(No Model.)

W. A. B. BUCKLAND.

PLATE FOR SECONDARY VOLTAIC BATTERIES.

No. 550,480. Patented Nov. 26, 1895.

FIG. 5.

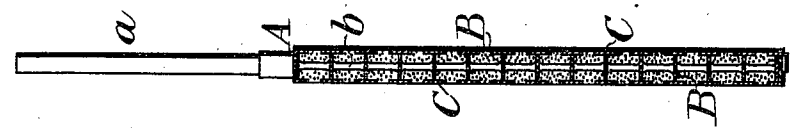


FIG. 6.

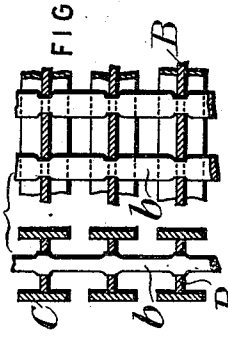


FIG. 4.

FIG. 3.

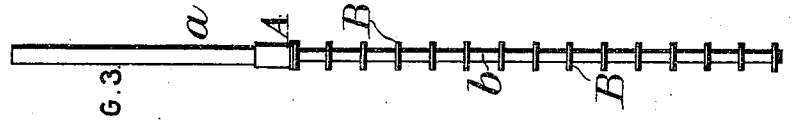


FIG. 1.

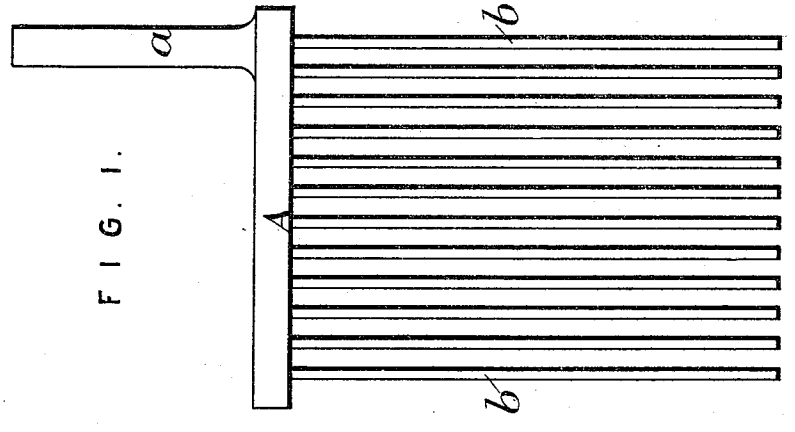
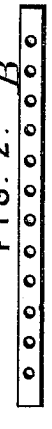


FIG. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM ALFRED BAXTER BUCKLAND, OF LONDON, ENGLAND.

PLATE FOR SECONDARY VOLTAIC BATTERIES.

SPECIFICATION forming part of Letters Patent No. 550,480, dated November 26, 1895.

Application filed July 15, 1895. Serial No. 556,057. (No model.) Patented in England March 25, 1895, No. 6,163; in France March 28, 1895, No. 245,999; in Belgium March 30, 1895, No. 114,832; in Italy May 7, 1895, LXXV, 464; in Spain June 25, 1895, No. 17,244, and in Canada August 14, 1895, No. 49,674.

To all whom it may concern:

Be it known that I, WILLIAM ALFRED BAXTER BUCKLAND, a citizen of England, residing at 12 Pakenham Street, Gray's Inn Road, London, in the county of Middlesex, England, have invented a certain new and useful Plate for Secondary Voltaic Batteries, (for which I have received Letters Patent in Great Britain March 25, 1895, No. 6,163; in France March 28, 1895, No. 245,999, patent of addition; in Belgium March 30, 1895, No. 114,832; in Italy May 7, 1895, LXXV, 464; in Spain June 25, 1895, No. 17,244, and in Canada August 14, 1895, No. 49,674,) of which the following is a specification.

My invention relates to the construction of a plate for a secondary voltaic battery, as I shall describe, referring to the accompanying drawings.

Figure 1 is an elevation of the conducting-frame. Fig. 2 is a plan of one of the partitions. Fig. 3 is an end view of the conducting-frame with the partitions placed upon it. Fig. 4 is an elevation of the conducting-frame with the partitions fixed. Fig. 5 is a vertical section of the plate with its charge of active material. Fig. 6 is a part transverse and part longitudinal section to an enlarged scale, showing the fixing of the partitions.

I cast in lead, or preferably lead alloyed with a little antimony, the frame shown in Fig. 1, consisting of a top bar A, conducting-arm *a*, and a number of parallel round bars *b*. I prepare in celluloid or other somewhat elastic non-conducting material that is not affected by the exciting liquid a number of strips B, having holes corresponding in number and position with the bars *b*, and I string the strips B on the bars at equal intervals. I then subject the parts of the bars *b* which are between the strips B to pressure, so as to flatten them, making them thinner and wider, as shown in Fig. 6, thus securing the partitions B in position. The plate thus prepared, as shown in Fig. 4, may have active material, such as lead-oxide paste, spread over both sides and filling up all the interstices to a surface level with the edges of the strips B, and in this condition, either bare or covered by porous material, it may be used in a secondary battery. I prefer, however, to cement to the edges of the strips B vertical strips C and then to fill up all the spaces with the paste, as shown in Fig. 5, the active material being thus held securely in the grooves formed by the strips B and C.

Having thus described the nature of my said invention and the best means I know for carrying the same into practical effect, I claim—

A plate for a secondary voltaic battery, consisting of a conducting frame having a number of parallel bars provided at intervals with flattened portions, and strips of elastic non-conducting material strung on said bars and held separated thereupon by the flattened portions of said bars, and a filling of active material covering the flattened bars and the strips strung thereupon, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 4th day of July, A. D. 1895.

WILLIAM ALFRED BAXTER BUCKLAND.

Witnesses:

OLIVER DUNANE,

JNO. P. M. MILLARD.