

(No Model.)

C. W. IDEN.
THERMO ELECTRIC ELEMENT.

No. 479,596.

Patented July 26, 1892.

Fig. 1.

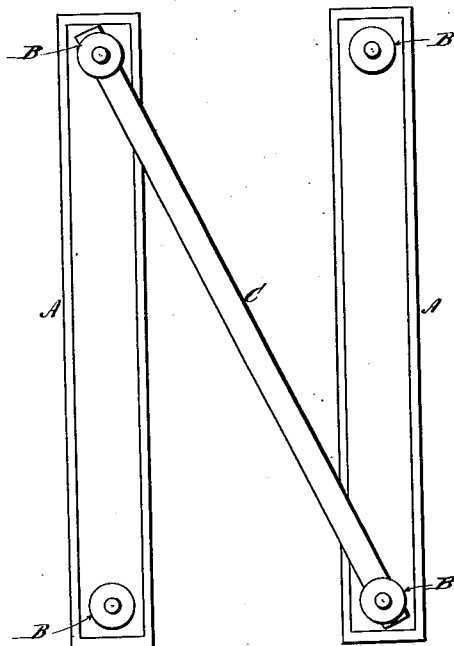
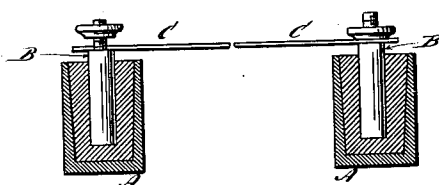


Fig. 2.



Witnesses:

D. W. Gardner
H. A. Pollock

Inventor:

Charles W. Iden
By his Attorney,

E. N. Drikenhoff

UNITED STATES PATENT OFFICE.

CHARLES W. IDEN, OF NEW YORK, N. Y., ASSIGNOR TO THE THERMO
ELECTRIC COMPANY, OF SAME PLACE.

THERMO-ELECTRIC ELEMENT.

SPECIFICATION forming part of Letters Patent No. 479,596, dated July 26, 1892.

Application filed November 11, 1889. Serial No. 329,931. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. IDEN, of the city, county, and State of New York, have invented a new and useful Improvement in Thermo-Electric Elements, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

This invention relates to an improvement in thermo-electric elements.

My invention will be readily understood from the accompanying drawings, in which—

Figure 1 represents a plan view, and Fig. 2 a cross-section through two of the nickeline poles.

My element consists of a compound of four parts of zinc and six parts of antimony or other equivalent material cast into a containing-box, preferably of Russia iron. This metal can be stamped into the shape of a box and the metal cast therein.

A represents the element, and B the pole-pieces or connectors made of nickeline. For this nickel may be substituted, if desired, or other material—such as copper—may be used. I prefer nickeline, however.

C represents a connecting-strip of copper connecting the positive and negative poles alternately. Of course other material be-

side copper can be employed; but I prefer copper. In practice one end of these elements is heated, the other remaining cool. I am aware of the fact that it may be thought impossible that these elements should generate electricity, since they are apparently short-circuited in the iron box; but the fact remains that they do generate electricity in large amounts.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a containing-box, a metal cast therein, and two pole-pieces, of different metal from that in the box, cast therein at or about the extremities of the same, substantially as described.

2. The combination of the iron box, the compound of zinc and antimony cast therein, and the pole-pieces made of another metal and cast in the ends of said zinc and antimony, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES W. IDEN.

Witnesses:

ANTHONY GREF,
WM. A. POLLOCK.