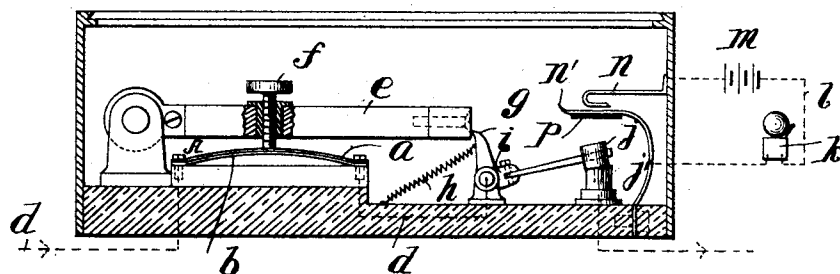


(No Model.)

E. EGGER.
ELECTRIC CUT-OUT.

No. 500,229.

Patented June 27, 1893.



Witnesses
Wm. A. Courtland
Nellie L. Pope

Inventor
Ernst Egger,
By his Attorney
Edward P. Thompson

UNITED STATES PATENT OFFICE.

ERNST EGGER, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO AARON NAUMBURG, OF SAME PLACE.

ELECTRIC CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 500,229, dated June 27, 1893.

Application filed November 8, 1892. Serial No. 451,294. (No model.)

To all whom it may concern:

Be it known that I, ERNST EGGER, a subject of the Emperor of Austria-Hungary, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Electric Cut-Outs, (Case No. 1,) of which the following is a specification.

My invention relates to means for maintaining a current closed under normal conditions, interrupting the same and giving a signal when abnormally great, all through the prime agency of a thermo-expansive electric conductor. All the details are set forth in the accompanying drawing, in which the single figure is a longitudinal vertical section, and in which the electric circuits are shown by dots and dashes.

The device embodying my invention consists of the combination of a metallic and curved conductor, made of two strips *a*, *b*, which together may be called a thermo-expansive electric conductor *A*, held rigidly at its ends on an insulator *c*, and included in the circuit *d*; a pivoted single arm lever *e* carrying a thumb screw *f* which rests upon the central portion of the strip *A*; a pivoted double arm lever, whose arm *g* normally bears upon the end of the lever *e* near the edge, so that if the lever *e* is lifted, the arm *g* can escape by the action of the retractile spring *h*, and whose arm *i* carries one terminal *j'* normally in contact with the opposite terminal *j'* of the circuit *d*, and an electric signal such as a bell *k*, in a local circuit *l*, having generator *m*, and a circuit closer whose terminals *n*, *n'* are in the path of the terminal *j*, and are movable.

The operation of the device is as follows:—
Normally, a current passes through the circuit *d*, and through the strip *A* and terminals *j*, *j'*. When the current becomes too great, the strip *A* expands so much that the lever *e* is moved and the arm *g* slips from the end of the lever and is pulled by the spring (normally under tension) to such an extent as to separate the terminals *j*, *j'*, which are maintained separated until the instrument is again set. An insulator *p* is on the under side of the terminal *n'* to cover the terminal *j* to keep the main current from entering the local cir-

cuit, at the same time, the terminal *n*, thereby closing the local circuit *l* and giving the alarm.

I prefer to make the strip *A* of the two metals, aluminium and steel.

The instrument is adapted to be used on currents of any strength, because, the same may be adjusted by means of the thumb screw *f*. By turning it so that the lever is lowered it will do for currents of greater strength, and by raising the lever, it will be adapted for smaller currents; or strips *A* may be of different cross section and interchangeable.

The instrument is set, after operation, by placing the arm *g* so that it rests against the end of the lever *e*.

I claim as my invention—

1. An electric cut out, consisting of the combination of a curved thermo-expansive electric conductor fixed at its ends, and included in an electric circuit; a pivoted lever having an adjustable thumb screw which rests upon the central portion of said strip, and a second lever, whose one arm rests against the end of the first lever, and is acted upon by a tensional spring, and whose other arm carries an electric terminal *j*, normally in contact with the opposite terminal of the said circuit.

2. An electric cut out, consisting of the combination of a curved thermo-expansive electric conductor fixed at its ends, and included in an electric circuit; a pivoted lever having an adjustable thumb screw which rests upon the central portion of said strip, and a second lever, whose one arm rests against the end of the first lever, and is acted upon by a tensional spring, whose other arm carries an electric terminal *j* normally in contact with the opposite terminal of the said circuit, and an electric alarm in a normally open local circuit whose one terminal is movable and in the path of the said terminal *j*.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 2d day of November, 1892.

ERNST EGGER.

Witnesses:

JAMES H. YOUNG,
AARON NAUMBURG.