E. J. FRASER.

Improvement in Apparatus for Amalgamating Precious Metals.

No. 126,196. Patented April 30, 1872.

Fig. 1.

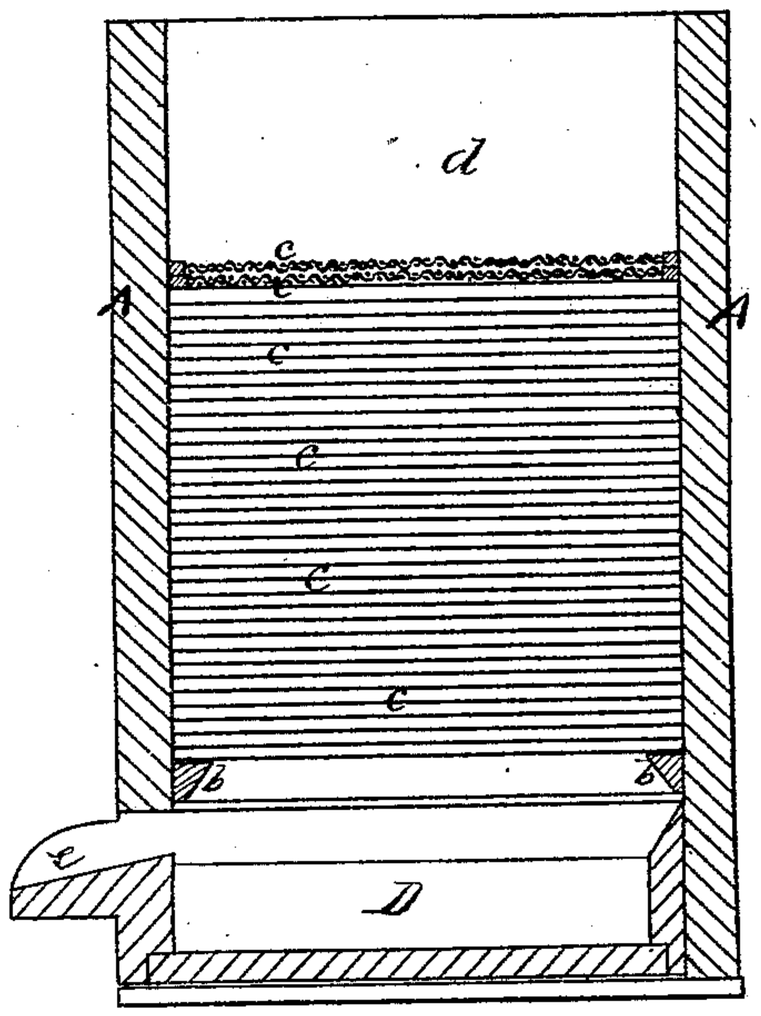
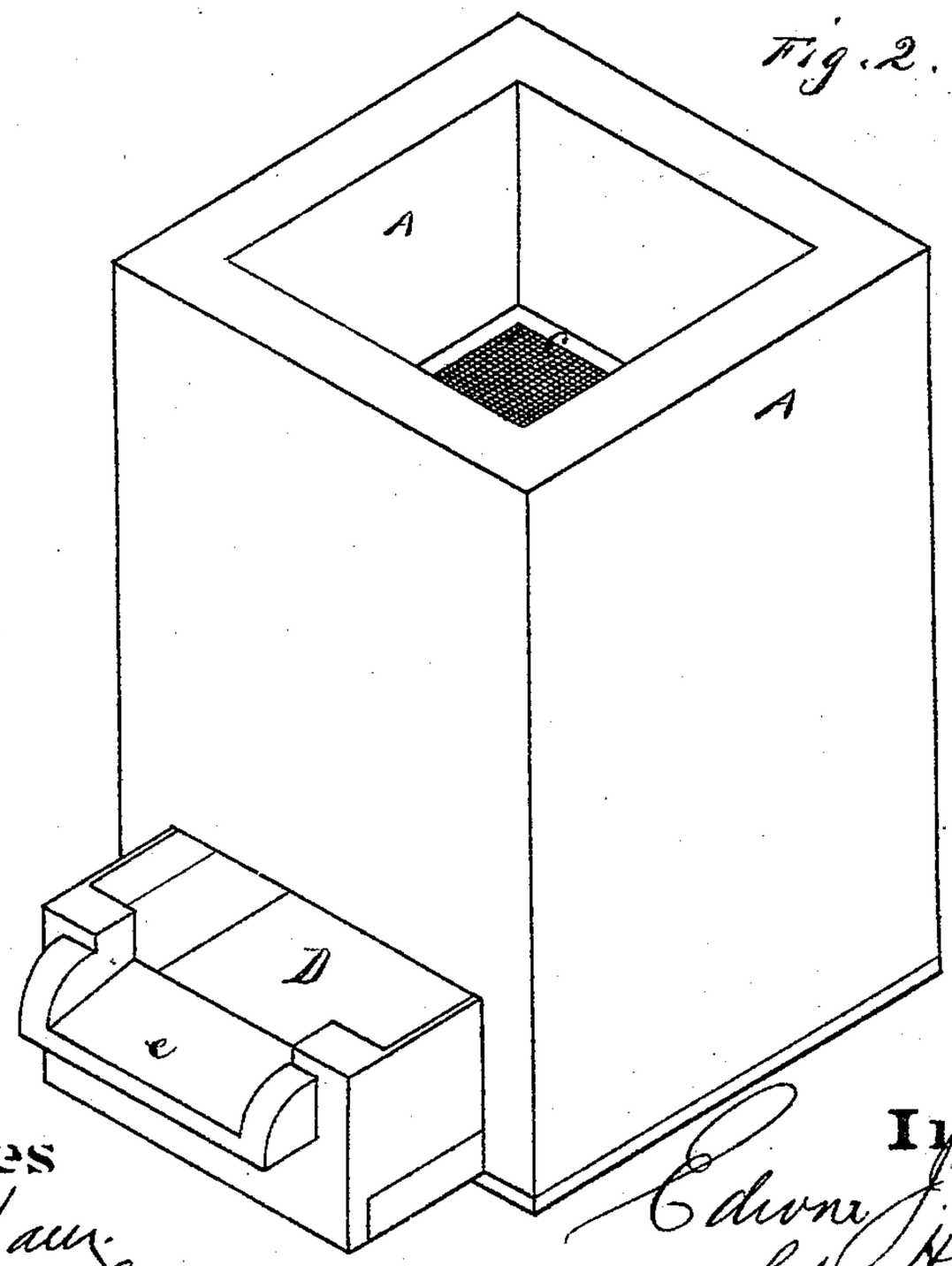


Fig. 2.



Witnesses

W. T. Bingham.

Wm Leidach.

Inventor

Edwin J. Fraser

by His Attys

Dewey & Co.

A.M. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

126,196

UNITED STATES PATENT OFFICE.

EDWIN J. FRASER, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN APPARATUS FOR AMALGAMATING PRECIOUS METALS.

Specification forming part of Letters Patent No. 126,196, dated April 30, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, EDWIN J. FRASER, of the city and county of San Francisco, State of California, have invented Improvements in Saving Precious Metals; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains, to make and use my said invention or improvements without further invention or experiment.

My invention relates to an improved device for saving what is known as float or flour gold, such as is contained or held in suspension in water passing from a battery or amalgamator, and is a new application of the same principle embodied in an application recently granted to me for an improved process for saving precious metals by passing the water through a filtering substance saturated with quicksilver. My present device consists in the employment of two or more sheets of amalgamated woven wire, such as is known as wire cloth or gauze, or, as a substitute therefor, perforated amalgamated metallic plates, placed one above another so as to form a filtering-body, through which the water containing metallic particles can be passed.

In order to more fully explain my invention reference is had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a vertical section. Fig. 2 is a perspective view.

A represents the two sides of a frame of any suitable size or shape. At the lower end of this frame a ledge, *b*, is formed so as to project inside of the frame. *c c c* are squares or other pieces of woven wire of the proper shape to fit inside the frame A. These squares or other-shaped pieces of wire-cloth can be bound with a slight metallic frame, if desired, in order to separate them slightly, or they may simply be laid one upon another. Any desired number of these squares can be used; but I prefer to leave an unoccupied space, *d*, above them inside of the frame, so as to confine the water and compel it to pass through the wire sections. Each of these sections will be amalgamated, and this can be done either before or after they are placed in the box—preferably before—thus providing an amalgamated filter of any desired thickness, through which the water, in order to pass through, will be thoroughly strained and every particle brought into immediate contact with the amalgamated surface, and consequently relieved of any fine particles of metal. Below the frame A I place a drawer or small removable box, D, into which the water, after it has passed through the metallic filter, will fall and pass off through a spout, *e*. The object of this drawer or box is to catch any quicksilver which may become detached from the amalgamated surface and prevent loss.

The entire machine can be placed anywhere along the length of the sluice and the water pass through it on its way to the sluice-yard, or at any other convenient point.

Perforated amalgamated plates can be substituted for the woven-wire sections with good results, and in many instances they will be preferable.

By this means I provide a metallic filter which will be effective in saving fine particles of metal, and one that can be used over and over many times before being rendered worthless. The manner or process of cleaning the sections of accumulated amalgam is not different from that generally used in metallurgy.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The frame A with its ledge *b*, in combination with the amalgamated wire sections *c c c*, all constructed and arranged substantially as and for the purpose above described.

In witness whereof I have hereunto set my hand and seal.

EDWIN J. FRASER. [L. S.]

Witnesses:

J. L. BOONE,

W. F. BINGHAM.