UNITED STATES PATENT OFFICE.

WALTER G WAITT, OF FREMONT, OHIO, ASSIGNOR TO NATIONAL CARBON COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF NEW JERSEY.

DRY CELL.

1,115,458. Specification of Letters Patent. Patented Oct. 27, 1914.

No Drawing. Application filed March 24, 1913. Serial No. 756,369.

To all whom it may concern:

Be it known that I, WALTER G. WAITT, a citizen of the United States, residing at Fremont, in the county of Sandusky and State of Ohio, have invented a certain new and useful Improvement in Dry Cells, of which the following is a full, clear, and exact description.

My invention relates to a method of making dry cells.

Dry cells of the present type consist of a zinc can, which is also one electrode, having a bibulous lining on the inside. The carbon electrode is in the center and the mix is packed inside the lining and around the carbon electrode. In one type of cell, the bibulous lining, which usually consists of pulp board or straw board, is placed in the cell in a thoroughly moistened condition. In another type of cell, the lining is placed in the zinc can in a dry condition. It is to this latter type of cell that my invention particularly relates. In the patent to Frederick L. White, #1,048,773, the particular advantages of using oil in the lining or on the zinc can of the dry cell are set forth and claimed.

My invention consists in a method of constructing a dry cell to obtain the advantages set forth in that patent and also other advantages which will be described herein.

It has been found advantageous to use dry powdery material such as flour in dry cells of both the wet and dry lining type. In the wet lining type, the flour is incorporated in the cell in form of a paste. In the dry lining type, it has been the practice to moisten the inside of the zinc can with water and dust the dry flour in it so that it adheres to the zinc. Zinc will not thoroughly wet with water but acts toward it much in the same way that an oily surface will; *i. e.*, the water instead of spreading evenly over the surface of the zinc collects in small patches. The result of this is that when flour is dusted around the inside of the can, it adheres in small patches instead of being distributed evenly over the zinc. Oils do not act in this way, but will form a uniform coat over the zinc. I, therefore, find that a substantially uniform coat of flour or other powdery material may be applied to the inner surface of the zinc can by first coating it with an oil such as kerosene, summer oil, vaseline, etc., and then putting the flour on the inside surface. Since the entire surface is covered with oil, it will stick so as to form a uniform layer on the zinc. The flour can most conveniently be placed on the zinc by putting in a quantity of flour and then pouring out all that does not stick to it; however, the flour can be placed in in any other way. The oils mentioned are by way of example only, and of course the method is not to be limited thereto. In the above mentioned patent, all oils are covered broadly and my process must be interpreted to include them in the same way.

My process forms a very convenient way of incorporating the powdery material uniformly in the zinc can, and in addition I obtain all the benefits of the oil film set forth in the patent.

My invention is not to be limited to dry cells of the dry lining type. If for any reason it is desired to coat the zinc of the wet lining type with flour or other material, it is obvious that my method can be used. The invention is also not necessarily limited to the application of the material to the zinc. If desired, the same method may be used to apply it to the bibulous lining.

Having described my invention, what I claim is:

1. The process of coating a dry cell part with a dry powder which consists in applying thereto a coating of a material that wets the surface and adding the said powder to the coating.

2. The process of coating an electrode of dry cells with dry powdery material which consists in applying a layer of oil thereto and then adding to this layer the desired amount of said material.

3. The process of coating one electrode of

a dry cell with flour which consists in applying a layer of oil thereto and then adding to the layer the desired quantity of flour.

4. The process of coating the inside of zinc cans of dry cells with powdery material which consists in filling the can with a material that wets the surface and pouring it out and then adding a quantity of said powdery material to the wetted surface of the can.

In testimony whereof, I hereunto affix my signature in the presence of

WALTER G. WAITT.

Witnesses:

C. B. CARR,

H. W. BIRKEMIER.