

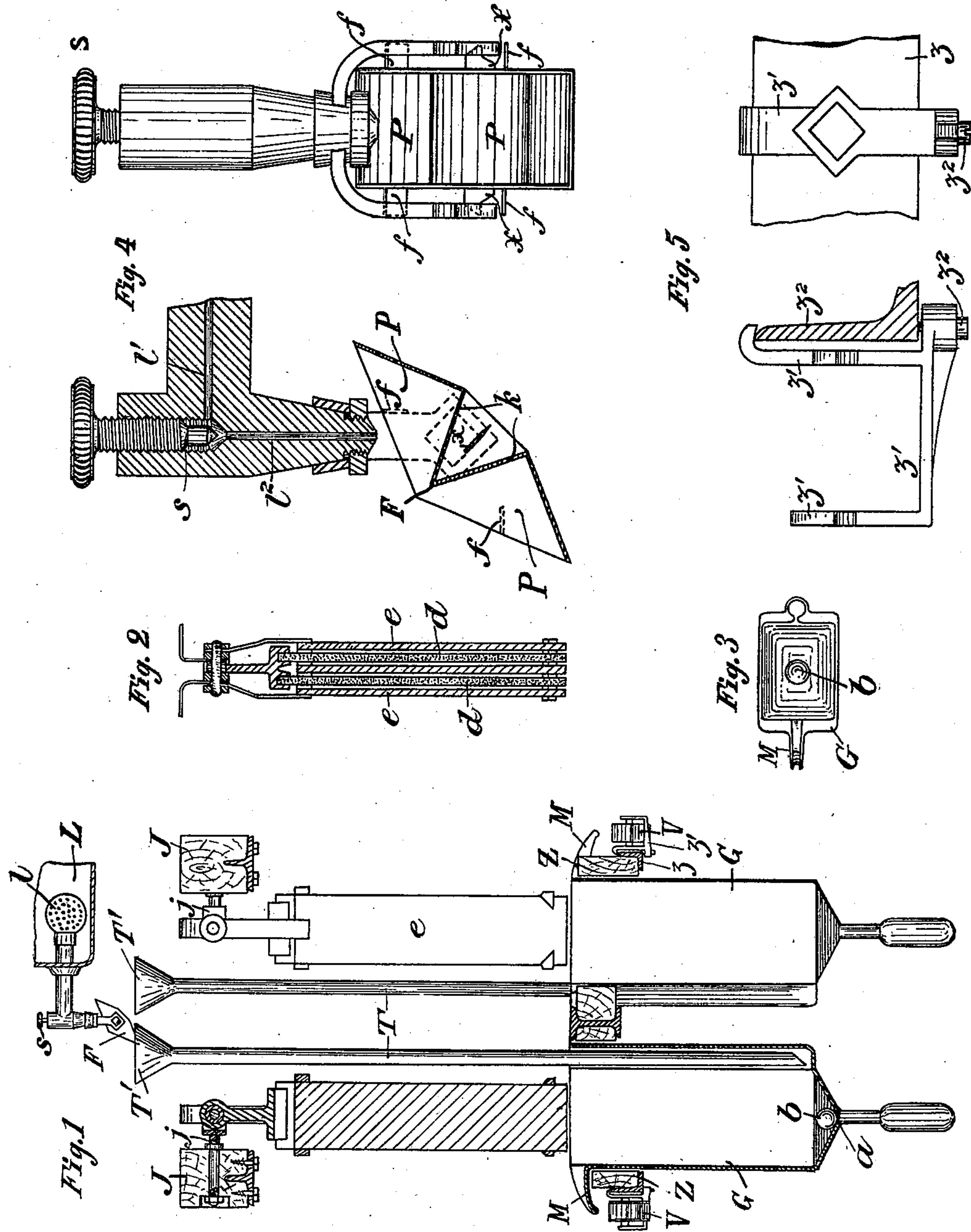
No. 627,641.

Patented June 27, 1899.

V. HALSKI.
BATTERY.

(Application filed Oct. 31, 1896.)

(No Model.)



Witnesses
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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, eb-
onite, or other suitable material and having overflow-spouts M, which discharge the weak-
ened liquid through channels V V to a com-
mon lower vessel. The channels V are con-
nected 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 potas-
sium 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 distributor F, having separated
pockets P P, as shown in Fig. 4, these pock-
ets being formed by a cross-partition k . The
distributor is provided with projecting knife-
edges $x x$, which rest in slots in the frame, as
shown, and the extent of the tipping is regu-
lated 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 distributor
F, the flow of liquid being regulated by means
of the screw-plug or cock s . The distributors
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 distributor until suf-

ficient liquid is collected to tip the distribu-
ter, 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 distributor is delicately balanced, its os-
cillation 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 ma-
terial, the purpose of the valve being to en-
able the liquid in the cell to be discharged
whenever desired.

The advantages of my invention will be ap-
parent to those skilled in the art, since sev-
eral 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 Let-
ters Patent of the United States, is—

1. The combination of two battery-cells ar-
ranged adjacent to each other, feeding-tubes,
leading to the cells, and a swinging distribu-
ter 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 distributor 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.