(No Model.)

C. B. SCHOENMEHL.

BATTERY ZINC.

No. 467,239. Patented Jan. 19, 1892.

FIG. 1.

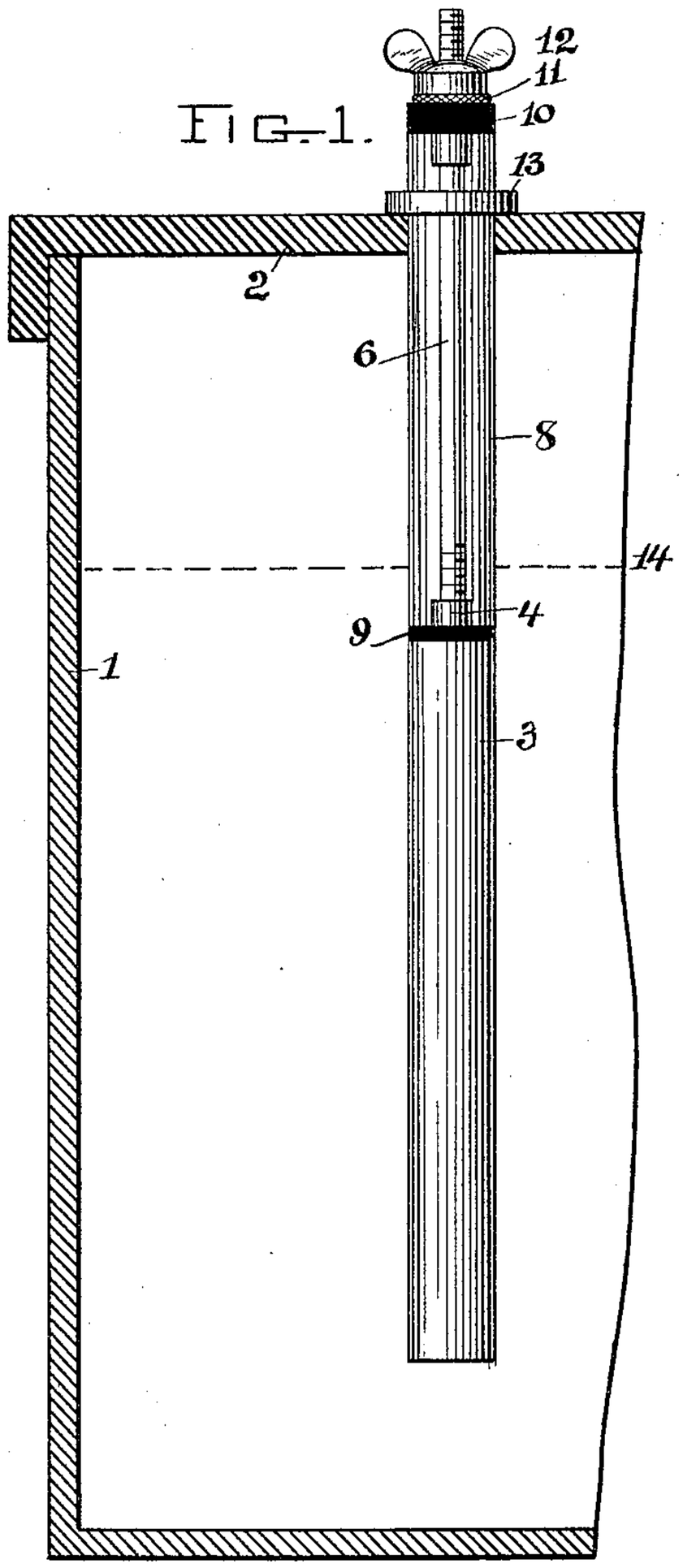

FIG. 2.

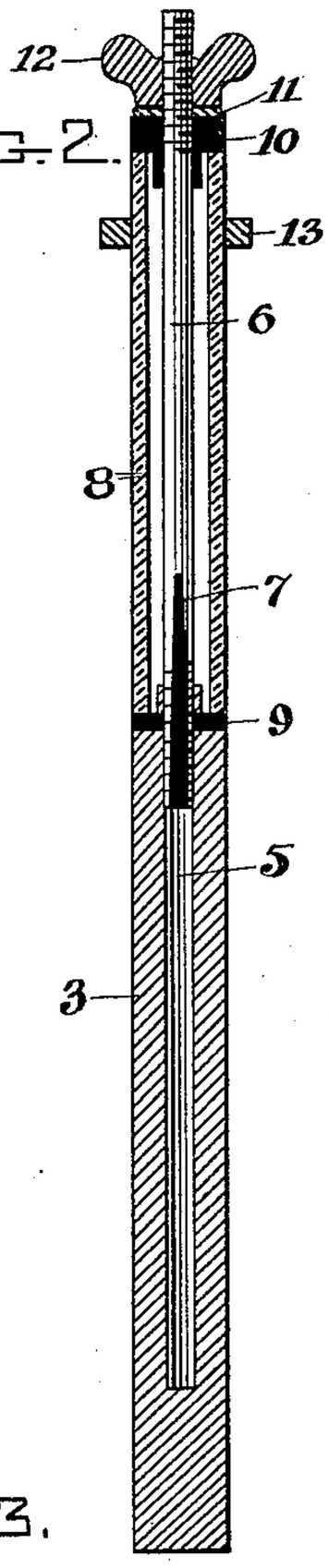

FIG. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES B. SCHOENMEHL, OF WATERBURY, CONNECTICUT.

BATTERY-ZINC.

SPECIFICATION forming part of Letters Patent No. 467,239, dated January 19, 1892.

Application filed April 25, 1891. Serial No. 390,397. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. SCHOENMEHL, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Battery-Zincs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in zinc elements for batteries, and has for its object to provide a device of this description which shall be simple and economical, in which the greatest service may be obtained from the zinc used, and which shall be self-amalgamating; and with these ends in view my invention consists in the details of construction and the combination of elements hereinafter fully explained, and then recited in the claims.

In the drawings which form a part of this specification, Figure 1 shows in section a battery-jar having therein shown in elevation a zinc made in accordance with my invention. Fig. 2 is a vertical section of the zinc; Fig. 3, a detail elevation of a part of the connecting-rod.

Like numerals denote the same parts in all the figures.

The jar, which I designate by the numeral 1, is provided with any ordinary cover 2, which latter has a hole for the introduction of the zinc. Any other elements required may be attached to the cover in any suitable manner; but as this forms no part of my invention I have not shown it in the drawings.

My improved zinc consists of a bar of zinc 3 of such size and sectional shape as may be found convenient. Its upper end bears a nipple 4, and said zinc, as seen at 5, is centrally bored for the greater portion of its length. Into the upper end of the hole just referred to is screwed a rod 6, having a groove or channel 7 cut in its side near its lower end.

8 is a tube of glass or porcelain which fits over the nipple 4 and surrounds the rod 6. Between it and the top of the zinc is a washer 9 of leather or rubber.

10 is a washer seated on the top of the tube and having its lower end projecting into the bore of the latter. On top of this washer is a nut 11, which runs on the screw-threaded upper end of the rod, and above this is a thumb-screw 12, by means whereof the parts may be held securely in engagement, and whereby the line-wire may be attached.

13 is an elastic ring adapted to surround the glass tube, as shown, and to hold the zinc suspended in the jar by resting upon the top of the latter.

The dotted line 14 in Fig. 1 indicates the depth to which the jar may be filled.

In the operation of my invention the thumb-screw, nut, and washer are removed from the top of the zinc. A certain quantity of mercury is then poured into the tube, the parts replaced, and tightly secured. This mercury will descend through the channel to the interior of the zinc and any excess will stand in the tube. This mercury serves to amalgamate the zinc. In order that it may not suffer from contact with the mercury, rod 6 is made of iron; but it is of sufficient size to afford ample conductivity. In addition to its function as a holder for the mercury the glass tube, by reason of its smooth surface, prevents the upward creeping of the salts, and of course it is non-corrosive. It furthermore prevents waste of zinc, inasmuch as the whole zinc is exposed to the action of the solution, and when consumed may readily be replaced without leaving, as in ordinary batteries, an upper end—say two or three inches long—to be thrown away or remelted. In replacing zincs it is only necessary to loosen the thumb-screw and washers and screw the lower end of the rod into the upper end of the new stick of zinc, since the glass tube, rod, washers, &c., may be used over and over again.

I claim—

1. A battery-zinc consisting of a hollow zinc stick, a connecting-rod screw-threaded into said stick, a glass tube surrounding said rod and forming a continuation of the zinc stick, and means, as described, for holding the parts in assembled position, substantially as specified.

2. A battery-zinc consisting of a hollow stick of zinc, a connecting-rod screw-threaded therein and provided with a channel leading

to the interior of said stick, a glass tube forming a continuation of said zinc stick, and washers and fastening-nuts whereby the parts are tightly secured together.

3. The zinc stick 3, in combination with the screw-threaded rod 6, having channel 7, the glass tube 8, the washers 9 and 10, the suspending-ring 13, and the nut and thumb-screw 11 12, all the parts being arranged as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES B. SCHOENMEHL.

Witnesses:

WILSON H. PIERCE,

FRANK J. PAGE.