(No Model.)

J. C. CHAMBERLAIN.

ELECTRIC CUT-OUT DEVICE.

No. 396,920. Patented Jan. 29, 1889.

Fig. 1

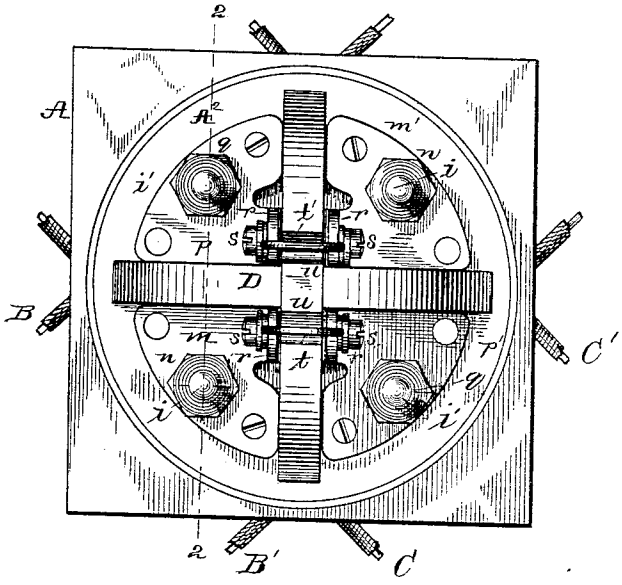


Fig. 2.

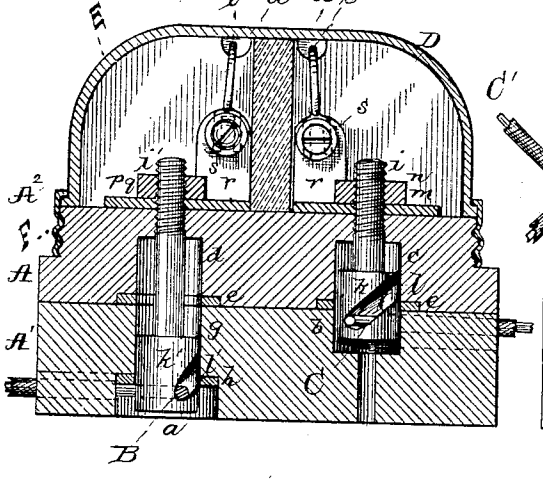
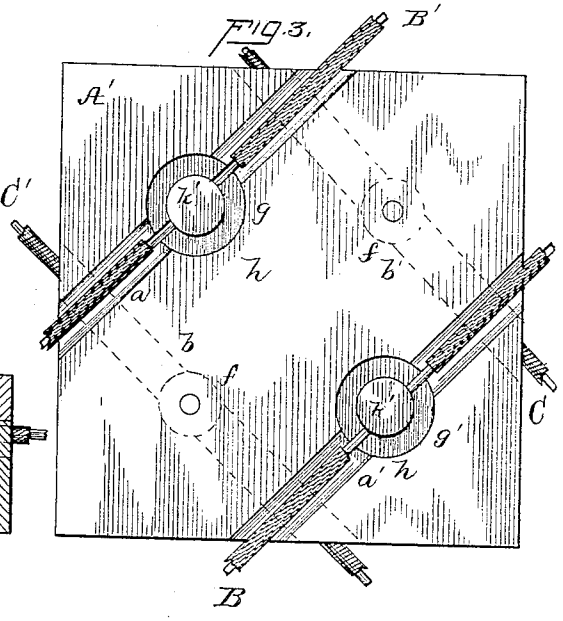


Fig. 3.



ATTEST:

E. C. Howland

William Pyle

INVENTOR:

J. Chester Chamberlain

By Dyer & Seely

Attys

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

UNITED STATES PATENT OFFICE.

J. CHESTER CHAMBERLAIN, OF NEW YORK, N. Y.

ELECTRIC CUT-OUT DEVICE.

SPECIFICATION forming part of Letters Patent No. 396,920, dated January 29, 1889.

Application filed June 29, 1887. Serial No. 242,830. (No model.)

To all whom it may concern:

Be it known that I, J. CHESTER CHAMBERLAIN, of the city of New York, in the county and State of New York, have invented a certain new and useful Improvement in Electric Cut-Out Devices, of which the following is a specification.

My invention relates to connecting-blocks used in electric-light wiring for supporting fusible links or safety-catches and connecting them in circuit.

My object is to construct such blocks in a simple and efficient manner, and to enable good electrical and mechanical connections to be readily made thereon, and to effectively insulate the two sides of the circuit from each other.

My invention consists in the novel devices and combinations of devices employed by me in accomplishing the above-named objects, as hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 is a plan view of a safety-catch block embodying my invention, with its cover removed; Fig. 2, a cross-section thereof with the cover on, and Fig. 3 a bottom view of the block.

The block as illustrated in Figs. 2 and 3 is designed for situations where there are two crossing circuits, or branch circuits are taken off from a main circuit, and connection between the crossing circuits or between the main and branch circuits is made through safety-catches, one for each pole of the circuit. My invention is as well adapted, however, for the simple interpolation of a safety-catch in each side of a continuous circuit, and the devices at the top of the block (seen in Fig. 1) are the same in the latter case as in the former.

A and A′ are blocks of suitable insulating material, preferably a non-combustible material. The lower block, A′, has two diagonal parallel slots or grooves, *a a′*, in its lower side and two parallel grooves, *b b′*, at right angles thereto in its upper side. The block A has a circular screw-threaded part, A^2, on its upper side, and it has four holes, *c c d d*, extending through it, each surrounded at the under side of the block by a countersunk annular plate, *e*. When the plates are put together, as shown, the apertures *c* meet the slots *b b′* at their middle parts, where circular recesses *f* are formed. The apertures *d* communicate with apertures *g g′*, extending through the block A′ at the middle of the slots *a a′*, and provided with annular connecting-plates *h h*.

The wires B B′ of the main circuit are laid in the slots *a a′*, being bared of insulation at the parts beneath the apertures *g g′*. The wires C C′ of the branching multiple-arc circuits are laid in the slots *b b′*, being similarly bared beneath the apertures *c c′*. Through the apertures *c c′* are inserted, from the bottom of the block A before the blocks are put together, connecting devices, which are in the form of hooks, each consisting of a screw-threaded rod or stem, *i*, and an enlarged head, *k*, having an oblique slot, *l*. The screw-threaded stems extend through metal contact-plates *m m′* on top of block A. The wires C C′ in the slots *b b′* are passed through the slots *l l*, and nuts *n* are then screwed upon the ends of the stems, so as to draw the hooks up against the wires and make a good electrical and mechanical connection between such wires and the plates *m m′*, respectively. Similar connecting-hooks, but of greater length, consisting of stems *i′* and heads *k′*, with oblique slots *l′*, extend through both blocks by means of the apertures *d* and *g g′*. These hold the wires B B′ at their lower ends in the slots *a a′* and pass through contact-plates *p p′* on the top of the box, being provided with nuts *q q*, which not only hold the wires and secure connection between said wires and their contact-plates, but act to hold the two parts of the block firmly together.

Each of the contact-plates *m*, *m′*, *p*, and *p′* is provided with an upwardly-extending lug, *r*. To these lugs are attached, by means of binding-screws *s s*, the fusible wire safety-catches. Safety-catch *t* connects plate *m* with plate *p′*, and safety-catch *t′* connects plates *m′* and *p*. It will be seen that the circuit B B′ is thus connected with circuit C C′ through safety-catches—one for each side or pole of the circuit. Before the safety-catches are connected, however, I place upon the block a double insulating-bridge, D, preferably of glass or other non-combustible material, of the form shown, which sets down upon the block between the contact-plates and effectu-

ally separates all said plates from one another and prevents any danger of short-circuiting or arcing between the plates. The safety-catch wires are bent so as to pass over the bridge in guiding-slots *u u*.

In order to protect the block and the safety-catches from external contact, I provide a cover or cap, E, which is placed over the block, and secured by a screw-threaded metal ring, F, screwed on the circular portion A^2 of the block and engaging a flange, *v*, on the cover.

What I claim is—

1. The combination of an insulating-block, safety-catch terminals on one side thereof, and metal hooks extending from said terminals through said block for engagement with circuit-wires on the other side thereof, substantially as set forth.

2. The combination of an insulating-block, safety-catch terminals on one side thereof, metal hooks extending from said terminals through said block for engagement with circuit-wires on the other side thereof, and means for locking said hooks in place, substantially as set forth.

3. The combination of an insulating-block having slots on its lower side for receiving circuit-wires, and safety-catch terminals on its upper side, and the connecting devices passing through said block, having oblique slots at their lower ends for receiving the wires, and clamping-nuts on their upper ends, substantially as set forth.

4. The combination of two blocks placed together, the wires of a circuit passing beneath said blocks, the wires of a crossing or branching circuit between said blocks, connecting devices extending from the wires beneath the blocks through both blocks to safety-catch terminals, connecting devices extending from the wires between said blocks through the upper block to other safety-catch terminals, and safety-catches joining the wires of one pair, respectively, to those of the other pair, substantially as set forth.

5. The combination, with the safety-catch block and the four terminal plates thereon, of the double insulating-bridge upon said block separating said plates from one another, substantially as set forth.

6. The combination of the block, the four safety-catch terminal plates thereon, the double insulating-bridge, and the cover, substantially as set forth.

This specification signed and witnessed this 25th day of June, 1887.

J. CHESTER CHAMBERLAIN.

Witnesses:

WILLIAM PEZER,

E. C. ROWLAND.