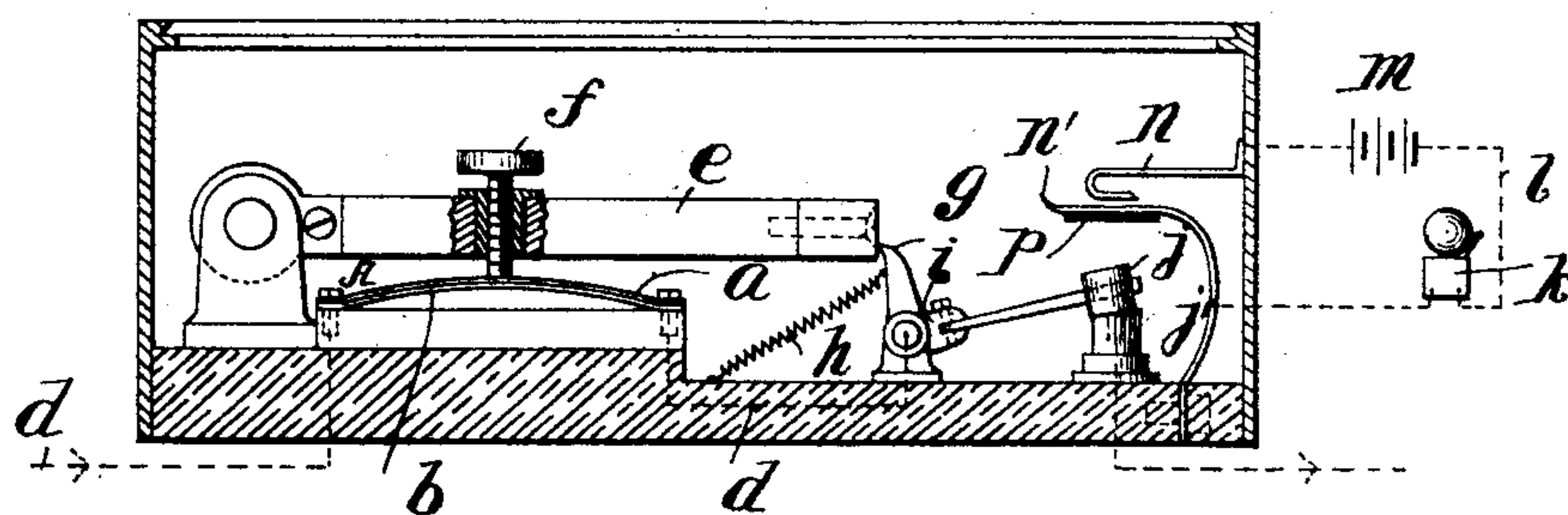


(No Model.)

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 ^{Wm}

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.