

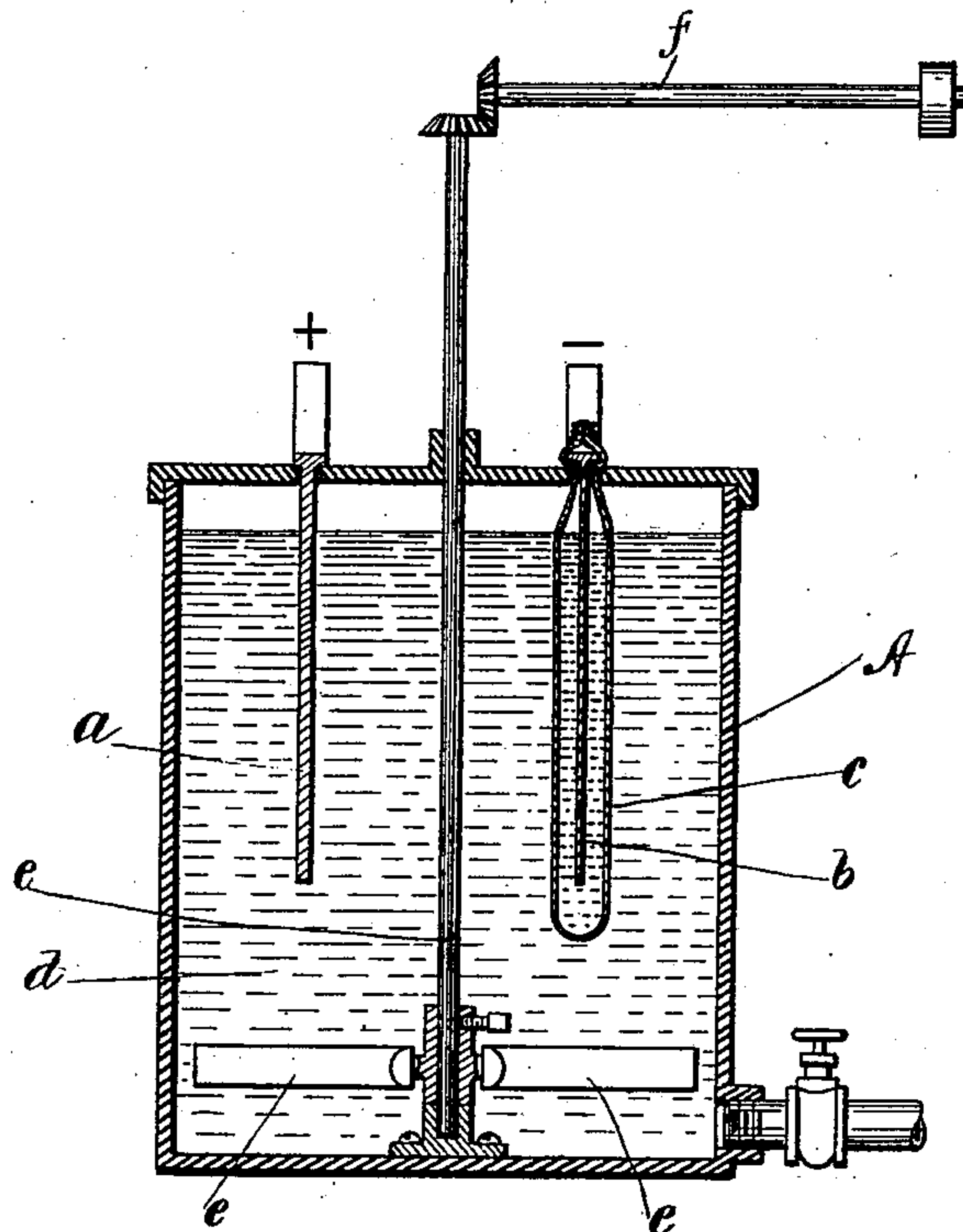
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R. FRANCHOT.
PROCESS OF MAKING PARIS GREEN.

(Application filed Aug. 17, 1901.)

(No Model.)



Attest:
O. F. Kehoe
A. W. Bourke

Inventor:
Richard Franchot
by Philip Sawyer Rice & Kennedy
Attys

UNITED STATES PATENT OFFICE.

RICHARD FRANCHOT, OF NIAGARA FALLS, NEW YORK.

PROCESS OF MAKING PARIS-GREEN.

SPECIFICATION forming part of Letters Patent No. 698,696, dated April 29, 1902.

Application filed August 17, 1901. Serial No. 72,348. (No specimens.)

To all whom it may concern:

Be it known that I, RICHARD FRANCHOT, a citizen of the United States, residing at Niagara Falls, county of Niagara, and State of New York, have invented certain new and useful Improvements in Processes of Making Paris-Green, fully described and represented in the following specification and the accompanying drawing, forming a part of the same.

This invention relates to a process of making paris-green from metallic copper by electrolysis.

The invention consists, essentially, in subjecting to an electric current a copper anode in an aqueous solution of a mixture of an acetate, such as acetic acid, or an acetate of a metal and arsenious oxid. Copper is thus dissolved from the anode, and aceto-arsenite of copper or paris-green is formed directly as an insoluble precipitate.

In carrying my invention into practice I preferably use an anode consisting of a thick plate of copper and a cathode which may be only a thin sheet of copper, these being immersed in the solution. The cathode is surrounded by a linen bag as a convenient means of preventing the cathode products mixing with the electrolyte, this bag being filled with a solution of acetic acid or a metallic acetate free from arsenic. The hydrogen formed in the process thus passes into the atmosphere without coming in contact in its nascent state with the arsenic in the electrolyte, which would cause the formation of metallic arsenic and arseniureted hydrogen. The electrolyte is agitated during this process. The process is practically continuous. The paris-green is filtered or settled out of the solution, and from time to time fresh arsenious oxid and acetic acid or metallic acetate is added to the solution. The cathode-bag is emptied periodically, as necessitated by the accumulation of products therein, and filled with fresh acetic acid or metallic acetate solution. The cathode products in the

bag will in general consist of hydrogen gas and the hydrate of the metal contained in the acetate used. Thus if acetate of lime is used in the electrolyte the cathode product is hydrate of lime.

In the accompanying drawing I have shown in diagrammatic vertical section a simple apparatus for carrying out my process, in which—

A is the cell; *a*, the copper-plate anode; *b*, the copper cathode inclosed in the bag *c*, and *d* the electrolyte. A mechanical stirrer *e* is shown, actuated by the shaft *f*. Of course hand agitation may be used.

My invention provides a very economical and convenient electrolytic method of producing paris-green having many advantages over the electrolytic processes now in use, of which the following are especially important. The paris-green is produced directly. Acetate of lime may be used as the raw material, which is very cheap. Of course economy of my process over chemical processes is secured by the use of metallic copper instead of sulfate of copper and the avoidance of the use of soda. The production of the dangerous arsenic or arseniureted hydrogen is avoided.

What I claim is—

1. The process of making paris-green, which consists in electrolyzing with a copper anode a solution of an acetate and arsenious oxid.

2. The process of making paris-green, which consists in passing an electric current through a solution of an acetate and arsenious oxid with a copper anode and with the cathode immersed in a solution of acetate and inclosed to prevent the cathode products mixing with the arsenious oxid of the electrolyte.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

RICHARD FRANCHOT.

Witnesses:

WILLIAM H. RAY,
H. W. KELLOGG.