

(No Model.)

F. A. LANE.
ZINC FOR ELECTRIC BATTERIES.

No. 579,273.

Patented Mar. 23, 1897.

Fig. 1.

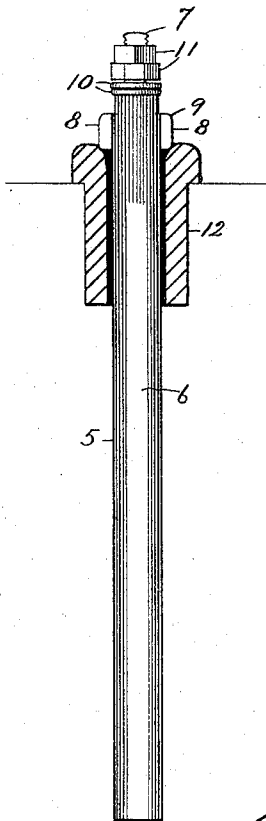


Fig. 2.

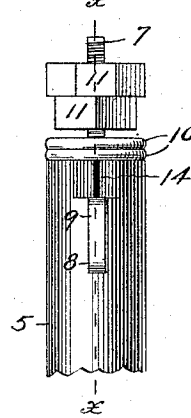


Fig. 3.

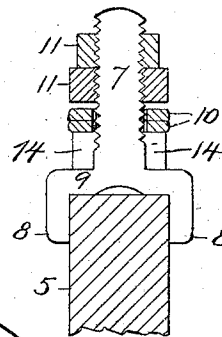
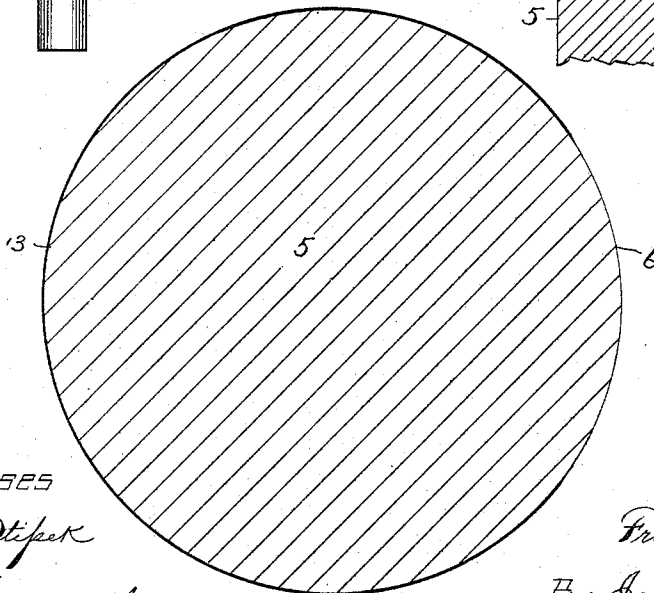


Fig. 4.



Witnesses

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ZINC FOR ELECTRIC BATTERIES.

SPECIFICATION forming part of Letters Patent No. 579,273, dated March 23, 1897.

Application filed October 22, 1895. Serial No. 566,451. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC A. LANE, a citizen of the United States, residing at Torrington, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Zincs for Electric Batteries, of which the following is a specification.

My invention relates to improvements in zincs for electric batteries; and the main objects of my improvement are to lessen the consumption of zinc and to give greater efficiency to the battery.

In the accompanying drawings, Figure 1 is a side elevation of one of my zincs, together with a sectional view of an insulator upon which it rests. Fig. 2 is an enlarged side elevation of the upper end of said zinc. Fig. 3 is a longitudinal section of the same with the central piece in elevation, and Fig. 4 is an exaggerated transverse section of the body portion of said zinc.

The main feature of my invention relates to the body portion 5 of the zinc. This is of the usual cylindrical form and it may be treated with mercury or in any ordinary manner, but I prefer to use the zinc that has not been treated with mercury. I give this body 5 a protecting-coating 13, Fig. 4, except for a limited exposed portion of the periphery along its length, as at 6. Said coating may be formed by first coating the full circumference or periphery of the body and then removing a portion of the coating to lay the zinc bare at a limited portion extending along the length of the zinc as far as it will be submerged in the bath.

The protecting-coating may be deposited by plating with nickel, copper, or other metal, or by applying a cement or paint—as, for example, celluloid paint—or other coating that will serve to cut off the action of the carbon. By thus protecting the zinc, except at the exposed portion 6, the consumption of the zinc extends inwardly from said exposed portion only instead of extending inwardly from all sides and consuming the entire circumference of the original body, as in the ordinary zincs. It is also believed that in addition to making the zincs last longer the battery is of greater

efficiency. This main feature of my invention may be employed in zincs generally without regard to the construction at the upper end, by which they are supported and with which the wire is connected, but I have invented a simple and efficient support and wire connection.

I cut from sheet metal the flat screw-shank 7 and supports 8 8 of the form shown in Fig. 3, said supports and shank being connected by the cross-arm 9. I slot the upper end of the zinc centrally for a short distance, making the slot 14 in its original form as wide as the screw-shank is thick and insert the cross-arm 9 in said slot, with the supports 8 8 extending downwardly by the sides of the body just below the bottom of the slot, as shown in Fig. 3. The metal above the cross-arm is then compressed in suitable dies to narrow the slot, as shown at 14, Fig. 2, and firmly fasten the screw-shank to the end of the zinc. As implied by the term "screw-shank," the edges of said shank are threaded, as shown, and the usual washers 10 and nut or nuts 11 applied to the projecting end, as shown. The supports 8 8 are designed to rest upon the insulator 12 at the top of the jar, as shown in Fig. 1. By this construction an efficient wire connection is formed and secured to the zinc at a small cost.

I claim as my invention—

1. A zinc for an electric battery having a protecting-coating encircling the major portion of its periphery and a limited exposed portion extending along its length in the longitudinal space left in said encircling coating, substantially as described and for the purpose specified.

2. A zinc for an electric battery having a transverse slot through its extreme upper end, and the screw-shank with a flattened portion thereof secured within said slot while its threaded portion projects therefrom, substantially as described and for the purpose specified.

3. A zinc for an electric battery having set into its upper end the screw-shank, said shank being provided with side supports 8, 8, on opposite sides of said zinc substantially as described.

4. A zinc for an electric battery having a transverse slot at its upper end and the flat screw-shank, the projecting end thereof being of less width at the mouth of said slot
5 than the diameter of said zinc, while the inner end of said shank is enlarged; the slot in the zinc being contracted above said enlarged end and at each side of the narrow portion of said shank, substantially as described and for the purpose specified.

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Witnesses:

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