M. W. PARRISH.

GRAVITY BATTERY.

No. 183,201. Patented Oct. 10, 1876.

Fig. 1.

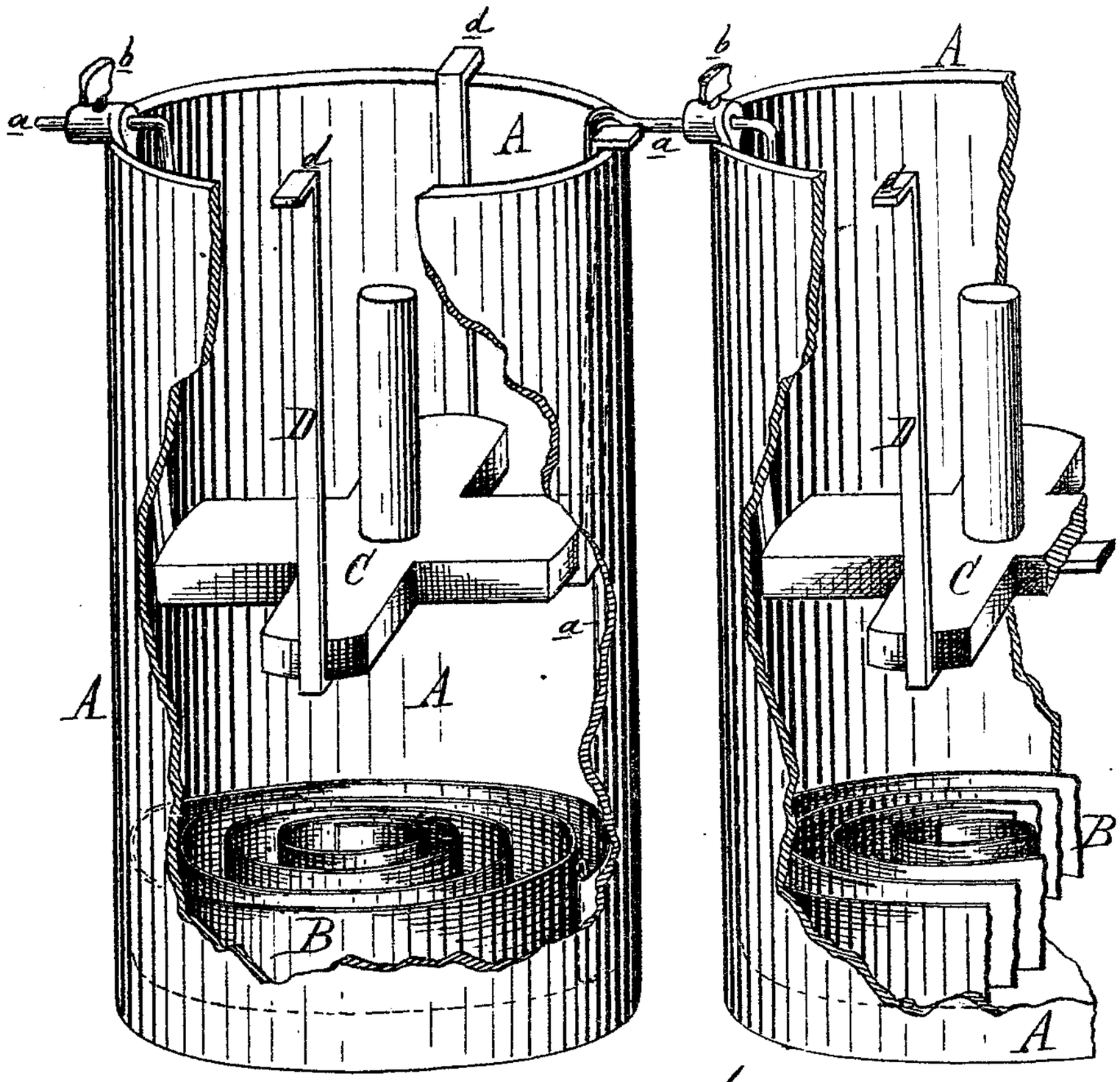
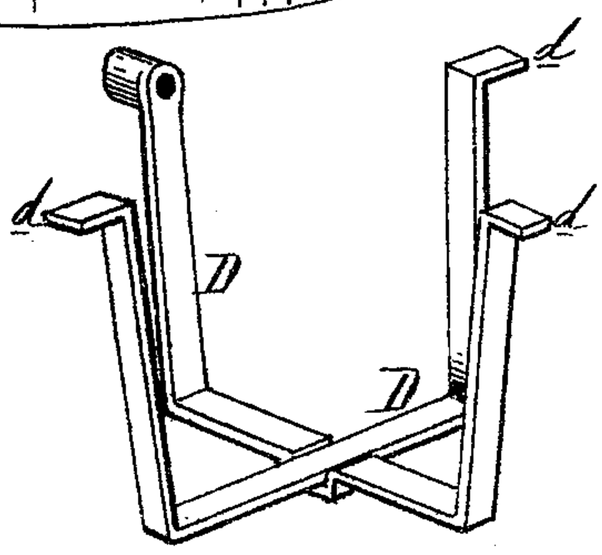


Fig. 2.



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UNITED STATES PATENT OFFICE.

MYRON W. PARRISH, OF JACKSON, MICHIGAN.

IMPROVEMENT IN GRAVITY-BATTERIES.

Specification forming part of Letters Patent No. **183,201**, dated October 10, 1876; application filed August 31, 1876.

To all whom it may concern:

Be it known that I, MYRON W. PARRISH, of Jackson, in the county of Jackson and State of Michigan, have invented an Improved Gravity-Battery, of which the following is a specification:

My invention relates to an improvement in what is commonly known as the "gravity-battery," having for its object to keep the circuit complete for a given length of time, while the zinc is removed from the cell for cleansing or replacing it with a new one. To this end it consists in the employment of a copper basket (to which the zinc wire is connected) for suspending the zinc plate in the supernatant zinc solution, so that, if the zinc plate be temporarily removed from the cell, the circuit will remain continuous and perfect until the supernatant solution is exhausted.

Figure 1 is a perspective view of my cell, with a portion of another, showing the manner of coupling the two elements, and with a portion of the glass cup broken away. Fig. 2 is a detached perspective view of a pair of hangers, which form a basket to suspend the zinc plate shown in Fig. 1.

In the drawing, A represents a glass or other cell, in the bottom of which is laid a sheet-copper scroll, B, provided with a wire, *a*, for connecting it with the zinc of the next cell. In "setting up" the battery the cell is nearly filled with a solution of sulphate of zinc and sulphate of copper, in the usual proportions, before placing in it the copper scroll.

Heretofore the zinc plate has been suspended in the zinc solution by hooking a hanger cast in one piece with it over the top edge of the cell, and to which hanger the copper wire of the next cell was connected by a binding-screw, which resulted in breaking the circuit at each time a zinc plate was removed for repairs or renewal, or, from corrosion, it broke off from the hanger and fell down onto the copper scroll.

To overcome these objections I employ a basket composed of two crossed copper hangers, D D, to sustain or support the cruciform zinc plate C at its proper level in the solution, which hangers have hooks *d d* at the ends, which rest upon the top edge of the cell, to suspend the basket formed by them therein. The wire *a*, leading from the copper of the next cell, is fastened by a binding-screw, *b*, to one of the hooks of a hanger, instead of, as heretofore, being fastened directly to the zinc plate, so that the latter is now no longer necessary to complete the circuit from one cell to the solution in the next one, (to which it is hung,)-but, by its decomposition, furnishes the necessary quantity of sulphate of zinc to keep up the cell.

If the zinc plate is removed, (the circuit being complete, as above described,) the current will be maintained, through the basket-hangers and the solution, to the copper, the same as if the zinc were in place, until the zinc solution is exhausted or destroyed, which may be from four to ten hours, thus allowing ample time to cleanse, repair, and replace the zinc plates of a battery without breaking the circuit.

What I claim as my invention is—

1. In a gravity-battery, substantially as described, a copper hanger adapted to complete the circuit through the contained solution, and to suspend or sustain the zinc plate in the latter, substantially as set forth.

2. The copper hangers D D, forming a basket for sustaining the zinc plate in the supernatant solution of a gravity-battery, and adapted to complete the circuit through the solutions independently of the zinc plate, substantially as described.

MYRON W. PARRISH.

Witnesses:
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CHAS. J. HUNT.