

J. Hill.
Galvanic Battery.

N^o 103,331.

Patented May 24, 1870.

Fig. 1.

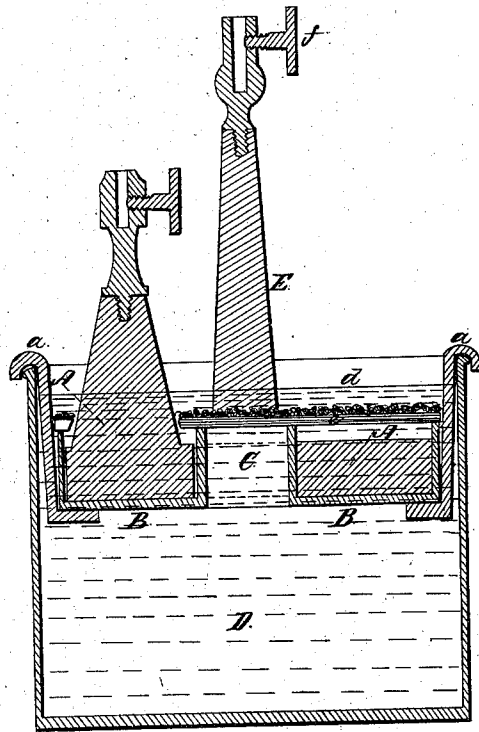


Fig. 2.

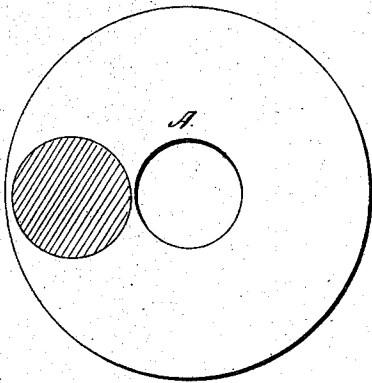
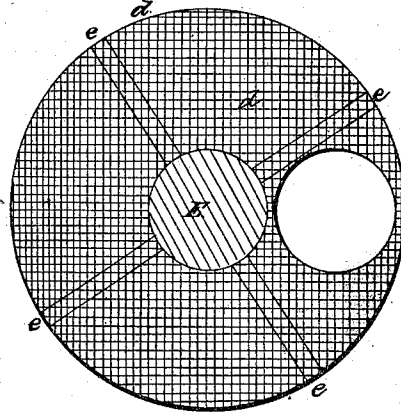


Fig. 3.



Witnesses:
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JOSEPH HILL, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF, M. S. FROST,
AND E. P. HUYLER, OF SAME PLACE.

Letters Patent No. 103,331, dated May 24, 1870.

IMPROVEMENT IN GALVANIC BATTERIES.

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

I, JOSEPH HILL, of the city, county, and State of New York, have invented certain Improvements in Galvanic Batteries, of which the following is a specification.

The object of my invention is the construction of a cheap and constant galvanic battery.

In all batteries where the metallic elements are suspended vertically, the negative element is subject to local action, from imperfect or irregular amalgamation, due to the gravitating of the mercury to the lower portion of the plate or cylinder.

I obviate this difficulty by making the negative element in the form of an annular disk, A, figs. 1 and 2.

This disk is held in a glass (or other suitable material) vessel, B, fig. 1, having an opening in the center C. Mercury is then poured upon the disk till it is covered, and the whole suspended in the top of a jar, D, by means of lead hangers *a a*, fig. 1, so that the disk will be fully immersed in the exciting fluid.

The horizontal position of the disk insures an equal coating of mercury till the whole of it is consumed.

The positive element is a disk, *d*, figs. 1 and 3, of copper-wire cloth secured to a spider frame, *e*, to insure stiffness, and rests on the rim of the vessel B.

A lead shoulder, E, figs. 1 and 3, on the center of the wire-cloth disk holds a rod with binding-screw *f*.

When a circuit is made between the two elements, a rapid evolution of hydrogen takes place, the gas rising up through the meshes of the wire-cloth, and generating a current from the center opening O toward the sides of the jar, causing a continuous circulation of the fluid, and thus securing a uniform and constant action till the battery is exhausted.

What I claim as my invention is—

1. Suspending horizontally the negative plate in or near the top of a jar or other vessel, under such conditions as shall secure a full and equable coating of mercury and circulation of the fluids, substantially as herein described.

2. The use of wire-cloth as the positive element in a galvanic-battery, substantially in the manner and for the purpose specified.

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