(No Model.)

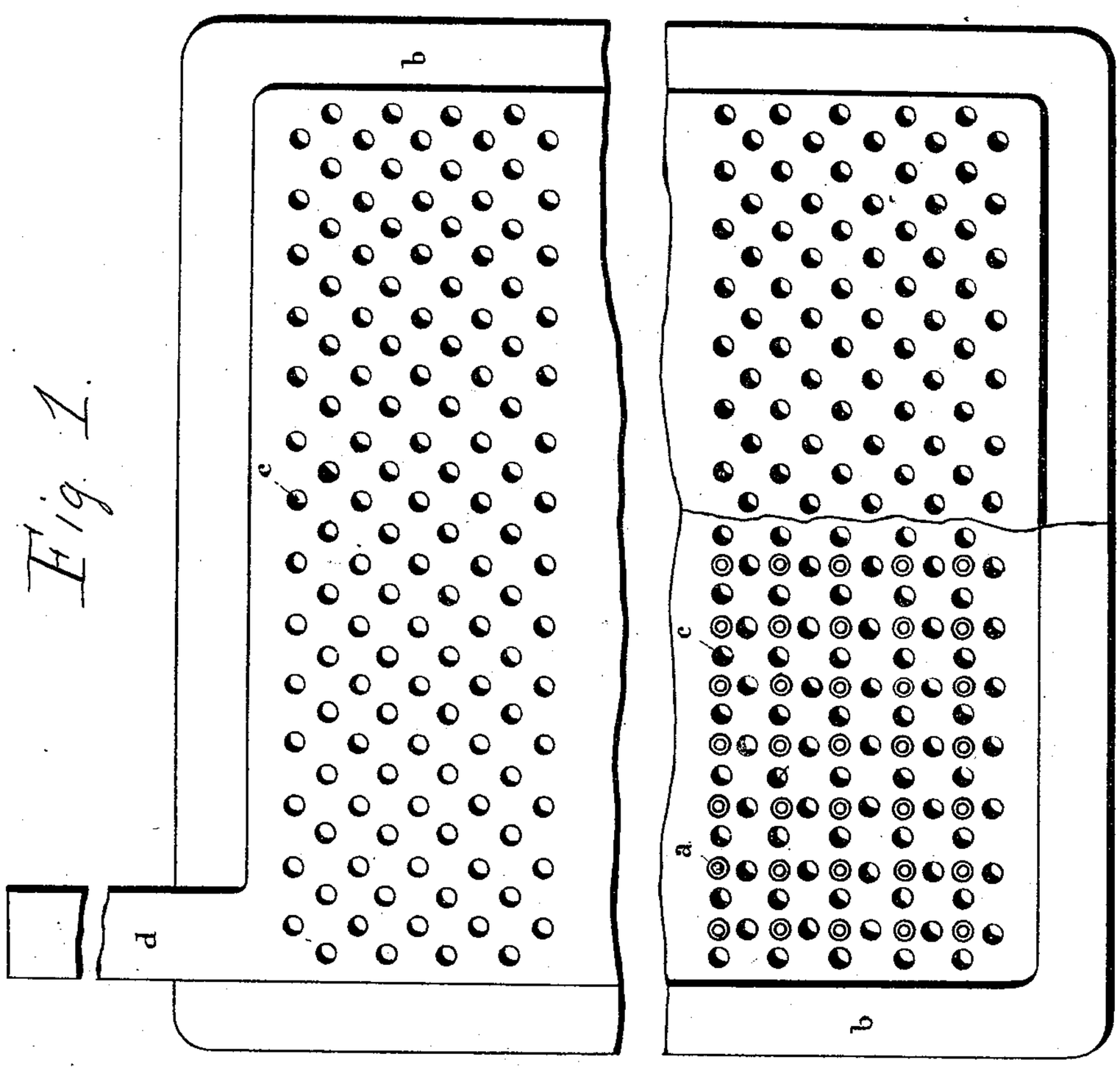
C. J. BARBIER.

ACCUMULATOR PLATE.

No. 521,970. Patented June 26, 1894.

Fig. 2.

Fig. 1.



Witnesses:
E. B. Bolton
H. van Oldenneel

Inventor:
Charles Joseph Barbier
By Richards & Co
his Attorneys.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES JOSEPH BARBIER, OF LYONS, FRANCE.

ACCUMULATOR-PLATE.

SPECIFICATION forming part of Letters Patent No. 521,970, dated June 26, 1894.

Application filed January 12, 1894. Serial No. 496,669. (No model.) Patented in France July 24, 1893, No. 229,934.

To all whom it may concern:

Be it known that I, CHARLES JOSEPH BARBIER, a citizen of the Republic of France, residing at Lyons, France, have invented certain new and useful Improvements in Accumulator-Plates, (for which Letters Patent were granted in France July 24, 1893, No. 229,934,) of which the following is a specification.

The subject matter of my invention is an improved construction of accumulator plates, the object of which is to prevent absolutely the dropping off or the deformation of the active matter and to increase the power by gathering the current at points very near the one to the other in the inner part itself of said matter.

The annexed drawings show an exterior view of such plate in Figure 1 and a transverse sectional view of said plate in Fig. 2.

It consists of a flattened box formed of two leaves of lead *b b*, the borders of which are bent upward and placed the one against the other after which they are riveted or soldered over their entire circumference. The plane walls of said box are provided with pins *a*, *a*, interiorly cast of one piece with said walls, the extremity of which reaches near the opposite wall; said pins are disposed upon each wall so as to cross each other at regular distances. The walls *b b* are besides perforated with holes *c c*, disposed between the pins in such a manner that a pin is located opposite one of the holes in the opposite wall.

Before soldering the box at its circumference the active matter has been conveniently introduced into the same and piled up or compressed; said matter is divided and held together by the pins that pass through the same.

The conductors for establishing the current consist of two tongues *d d* adhering to the leaves *b b* that form the box and soldered or riveted together, or of one tongue only, the latter being reinforced as shown in the drawings. It will be understood that the active matter, before or after its formation, being entirely inclosed and held by the pins *a* cannot drop off or be displaced; its increase will swell the box evenly the surface of the box remaining plane, the swelling being facilitated by the double rounded shape of the edges which can stretch without tearing apart. The electrolysis occurs evenly and upon the two walls of the plate, because of the pins that lead the current from the one to the other through the active matter and to the holes that upon each surface correspond to the pins of the opposite surface. On the other hand, as the pins gather the current at points very near the one to the other in the center itself of the active matter it will be possible to obtain a more powerful and regular current with the same quantity of active matter. Finally the construction enables me to use a greater thickness of active matter and consequently to diminish the dead weight of the supports for the same capacity of electricity.

The essential feature of the plate is, that differing from the well known plates, protected by a covering, it is the covering or envelope itself that serves as a support for the active matter which is kept in place by the pins which are always in contact with the same and without its being possible for it to drop off. The lead used as the support can be mixed with a certain proportion of antimony in order to make it more resisting and less liable to be attacked by acids. Under these conditions it will be seen that the duration of the plates will be increased considerably.

I claim—

1. An improved accumulator plate comprising the flat lead box for containing the active matter, said box having its opposite sides provided with alternately arranged pins overlapping or projecting past each other, the walls of the box having perforations opposite the points of the pins, substantially as described.

2. A box for accumulator plates comprising the plates, having inwardly turned edges secured together, and alternately arranged pointed pins projecting from the inner faces of said walls, said pins extending past each other into proximity to the opposite wall, each wall having perforations arranged opposite the points of the pins carried by the opposite wall, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

CHARLES JOSEPH BARBIER.

Witnesses:

YVIN RABILLAUX,

GASTON JEANNIOUX.