No. 627,641. Patented June 27, 1899.

V. HALSKI.

BATTERY.

(Application filed Oct. 31, 1896.)

(No Model.)

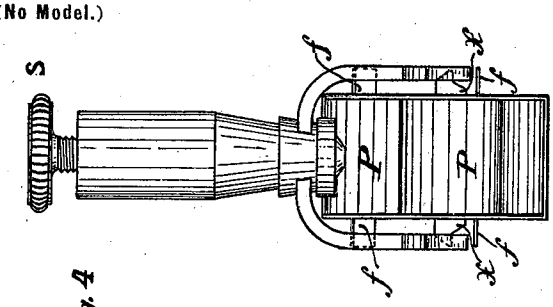


Fig. 4

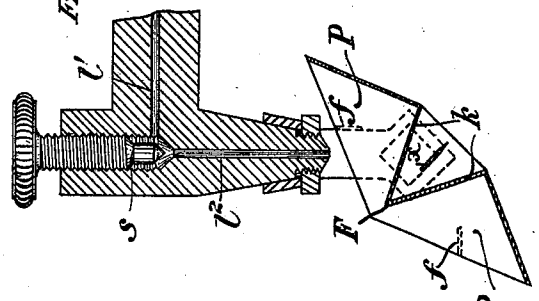


Fig. 2

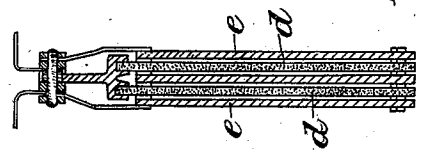


Fig. 5

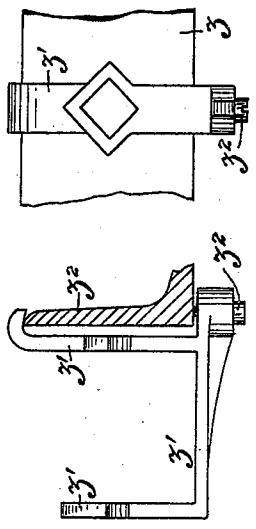


Fig. 3

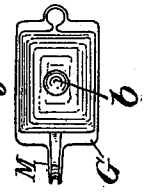
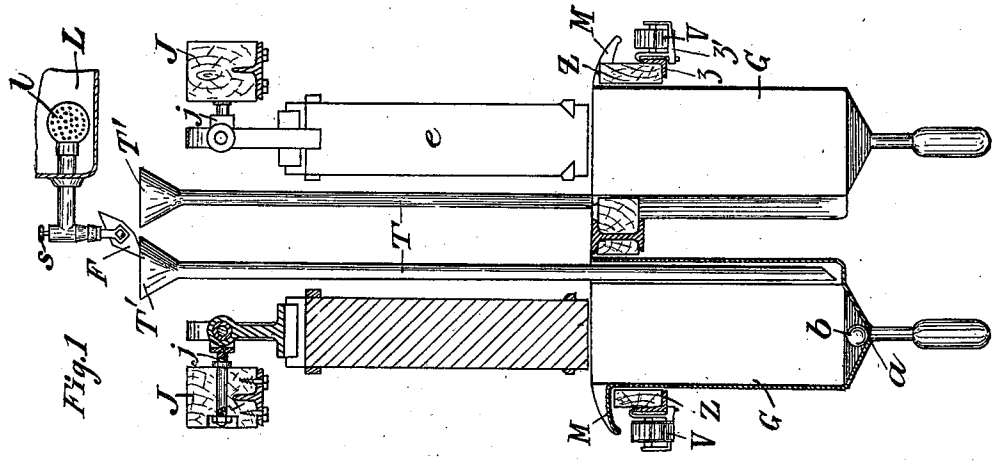


Fig. 1



Witnesses

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Inventor

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by Baldwin & Baldwin.

his attys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

VALENTIN HALSKI, OF LEMBURG, AUSTRIA-HUNGARY.

BATTERY.

SPECIFICATION forming part of Letters Patent No. 627,641, dated June 27, 1899.

Application filed October 31, 1896. Serial No. 610,716. (No model.)

To all whom it may concern:

Be it known that I, VALENTIN HALSKI, of Lemburg, in the Province of Galicia and Empire of Austria-Hungary, have invented new and useful Improvements in Batteries, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a side elevation, partly in section, of a pair of battery-cells constructed in accordance with my invention. Fig. 2 is a vertical section of the electrodes. Fig. 3 is a plan view of one of the cells, and Figs. 4 and 5 are detail views.

My invention relates to that class of batteries wherein the exciting fluid is constantly fed to and drawn off from the battery, and is designed to prevent danger of short-circuiting where the cells are placed in series.

In the drawings, G G represent the containing vessels of two cells, these vessels being formed of glass, earthenware, porcelain, ebonite, or other suitable material and having overflow-spouts M, which discharge the weakened liquid through channels V V to a common lower vessel. The channels V are connected with the supporting-pieces Z by means of the bracket-pieces z z', the bracket-piece z' being held in place by the set-screw z^2. The fresh liquid, preferably composed of potassium bichromate and sulfuric acid, is fed into the lower end of the receptacles by tubes T T, having funnels T′ T′ at their upper ends, and liquid is fed to each tube alternately by an oscillating distributer F, having separated pockets P P, as shown in Fig. 4, these pockets being formed by a cross-partition k. The distributer is provided with projecting knife-edges x x, which rest in slots in the frame, as shown, and the extent of the tipping is regulated by stops f, which limit the motions. The fluid is fed from the upper vessel L through a strainer l, passages l' l^2, into the distributer F, the flow of liquid being regulated by means of the screw-plug or cock s. The distributers are preferably made out of hard india-rubber or glass, and it is evident that the constantly-flowing liquid from the vessel L will pass into one of the pockets of the distributer until sufficient liquid is collected to tip the distributer, when the liquid will flow into one of the funnels T′, and the operation is repeated, the liquid flowing into the other pocket in the same manner. The fresh liquid passes down the tube into the bottom part of the vessel G, so that the battery is kept constant, and hence is made suitable for a light installation. As the distributer is delicately balanced, its oscillation will take place very rapidly. In some cases the liquid can be passed several times through the elements, it being replaced only partly by fresh liquid, in this case a motor being provided to force the liquid from the lower into the upper vessel. The electrodes d e, formed, respectively, of carbon and zinc, are connected to the supporting-pieces J J by means of the brackets j.

In the bottom of each of the cells G is an opening a, closed by a weighted ball-valve b, formed of india-rubber or other suitable material, the purpose of the valve being to enable the liquid in the cell to be discharged whenever desired.

The advantages of my invention will be apparent to those skilled in the art, since several elements may be connected up in series without danger of short-circuiting, and the feeding is automatic and simple in action, the liquid being fed in measured amounts.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination of two battery-cells arranged adjacent to each other, feeding-tubes, leading to the cells, and a swinging distributer arranged to tilt and feed the liquid first into one tube and then into the next.

2. The combination with two battery-cells, of feed-tubes, leading to near the bottom thereof, and a swinging distributer above the tubes arranged to tilt and feed the liquid first into one tube and then into the next.

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

VALENTIN HALSKI.

Witnesses:
HARRY BELMONT,
GEORG LAMB.