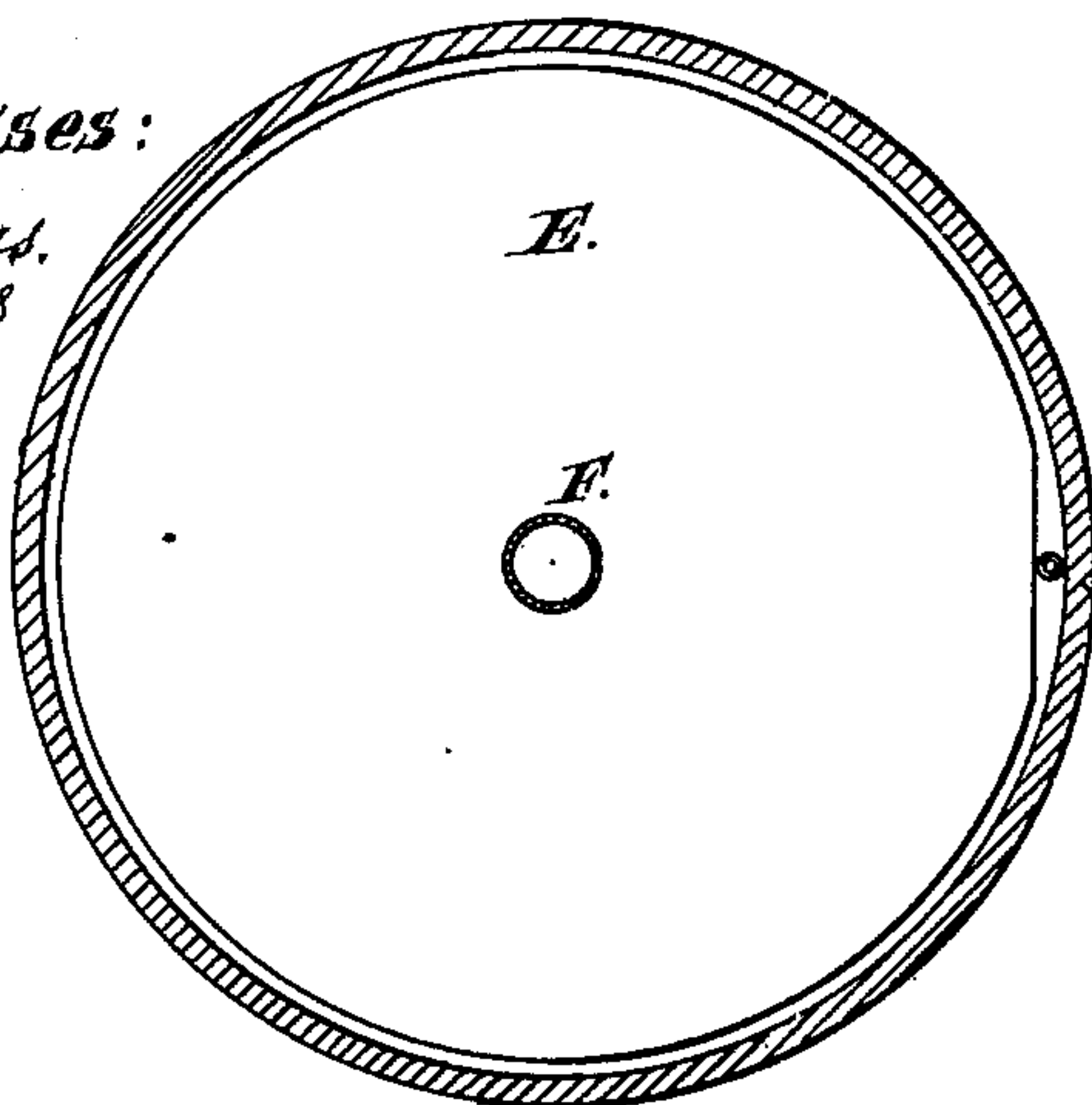


GALVANIC BATTERY.

Patented April 18, 1876.

Witnesses:

Merr. J. Burns.
 L. W. Harris



George H. Bliss,
Inventor.

By *Coburn & Thacher*
C. *Attys.*

UNITED STATES PATENT OFFICE.

GEORGE H. BLISS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN GALVANIC BATTERIES.

Specification forming part of Letters Patent No. 176,270, dated April 18, 1876; application filed February 19, 1876.

To all whom it may concern:

Be it known that I, GEORGE H. BLISS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Galvanic Batteries, which is fully described in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a vertical central sectional view of my battery; and Fig. 2, a transverse sectional view taken at the line *y y*, Fig. 1, leaving the vertical stem H uncut.

This invention is made for the purpose of enabling a ready adjustment of the parts in renewing the battery, and at the same time equalize the action of the battery and keep the sulphate of zinc separate from the sulphate of copper.

In the accompanying drawings, A is the glass cup or cell of the battery. B is the copper disk, which fits into the cell and rests upon its bottom. C is an insulated conducting-wire, connected to the copper disk B, and D is a post securely attached to the center of the copper disk B. E is also a copper disk, nearly filling the glass cup or cell A, and rests upon the post D, and is secured thereto by the set-screw F, which screws into the top of the post D. G is a zinc disk, securely attached to the stem H, and I is a cover to the glass cup or cell A. I stamp this cover, of the size to fit upon the top of the cup, out of sheet metal. There are holes J through this stem H, through which a pin, K, passes, to hold the zinc disk suspended at any desirable height within the cell or cup of the battery. L is a thumb-screw for attaching the wire to

the stem H, and through it to the positive pole of the battery.

In charging the battery, the disk B, with its insulated wire and post attachment, is first placed in the cup A, and the blue-vitriol crystals placed upon this copper disk in such a quantity as may be desired to make a charge; but I ordinarily fill the cup nearly or quite to the top of the post D. I then put the copper disk E in position and secure it on the top of this post by the screw F. The sulphate of zinc, in solution, is then poured upon the disk E, and the zinc disk inserted and suspended from the cover by the pin K at the desired height. The sulphate of copper gradually passes up about the edges of the copper disk E, as required for the battery, and the action is more gradual and uniform on account of the separation produced by the disk E.

My battery is very simple and cheap, and can be readily set up, and the adjustment of the zinc is readily made.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, in a galvanic battery, of the disk B, post D, and disk E, supported upon the post, as specified and shown.

2. The combination, in a galvanic battery, of the disks B and E, connected by a post, D, the zinc G, the zinc being suspended from the cover I and made adjustable, as specified and shown.

GEO. H. BLISS.

Witnesses:

HEINRICH F. BRUNS,
L. A. BUNTING.