J. PLUMBE, Jr.

GALVANIC BATTERY.

No. 2,984. Patented Mar. 4, 1843.

Fig. 4.

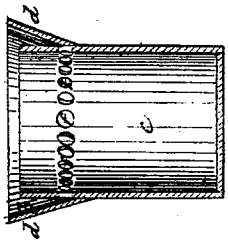


Fig. 3

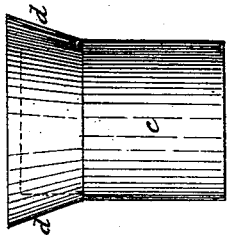


Fig. 2.

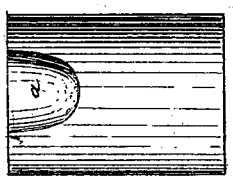
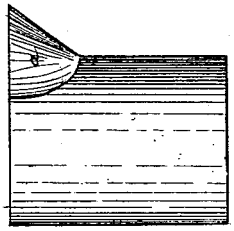


Fig. 1.



UNITED STATES PATENT OFFICE.

JOHN PLUMBE, JR., OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN GALVANIC BATTERIES.

Specification forming part of Letters Patent No. **2,984**, dated March 4, 1843.

To all whom it may concern:

Be it known that I, JOHN PLUMBE, Jr., of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in the Battery which is now Generally Used in Electro-Galvanic Processes; and I do hereby declare that the following specification, taken in connection with the accompanying drawings, forms a full and exact description of the same, wherein the nature and principles of my invention, by which it may be distinguished from others of like character, together with such parts thereof as I consider new and claim as my discovery, are duly represented.

Figure 1 of the drawings above mentioned exhibits a side elevation of the exterior or copper case of an ordinary galvanic battery. Fig. 2 is another elevation, which is taken on a plane supposed to be at right angles to that on which the first is delineated.

This case consists of a common cylindrical vessel of sheet-copper, having a lip, *a*, similar to the nose of a common water-pitcher, soldered to its exterior surface at its top, as seen in the drawings, the space between the lip and the cylinder constituting a receptacle or chamber for containing a quantity of sulphate of copper, for the purpose of keeping up, from time to time, the requisite strength of the solution in the vessel, the liquid obtaining access to the salt through a series of small holes bored through the side of the cylinder, and the salt, as it is dissolved, passing through the said holes into the solution.

My improvement on the above is shown in Figs. 3 and 4 of the drawings, the former being a side elevation, and the latter a vertical and central section, of my new battery, the said improvement consisting in extending the lip entirely around the exterior surface of the outer vessel of the battery, and so as to form a continuous circular trough, *b b*, Fig. 4, about the same, *c* representing the cylindrical case, and *d d* the circular lip surrounding it, the top of said lip being raised somewhat above the top of the vessel *c*, as seen in Fig. 4. A series of small holes, *f f*, is bored through the cylinder *c* into the space *b b* at or near its bottom. The sulphate of copper, being put in the space *b b*, will encircle the liquid in the vessel *c*, and, as it is dissolved, will be more equally and quickly distributed throughout the liquid than when disposed in the ordinary lip, *a*, Figs. 1 and 2. Besides, as the circular lip *d d* is elevated above the top of the vessel *c*, whatever liquid may be accidentally spilled over the said top will fall into the space *b b*, and from thence run back again through the holes *f f* into the battery. The external surface of the battery is thus kept free from moisture or being wet from the cause above mentioned.

In the battery seen in Figs. 1 and 2 a slight jar or inclination thereof is often sufficient to throw the liquid over the sides of the same, which, running down upon the board or table on which the battery rests and wetting its upper surface, causes serious inconvenience in the operation of the apparatus.

The external vessel or case, *c*, of the battery may be elliptical, square, or elongated in its horizontal section, instead of being circular, as hereinbefore described, and still have the trough formed entirely around it, and in other respects as above set forth. Therefore, in concluding my specification,

I claim—

Continuing the trough or lip entirely around the upper portion of the outer vessel of the battery, substantially in the manner and for the purposes above explained.

In testimony that the foregoing is a true description of my said invention and discovery I have hereto set my signature this 17th day of November, in the year 1842.

JOHN PLUMBE, JR.

Witnesses:
R. H. EDDY,
CALEB EDDY.