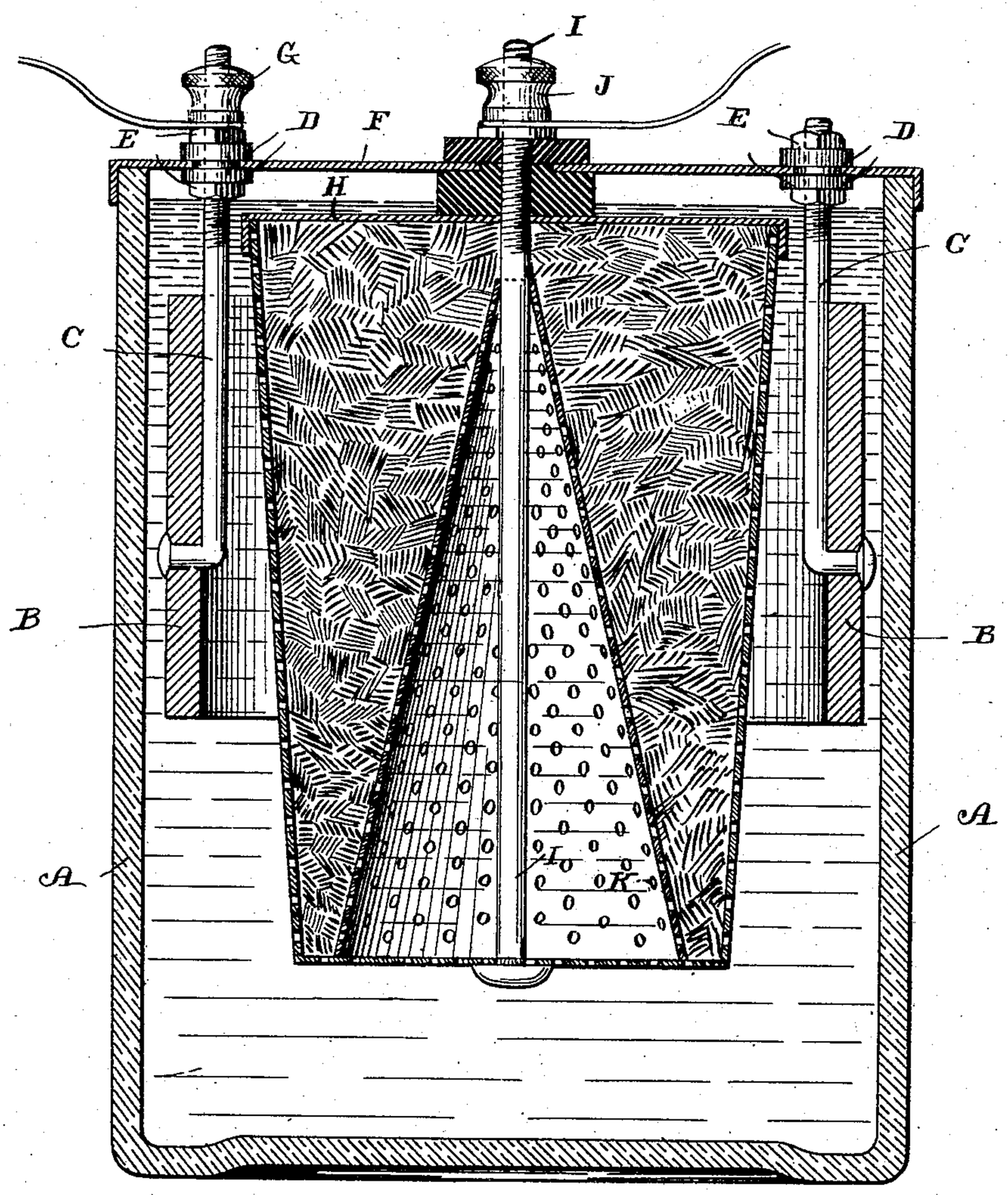
No. 764,827. PATENTED JULY 12, 1904.

# C. B. SCHOENMEHL.

## GALVANIC BATTERY.

APPLICATION FILED JULY 23, 1901.

NO MODEL.

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No. 764,827. Patented July 12, 1904.

# UNITED STATES PATENT OFFICE.

CHARLES B. SCHOENMEHL, OF WATERBURY, CONNECTICUT.

## GALVANIC BATTERY.

SPECIFICATION forming part of Letters Patent No. 764,827, dated July 12, 1904.

Application filed July 23, 1901. Serial No. 69,406. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES B. SCHOENMEHL, a citizen of the United States, and a resident of Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Galvanic Batteries, of which the following is a specification.

This invention relates to galvanic batteries, and more particularly negative elements therefor. Heretofore in batteries of this class where oxid of copper composed the depolarizer and when the same was contained in a special receptacle suspended in the solution of a jar considerable of the copper oxid was unavoidably wasted, for the reason that the lower part of the solution became so weak and inactive that the lower portion of the copper oxid was not attacked and consumed. The foregoing is especially true where very fine or cheap grades of copper oxid are used. Further difficulty has been experienced in connection with depolarizers for the reason that the depolarizer usually comprises vessels having parallel side walls to which the consumed copper oxid would invariably stick, making it difficult to remove the same when recharging became necessary. While the foregoing objection is overcome to some extent, it is nevertheless apparent in most of the basket or cylindrical forms of depolarizers which are usually suspended from the cover or a bridge.

It is therefore an object of my invention to first provide a depolarizer-receptacle which will more thoroughly expose its contents, and consequently insure a complete consummation. Said receptacle is not only largest adjacent to its top end, but also has both an exterior and interior exposed surface adapted to be attacked in a manner to work inward from the outside and outward from the inside, thus insuring complete consumption of the material.

A further object of the invention is to construct a receptacle in such a manner that both its interior and exterior wall shall be tapering or set at an angle other than a right angle to a central line through the basket, so as to insure a solidified mass of material quickly freeing itself from all sides of the receptacle, including the rod supporting the same, when the basket is opened and inverted for that purpose.

With the above objects in view my invention resides and consists in the novel construction and combination of parts shown upon the accompanying drawing, forming a part of this specification, upon which similar letters of reference denote like or corresponding parts, and which drawing illustrates a central vertical cross-section through a popular style of battery containing a negative element constructed in accordance with my invention.

Referring now in detail to the letters of reference marked upon the drawing, A indicates a jar which may be of any of the preferred or well-known types; B, an annular zinc suspended therein by means of supporting-wires C C, each of which is proivded with insulating-washers D and nuts E, connecting them with the cover F of the jar, which latter may be of metal. One of these wires C is provided with a binding-screw G, whereby a circuit-wire is attached in the customary way.

The depolarizer shown in the drawing consists of a basket suspended centrally of the cover, having exterior tapering side walls set at an angle other than a right angle to a central line through the basket and likewise a perforated bottom, as illustrated. The cover H of this basket may also be formed of perforated metal, if desired. A central rod I passes through the basket to connect the cover thereto and serves as a medium through which the basket is supported. Attached to this rod is a binding-screw J, whereby a second circuit-wire is connected. Interior of this basket I arrange a cone K, which is placed upon the bottom of the basket, with its largest end downmost and the side walls like those of the basket proper and arranged at an angle other than a right angle to a central line through the basket, but deflected in an opposite direction from the exterior walls—that is to say, the walls lean inward toward the rod, while those of the basket lean out. This form of construction not only gives a greater body of copper oxid at the top, but locates the entire mass in a sort of annular basket, which can conveniently be taken out with the jar-cover

and then removed therefrom by simply disconnecting the binding-screw and the nut beneath the same, so that the top of the basket proper can be taken off. The basket may next be inverted and possibly jarred slightly, whereupon the entire annular block of consumed material can be removed without the assistance of tools or instruments of any sort.

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

1. In a battery, the combination with the other parts, of an annular perforated depolarizer-receptacle having both an exterior and interior perforated side wall set at an angle other than a right angle to a vertical line passing therethrough.

2. In a battery, the combination with the other parts, of an annular basket for holding a depolarizer having an interior perforated side wall set at an angle other than a right angle to a vertical line passing therethrough, and forming a central opening in the lower portion of the basket only.

3. In a battery of the class described, the combination of a perforated depolarizer-basket having its walls arranged at an angle other than a right angle to a central line through the basket and a perforated cone centrally located within said basket forming an annular chamber within the basket, larger through its bottom than its top.

4. In a battery of the class described, the combination of a depolarizer-receptacle comprising an annular perforated basket broader through the top than the bottom, a central chamber within the basket having perforated side walls and openings through the bottom of the basket to insure access therethrough of the solution.

5. In a battery, the combination with the other parts, of a depolarizer-receptacle having perforated side walls deflected outward from the bottom to top, and an interior perforated wall for said basket deflected outward from top to bottom, thus forming an annular compartment, all the side walls of which are set at an angle other than a right angle to a central line through the basket.

6. In a battery, the combination with the other parts, of an annular receptacle for holding a depolarizer, a conical chamber within the receptacle having perforated walls to insure access of the solution therethrough.

7. In a battery, the combination with the other parts, of an annular basket suspended from the cover having both its inner and outer walls deflected in substantially opposite directions from a vertical line and at angles other than a right angle to a central line passing through the receptacle.

8. In a battery, the combination with the other parts, of a depolarizer-basket, having perforated walls and a hollow cone-shaped perforated bottom, all substantially as set forth.

9. In a battery, the combination with the other parts, of a receptacle for holding a depolarizer, having each of its side walls perforated and at least one wall which extends under some part of the depolarizer-holding space set at an angle other than a right angle, to a vertical line passing through the said receptacle.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 9th day of July, A. D. 1901.

CHARLES B. SCHOENMEHL.

Witnesses:
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