

J. J. GEIGER.
Electric Battery.

No. 86,221.

Patented Jan. 26, 1869.

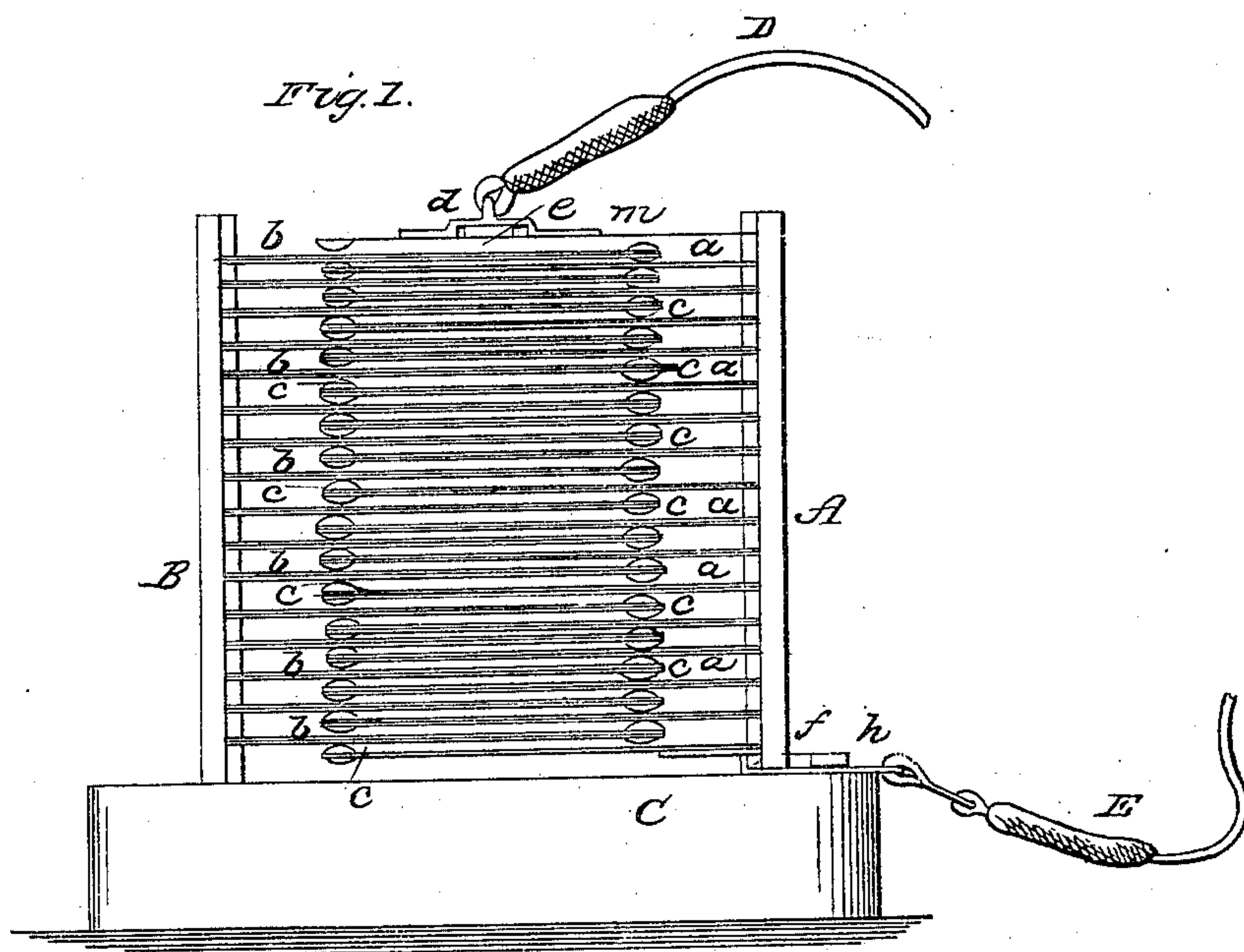
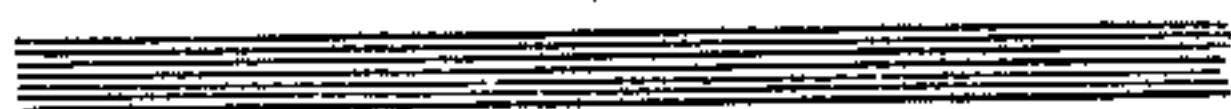


Fig. 2



Witnesses
Am. A. Morgan.
G. B. Cotton

Inventor.
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United States Patent Office.

JOHN JACOB GEIGER, OF CHICAGO, ILLINOIS.

Letters Patent No. 86,221, dated January 26, 1869.

IMPROVEMENT IN VOLTAIC PILES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN JACOB GEIGER, of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Improvement in Voltaic Piles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a side view of my invention when set up for voltaic action.

Figure 2 is a detail view of one of the plates, showing its composite character.

Similar letters of reference indicate like parts.

The object of this invention is to provide a portable and convenient voltaic pile; and

The invention consists in the construction and arrangement of the parts of the same, as will be hereinafter more fully described.

I employ a system of plates, arranged in two parts, or combs, that is to say, one-half the number of plates is affixed into a back of any suitable insulating-material, as wood, glass, or earthenware, by slotting the said backs and affixing the ends of the plates therein, as shown, thus forcing two combs, or parts, which, when brought together as shown in the drawing, leave such a narrow space between each of the plates that the voltaic fluid will adhere within the spaces by capillary attraction.

Each complete plate is composed of a positive and negative metal, arranged so that the positive and negative metals will lie in the same relative direction, as shown by the red and blue color in each complete plate, which is lettered *a* and *b*.

The plates *a* are set into the back *A*, which latter may be of any suitable insulating-material, as wood, earthenware, or glass.

The back, *B*, for the plates *b* is of the same material.

The free ends of the plates are provided with lateral protuberances, *c c c*, &c., of any suitable insulating-

material, as sealing-wax, wood, bone, glass, or any other substance which will not be acted upon by the fluid.

The object of these projections is to prevent the ends of the plates from touching the adjacent plates, and thus destroy the galvanic action of such touching plates.

The last plate of the negative end of the pile is of the one metal.

In using this pile, the two parts are brought together, as shown, and a sponge containing the acid or solution is passed along the edges of the plates with slight pressure, till the spaces are filled with the fluid, which will remain there by capillary attraction.

The pile is then set up on the top or bottom of the box *C* (which contains it when not in use) by slipping the clip or plate *h* under a staple or strap, *f*, on the said box. A hook, *g*, from the wire or cord *E*, is then inserted in a hole in the clip *h*, as shown.

The wire or cord *D* terminates in a clip, *e*, which is slipped under a staple or strap, *d*, affixed to the last plate on the negative end of the pile, as shown, when the pile is ready for action by connecting the poles.

When not in use, the two parts or combs are separated and placed in the box *C*.

The plates may be of copper and zinc, or other metals suitable for galvanic action.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

As an article of manufacture, a voltaic pile, composed of two parts, or combs, *A, a a*, &c., and *B, b b*, &c., arranged substantially as and for the purpose described.

The above specification of my invention signed by me, this 20th day of July, 1868.

JOHN JACOB GEIGER.

Witnesses:

A. W. CLINDINNING,
C. S. HALSEY.