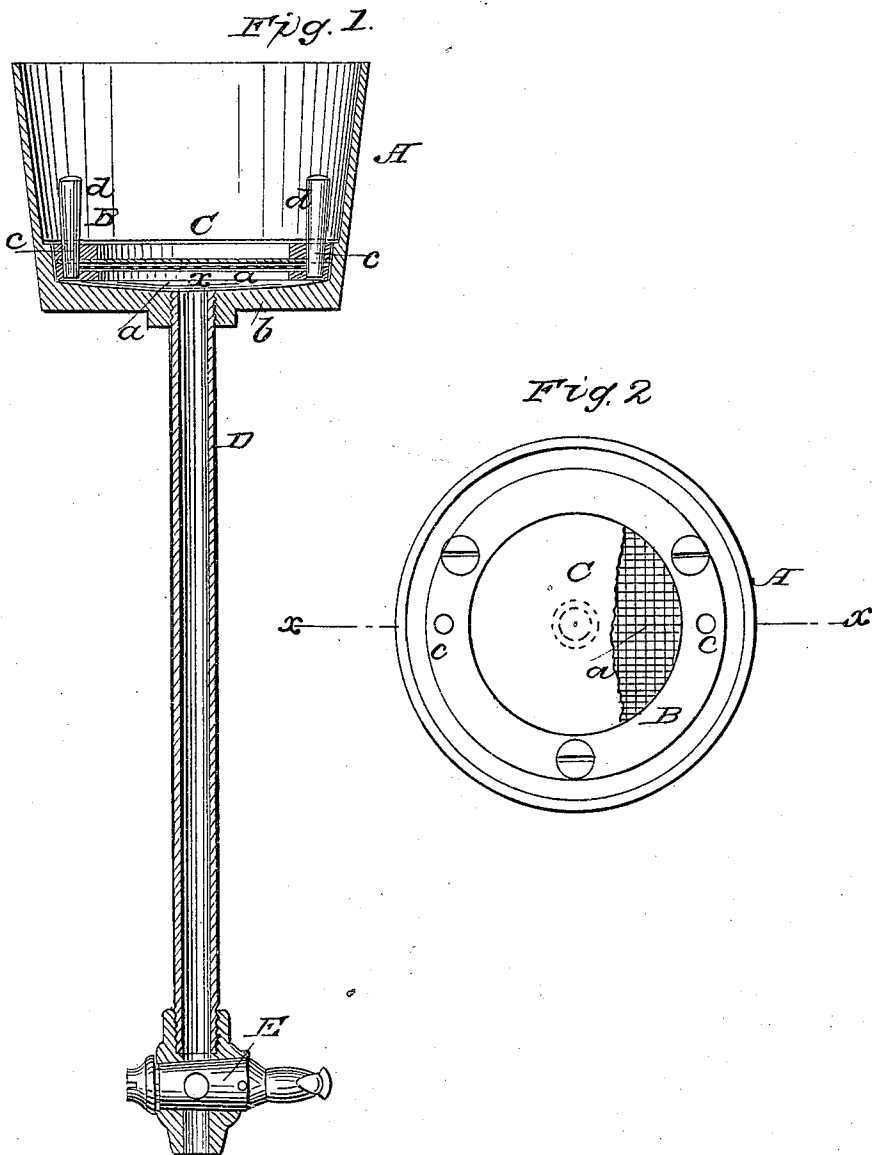


T. VARNEY.
Ore Amalgamator.

No. 34,708.

Patented March 18, 1862.



Witnesses
J. W. Coombs
G. W. Reed

Inventor:
Thos Varney
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UNITED STATES PATENT OFFICE.

THOMAS VARNEY, OF SAN FRANCISCO, CALIFORNIA.

IMPROVED DEVICE FOR STRAINING GOLD AND SILVER AMALGAM.

Specification forming part of Letters Patent No. **34,708**, dated March 18, 1862.

To all whom it may concern:

Be it known that I, THOMAS VARNEY, of the city and county of San Francisco, in the State of California, have invented a new and Improved Implement or Device for Straining Gold and Silver Amalgam; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical central section of my invention, taken in the line *x x* of Fig. 2; and Fig. 2, a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

Gold amalgam has been hitherto strained by simply squeezing the quicksilver through buckskin with the hands. Silver amalgam is strained through a coarse cotton cloth, the quicksilver passing through by its own gravity. A considerable quantity of the silver (say from five to ten per cent.) passes through the cloth, and hence this plan is attended with considerable loss.

The within-described invention is designed to supersede the old modes of straining, and to this end atmospheric pressure is employed for forcing the mercury through the strainer, as hereinafter fully shown and described.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a tub or vessel, in the lower part of which there is placed or fitted a ring, B, having a wire-cloth, *a*, attached to it, and a strainer, C, of buckskin or other suitable material placed on the wire-cloth. The bottom *b* of the tub or vessel A below the strainer C is slightly concave, and the ring B has two holes, *c c*, made through it, which holes are provided with plugs *d d*. The concave upper surface of the bottom *b* forms a passage, *a^x*, below the strainer, with which passage the holes *c c* in the ring B communicate, as shown clearly in Fig. 1.

D is a tube, the upper end of which is screwed into the center of the bottom *b* of the tub and communicates with the passage *a^x* below the strainer. The lower end of the tube D is provided with a cock, E. The tube D may be thirty inches or upward in length. The tub or vessel A may be of any proper dimensions. The ring B and strainer C, when inserted in the tub or vessel A, form a bottom therefor, as it completely covers the bottom *b*.

The operation is as follows: The cock E at the lower end of the tube D is closed, and the plugs *d d* are withdrawn from the holes *c c*, and the tube D is filled with quicksilver by pouring the same into the tub or vessel A, the quicksilver passing through the holes *c c* and passage *a^x* underneath the strainer into tube D. When the tube D is filled, the holes *c c* in the ring B are closed by the plugs *d d*, and the amalgam to be strained is poured into the tub or vessel A. The cock E is then opened and the quicksilver will flow from D, which must be sufficiently long (say 30 inches or more) to contain a column of quicksilver that cannot be sustained by the pressure of the atmosphere. The flowing of the quicksilver from D of course produces a vacuum beneath the strainer C, and the quicksilver of the amalgam above will be forced through the strainer C by the pressure of the atmosphere. Thus it will be seen that by this simple implement or device the amalgam may be expeditiously strained with trifling labor and in a perfect or thorough manner.

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

The combination of the tub or vessel A, strainer C, and tube D, arranged to operate in connection with quicksilver, as and for the purpose set forth.

THOMAS VARNEY.

Witnesses:

D. W. CHAMBERS,
ALFRED RIX.