

H. PALMER.
Electric Battery.

No. 82,981.

Patented Oct. 13, 1868.

Fig. 1

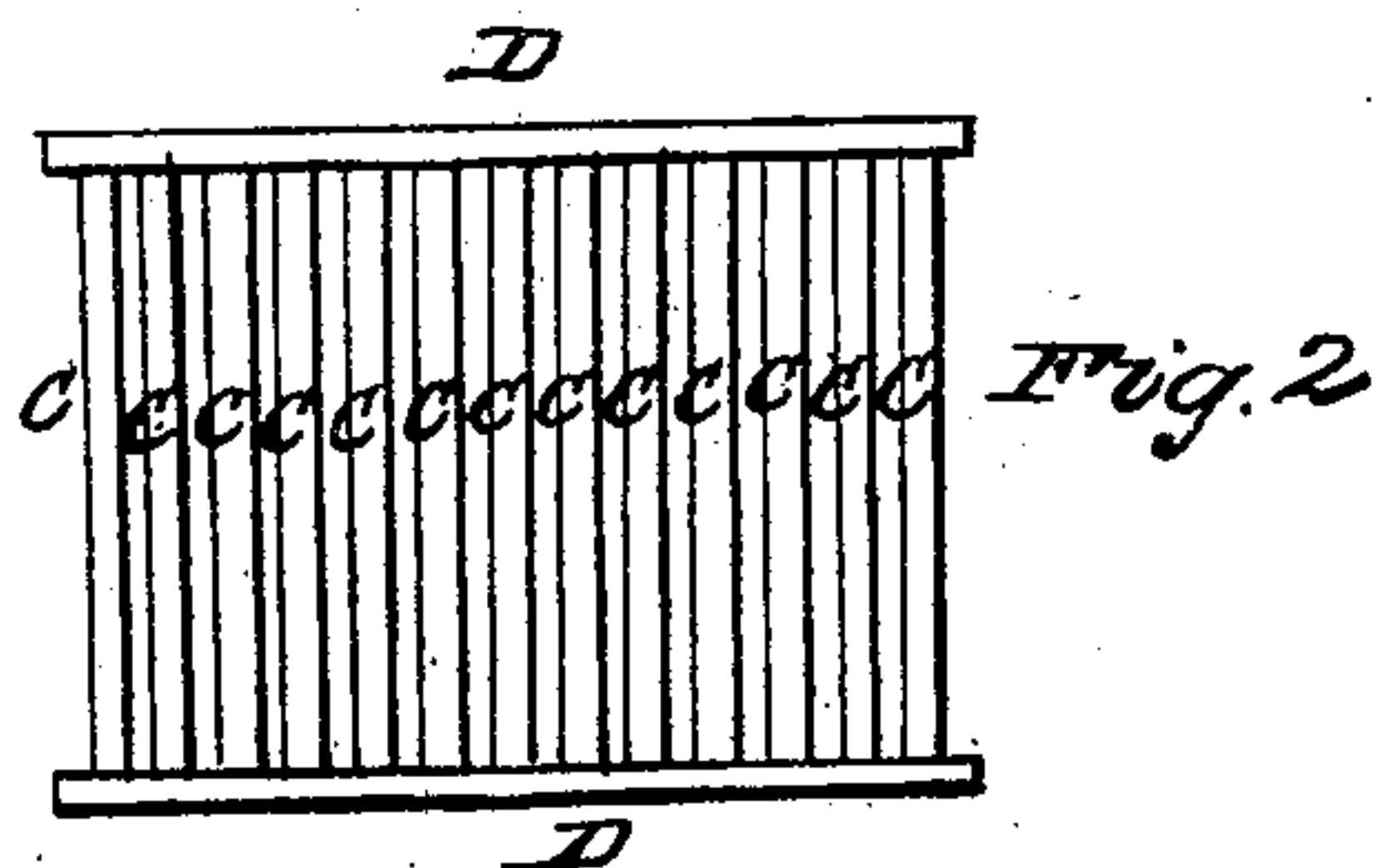
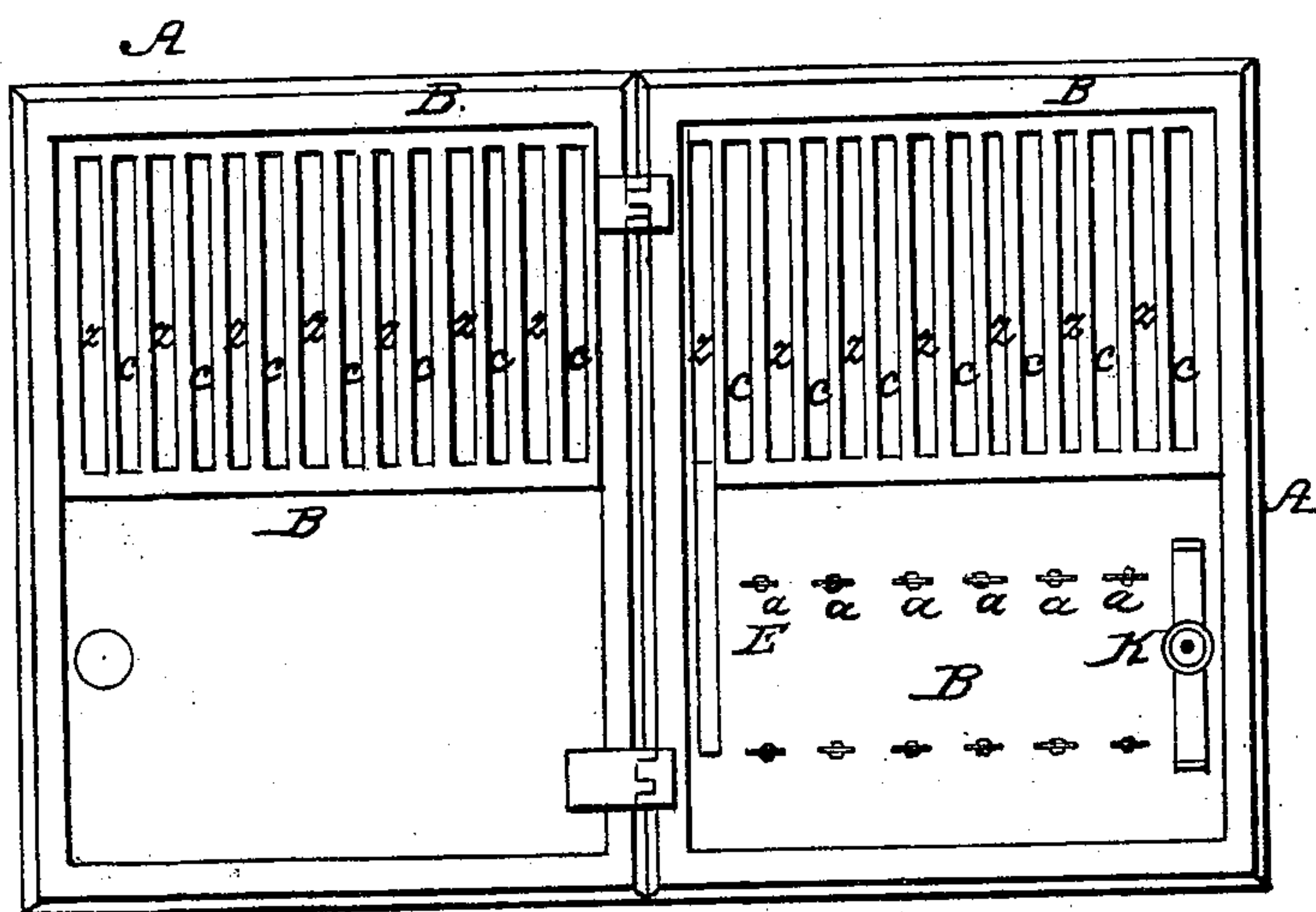
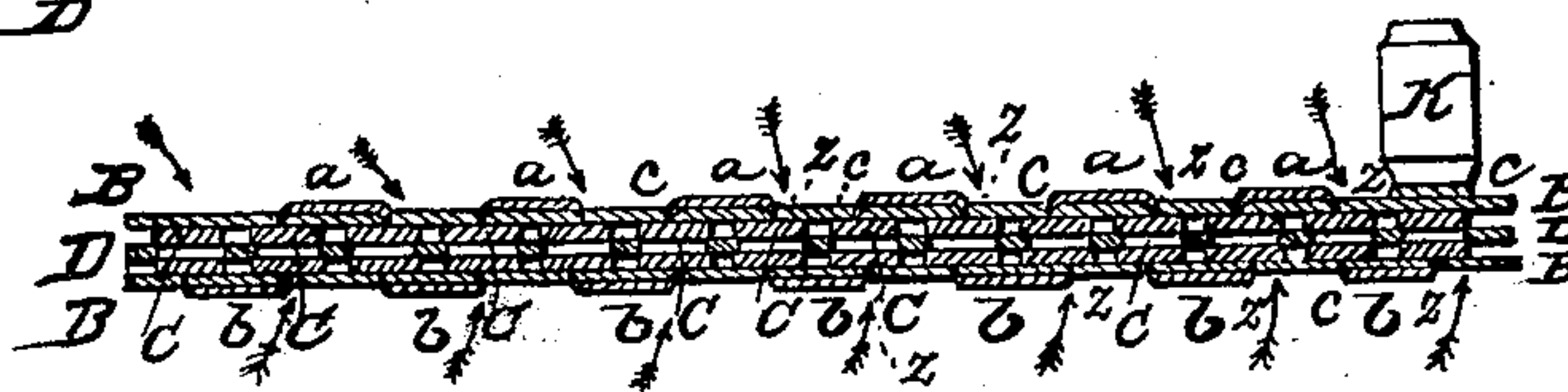


Fig. 3.



Witnesses:
H. E. Mann
H. Brune

Inventor:
H. Palmer.

UNITED STATES PATENT OFFICE.

HENRY PALMER, OF EVANSTON, ILLINOIS.

IMPROVEMENT IN VOLTAIC BATTERIES.

Specification forming part of Letters Patent No. 82,981, dated October 13, 1868.

To all whom it may concern:

Be it known that I, HENRY PALMER, of Evanston, in the county of Cook and State of Illinois, have invented a new and useful Electro-Voltaic Generator; and I do hereby declare and make known that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the letters and figures marked thereon, which form part of this specification.

My said invention consists in a novel mode of constructing voltaic generators to enable the working surfaces of the metallic elements to be thoroughly cleaned, when desired, by removing the saturated cloth or other material lying between said surfaces, substantially as hereinafter specified.

My invention further consists in so connecting the pairs of elements by means of wires, or their equivalent, concealed and protected from the corrosive action of the solution used in moistening the cloth, thus preventing incrustations or deposits upon said connections, which would materially impair the efficacy of the apparatus.

To enable those skilled in the art to understand how to construct and use my said invention, I will now describe it in detail, making reference to the aforesaid drawings, in which—

Figure 1 represents the box containing the apparatus, open, one set of the same being open, as for cleaning, and the other being closed, as for use. Fig. 2 represents the form in which the interlying cloth is arranged; and Fig. 3 is a cross-section taken through the apparatus when arranged for use.

Similar letters of reference in the several figures denote the same parts of my invention.

A represents any suitable case in which the apparatus can be placed, two different devices being represented, arranged side by side, and suitably connected; but a series of any number may be used, or one alone, as may be desired. B represents two plates of suitable non-conducting material, upon which the negative and positive elements *c z* are secured alternately, as seen in Figs. 1 and 3, in such a manner that when the plates are placed face to face upon each other the zinc strips on one plate lie upon the copper strips upon the other, as clearly shown in Fig. 3.

Between the two sections of the generator is arranged a series of strips of cloth or paper,

C, their ends being connected for convenience in applying the same by bars D, made of any suitable non-conducting material, which strips lie between the alternating elements, as indicated in the drawings.

It will be observed that the wire connections *a b* between the strips of copper and zinc upon the same plate are made at the opposite side of the plates from that upon which the elements are secured, and as the faces of said plates are made impervious to the solutions used for wetting the cloth strips C, said connections are kept free from said solutions, and all corrosion thereof is effectually prevented.

Said wire connections, it will be observed from an inspection of Fig. 3, are made in such a manner as to cause the galvanic current to pass alternately from one section of the generator to the other, and not directly through the series of elements upon one plate, B, the two sections, when laid together, as shown in Fig. 3, forming a single generator. Thus the current will pass toward the positive pole K in the direction indicated by the arrows, the elements on the two plates being connected, as aforesaid, in alternate pairs, and after passing through the generator it may be passed through a bar, E, or other suitable connection, into and through another similar generator, and so on through a series of any required number; or one generator, made in two sections, may be used alone, as preferred, the nature of my invention consisting in bisecting a generator in such a manner that the acting surfaces of the elements may be laid bare at pleasure for the purpose of cleaning the same, and thus restoring the efficacy of the generator.

Instead of flat plates, the metallic elements may be formed of wires of suitable size arranged in the same manner, and any other correlative metals or substances than zinc and copper may be employed.

Having described the construction and operation of my improvement, I will specify what I claim, and desire to secure by Letters Patent.

I claim the combination of the plates B and the positive and negative elements, when arranged to operate in the manner and for the purposes specified.

HY. PALMER.

Witnesses:

W. E. MARRS,
H. BRUNS.