

UNITED STATES PATENT OFFICE.

CHARLES E. LOCKWOOD AND WILLIAM C. BANKS, OF NEW YORK, N. Y.

BATTERY-DEPOLARIZER.

SPECIFICATION forming part of Letters Patent No. 714,590, dated November 25, 1902.

Application filed September 5, 1900. Serial No. 29,038. (No model.)

To all whom it may concern:

Be it known that we, CHARLES E. LOCKWOOD and WILLIAM C. BANKS, citizens of the United States, and residents of New York city, in the counties of New York and of Kings, respectively, and State of New York, have invented certain new and useful Improvements in Battery-Depolarizers, of which the following is a specification.

10 In many batteries it is desirable to use as a depolarizing agent an oxid of copper in a finely-divided state. For instance, in the battery shown in United States Patent No. 570,013, dated October 27, 1896, the said agent, 15 (there marked "B") is such oxid of copper. In preparing it it is common to take metallic copper and oxidize it; but, as is well known, the process of oxidation does not take effect to any great depth, and as soon as the oxid 20 on the surface of the metallic copper has by the battery action been reconverted into metallic copper the battery-current substantially ceases, and it is necessary to supply more oxid of copper. The metallic copper has 25 meanwhile performed no function except to form a support for the oxidized portion at its surface, and to get a certain quantity and continuity of action it has been necessary to use a large quantity of copper, of which only 30 the oxid upon the surface was absolutely required for the chemical action.

The object of our invention has been to avoid the necessity for using this considerable body of (in one sense) useless metallic copper, and we have devised a depolarizer which 35 successfully accomplishes the desired result. In creating it we take finely-divided particles of iron, and first plating them with copper we oxidize that copper, preferably by heating the plated particles in a furnace; but we do 40 not limit ourselves to any particular method of plating the particles or of oxidizing the plating when formed. Some methods are better than others; but any method which will deposit the copper as a plating and will 45 oxidize the deposit will accomplish our object.

What we claim as our invention, and desire to secure by Letters Patent, is—

A depolarizer for a primary battery composed of a copper plating deposited upon the 50 surfaces of finely-divided iron particles and oxidized thereon.

Signed at New York city, in the county of New York and State of New York, this 21st day of August, A. D. 1900.

CHARLES E. LOCKWOOD.
WILLIAM C. BANKS.

Witnesses:

M. SLOUGH,
A. G. N. VERMILYA.