

(No Model.)

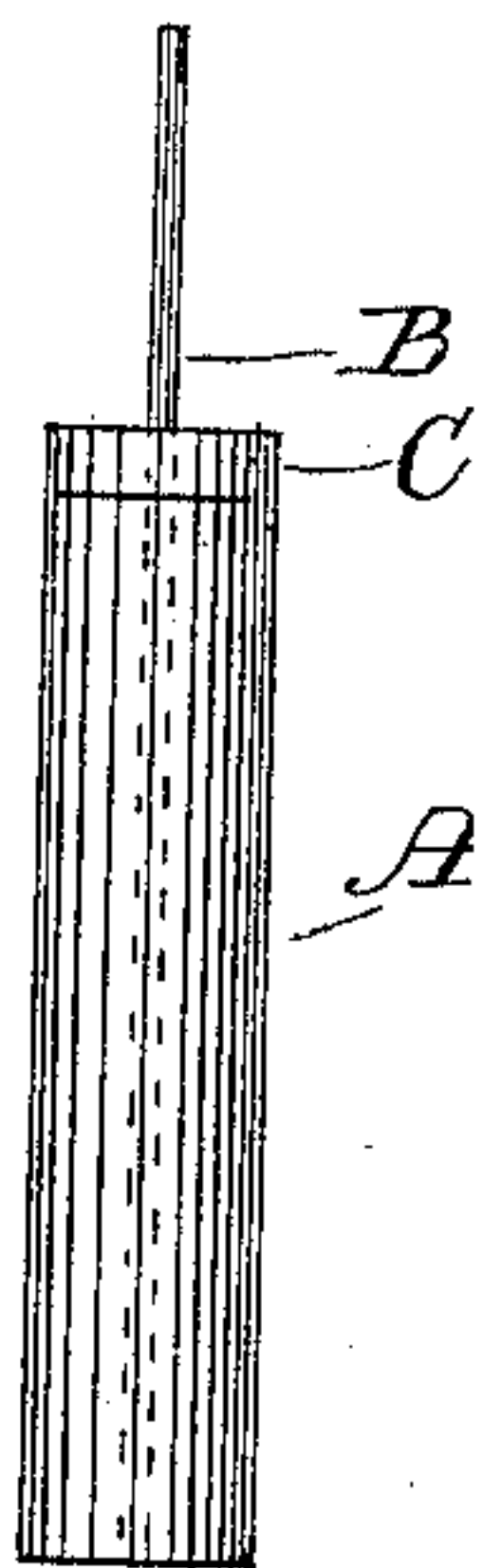
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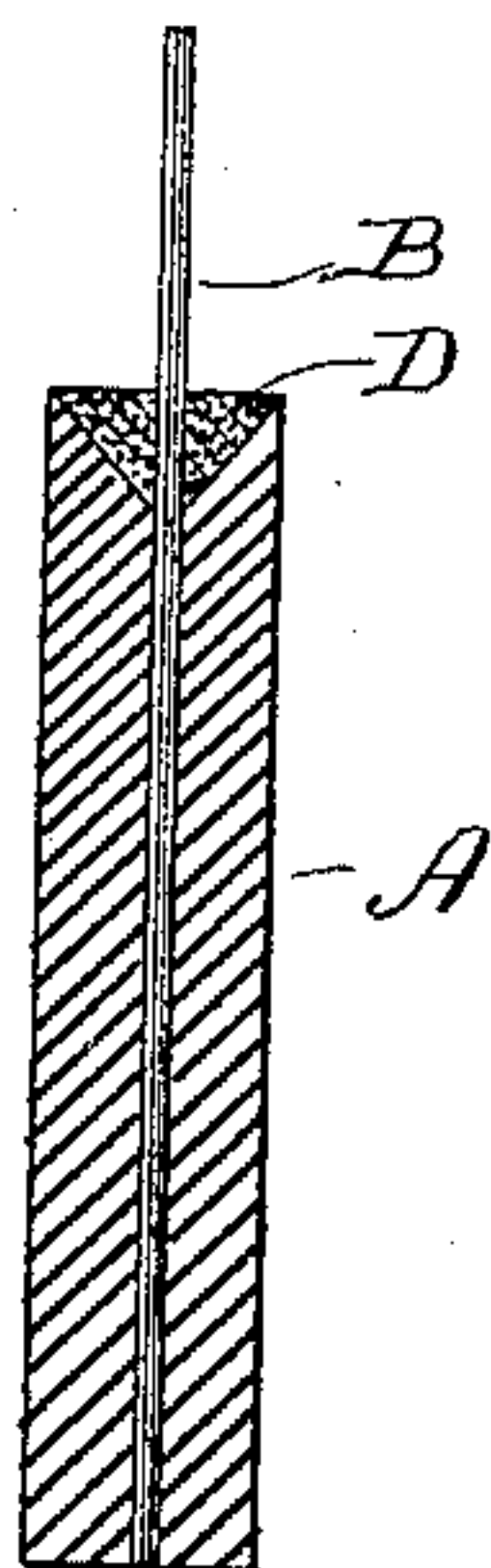
No. 313,615.

Patented Mar. 10, 1885.

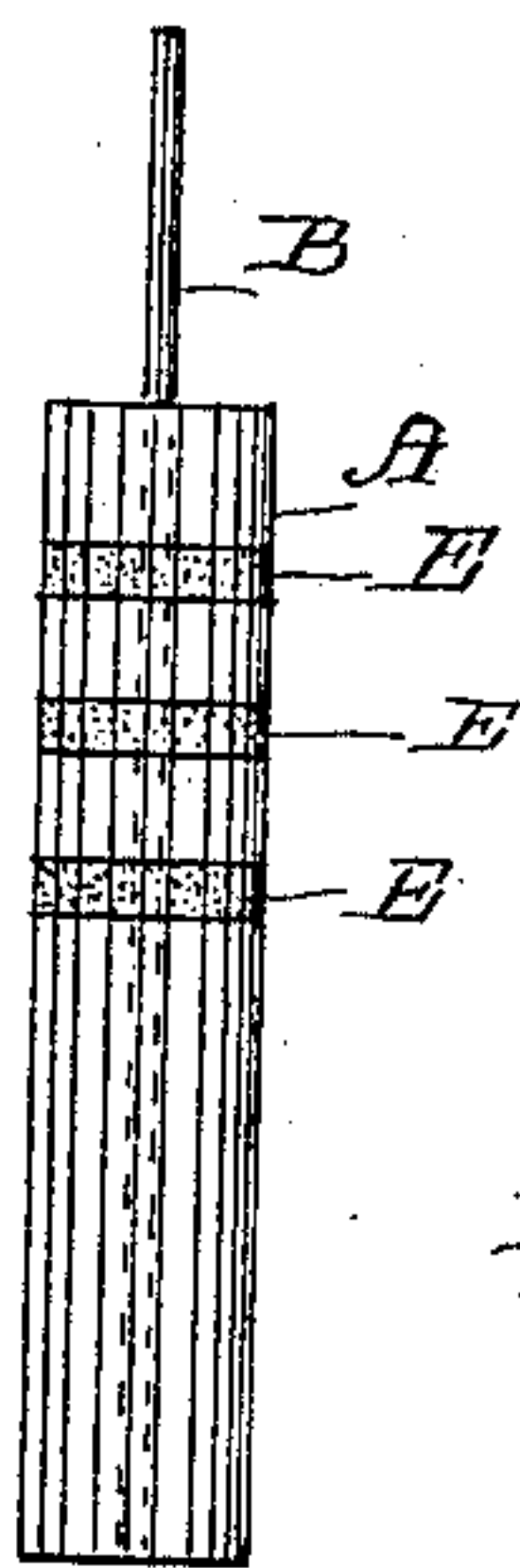
*Fig 1*



*Fig 2*



*Fig 3*



Witnesses  
*S. Williamson*  
*W. J. Harland*

Inventor  
*William S. Platt*  
By *Smith & Hubbard*  
Attys.

# UNITED STATES PATENT OFFICE.

WILLIAM S. PLATT, OF WATERBURY, CONNECTICUT.

AMALGAMATING ZINC PLATES OR BARS FOR VOLTAIC BATTERIES.

SPECIFICATION forming part of Letters Patent No. 313,615, dated March 10, 1885.

Application filed April 23, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. PLATT, 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 Amalgamating Zinc Plates or Bars for Voltaic Batteries; 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.

My invention relates to certain novel and useful improvements in amalgamating zinc plates or bars for voltaic batteries, and has for its object to simplify the process of amalgamation and to greatly reduce the expense of said process; and with these ends in view my invention consists in the details of construction and combination of elements, herein after fully and in detail explained, and then specifically designated by the claim.

In order that those skilled in the art to which my invention appertains may more fully understand the construction and adaptation of my improvement, I will proceed to describe the same in detail, referring by letter to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an elevation of a zinc bar with my improved amalgamating button applied thereto; Fig. 2, a vertical sectional view showing a modified way of applying my amalgamator, and Fig. 3 also a modification showing the amalgamator applied in thin strips on the lateral surface of the zinc bar.

Similar letters denote like parts in the several figures of the drawings.

A is the zinc bar, which is cast with a copper or other suitable wire, B, extending within the same or throughout its entire length, as may be desired. I prefer, however, to have this wire extend throughout the entire length of the bar, as the latter is not only strengthened thereby, but is prevented from cracking during the process of casting.

C is a button perforated centrally and adapted to be inserted over the wire so as to be seated on the end of the bar for the purpose presently explained. This button is made of mercury and zinc combined in suitable proportions. When the acid in the battery acts on said button, the particles of mercury in the button will form an amalgam with the zinc bar.

It is obvious that the process of amalgamation may be determined and the proportions of mercury and zinc in the button varied to produce desired results in different zinc plates or bars.

The amalgamating substance may be applied to the bar in various ways. The bar may be recessed and filled with the amalgam, as shown at D, Fig. 2, or shallow grooves may be formed in the sides of the bar and filled with the amalgam, as shown at E, Fig. 3; but I prefer the method illustrated at Fig. 1, as it is the simplest and produces the best results.

I do not wish to be understood as claiming, broadly, the amalgamation of zinc for use in voltaic batteries, as I am aware that this is common and well known; but in my improvement the zinc bar undergoes amalgamation during the action of the acid on the same, and the results are highly beneficial.

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

In combination with a zinc bar or plate to be used in a voltaic battery, an amalgam or alloy of mercury applied to said bar in the form of a button or strip, substantially as set forth.

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

WILLIAM S. PLATT.

Witnesses:

GEORGE R. WELTON,  
DANIEL F. WEBSTER.