted on a base-plate *a*, of slate, porcelain, or other suitable material, which is a non-conductor of electricity.

A circuit-changing member is vertically arranged centrally of the plate *a*, and said member is in the form of a rod *b*, which has a lateral bent portion *b'* at its upper end and its lower end terminating at the central portion of an upwardly-curved extension *b²*. This rod member is loosely mounted in supports *c c*, which are secured to the base-plate *a* by screws *c' c'*.

Two lugs *d d* are located one at each side and near to the upper portion of the circuit-changing member *b*, and each of said lugs has an integral binding-post, as *d' d'*, which passes through the base-plate to receive the different ends of the lighting-circuit wires *e e*. Beneath the lugs *d d* are situated two laterally-separated conducting-pieces *f f*, having each an integral binding-post, as *f' f'*, which passes through the base-plate to receive the different ends of the main-circuit wires *g g*.

Each conducting-piece *f* has its inner portion bifurcated to receive the pivot-centers *h h* of arms *i i*. Coil-springs *j j* are secured upon the conducting-pieces *f f*, as at points *f² f²*, and said springs are arranged to force the upper portion of the arms *i i* in contact with the lugs *d d* in the manner shown in Fig. 1. In this position of parts, Fig. 1, the concave surface formed by the extension *b²* of the circuit-changing member *b* is clear of the lower ends of the arms *i i*, and thus the full charge of electric current passes freely through the lighting-wire *e*, through the binding-post of the lug *d*, through the pivot-arm *i*, through the binding-post of the conducting-piece *f*, thence through the wire *g* of the main circuit to the other binding-post of the conducting-piece *f*, through the pivot-arm *i*, through the binding-post of the lug *d*, and thence through the opposite lighting-wire *e*.

The base-plate *a* is mounted in a metal box *k* and secured thereto by screws *l l*, as shown in Fig. 4. This switch-box *k* has a laterally-projecting hub *k'*, which is bored to loosely receive therethrough a shaft *m*. On the inner portion of the shaft *m* is made fast a cam *n*, of non-electric-conductor material, and on the outer portion of said shaft is secured an operating hand-wheel *o*, which abuts the hub *k'* of the switch-box *k*. A collar is secured upon the shaft *m*, as at *p*, to prevent lateral movement of said shaft. The cam *n* is adapted to contact beneath the bent portion *b'* of the circuit-changing member *b* and to lift the latter in order to break the electric connection of the lighting-circuit. Said cam *n* has two depressions formed in its surface, as at points *n'* and *n²*, and as the cam is turned in the arrow direction it carries up the member *b* and causes the curved extension of the latter to contact with and force inwardly the free ends of the spring-pressed arms *i i* until the bent portion *b'* of the member *b* strikes in the depression *n²* of the cam, when the said operating parts will be in the position shown in Fig. 2, and thus breaking the current of the lamp-circuit. As the cam is further turned in the arrow direction, (shown in Fig. 2,) said cam releases the member *b*, the latter falls by gravity and the arms *i i* are again forced in contact with the lugs *d d* by the springs *j j*, and the operating parts again assume their normal position. (Shown in Fig. 1.)

The box *k* has the usual perforated porce-

lain bushings *q q* mounted in its sides to receive the wires *e e* of the lighting-circuit and wires *g g* of the main circuit, respectively, in the manner shown in Fig. 3.

5 What I claim, and desire to secure by Letters Patent, is—

1. In an electric cut-out switch, the combination of the wires of an electric-lamp circuit having their ends connected to the binding-posts of fixed lugs; the wires of an electric
10 main circuit having their ends connected to the binding-posts of fixed conducting-pieces; two arms, each pivotally mounted on each of the conducting-pieces; means to force the
15 upper portion of said arms in contact with the lugs of the lamp-wires; a rod loosely mounted in proper supports and having an integral curved extension, and means for lifting said rod whereby its extension forces
20 inwardly the lower free ends of said arms, and thus break the electric connection of the lamp-circuit, substantially as set forth.

2. In an electric cut-out switch, the combination of the wires of an electric-lamp circuit having their ends connected to the binding-posts of fixed lugs; the wires of an electric
25 main circuit having their ends connected to the binding-posts of fixed conducting-pieces; two spring-pressed arms having free ends, each arm pivotally mounted on each conducting-piece of the main wires, and said
30 arms adapted to bear against the lugs in making electric connection with the lamp-wires; a rod loosely mounted in proper supports, having a bent portion at its upper end and an upwardly-extending curved portion at its lower end, respectively, and which latter portion is normally free of contact with
35 the free ends of said arms; a shaft; and a ro-

tatable cam of non-electric-conductor material secured on said shaft, said cam adapted to lift said rod, by its bent portion, whereby the curved portion of said rod causes said
40 arms to release from electric connection with the lamp-wires, substantially as set forth. 45

3. In an electric cut-out switch, the combination of two lugs having integral binding-posts upon which are secured the ends of
45 wires of an electric-lamp circuit; two conducting-pieces having integral binding-posts upon which are secured the ends of wires of
50 an electric main circuit; two vertically-arranged arms whose central portion is pivotally mounted on said conducting-pieces; springs adapted to press the upper portion of
55 said arms in contact with said lugs, whereby the full charge of electric connection is made through both said wires; a circuit-changing member in the form of a rod, which is situated
60 and loosely supported between said arms, and said rod having a lateral bent upper portion and its lower portion terminating in an
upwardly-curved extension, which is normally located below said arms, and a rotatable
65 cam, which is a non-conductor of electricity, adapted to lift said rod by its bent portion, whereby the curved extension of the
latter acts upon the lower ends of said arms and causes the same to swing inwardly and
70 thereby break the electric connection of the lamp-circuit, substantially as set forth.

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

PETER PETERS.

Witnesses:

GEO. W. CAMPBELL,
E. F. JAMESON.