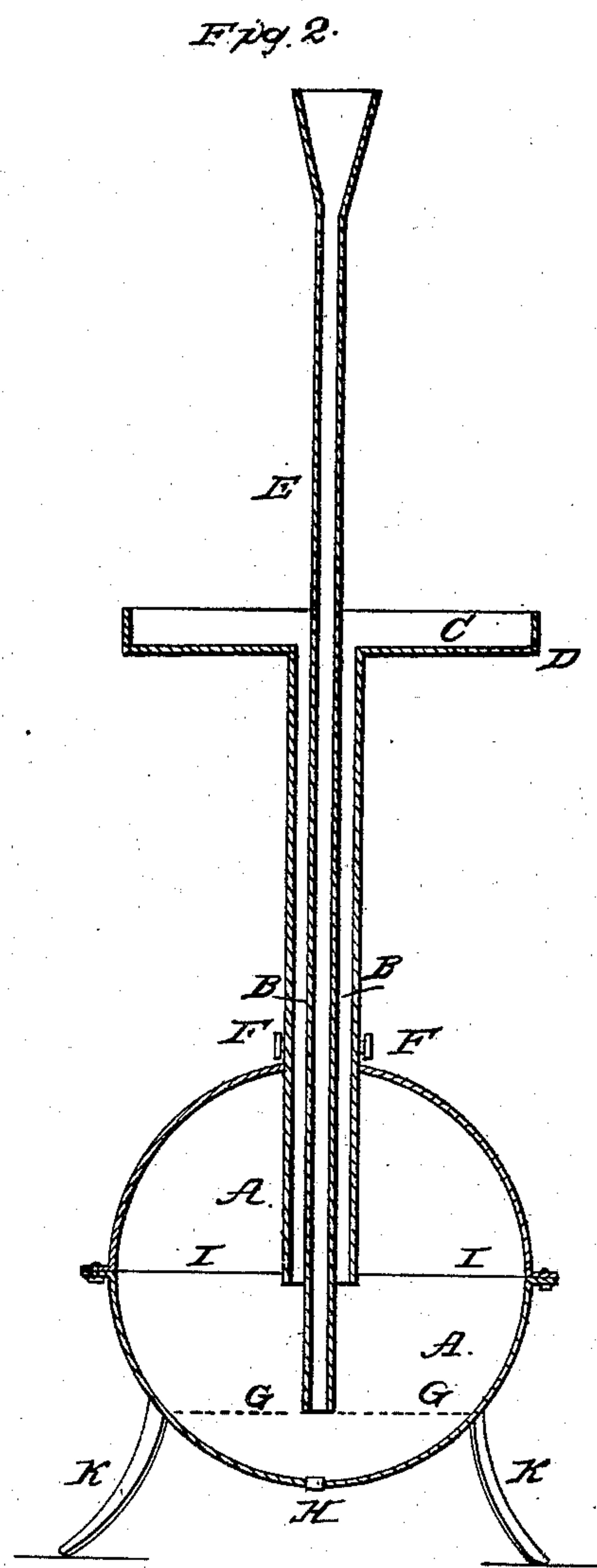
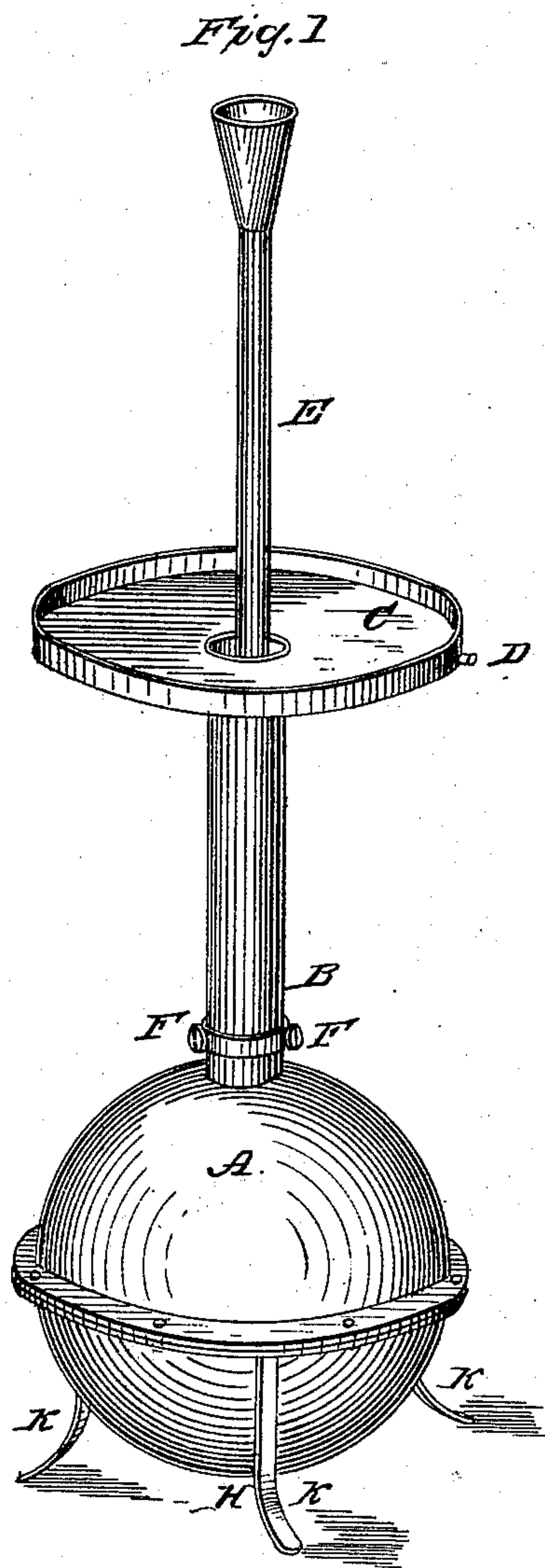


S. E. WOODWORTH.

Ore Washer.

No. 32,022.

Patented April 9, 1861.



Witnesses
Wm. H. Gault,
H. H. Coffin

Inventor
J. E. Woodworth

UNITED STATES PATENT OFFICE.

SELIM E. WOODWORTH, OF MURPHY, CALIFORNIA.

AMALGAMATOR.

Specification of Letters Patent No. 32,022, dated April 9, 1861.

To all whom it may concern:

Be it known that I, SELIM E. WOODWORTH, of Murphy, Calaveras county, and State of California, have invented a new and useful
5 Apparatus for Amalgamation of Precious Metals, which I call a Fountain-Riffle; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings,
10 making a part of this specification, in which—

Figure 1, is a perspective view of the apparatus; and Fig. 2, is a sectional view.

15 A, A, is an air-chamber in the upper part of a hollow globe; B, is a hollow shaft passing down through the top of the globe to its center, the upper part of this shaft terminates in a box or table C; D is an outlet to the box or table, placed where most convenient; E, is a pipe of a diameter, say, one
20 third that of the shaft B, through the center of which it passes, and is kept in place by the set screws F, F, or other convenient device, this pipe should extend below the
25 lower end of shaft B, to the line of the mercury as represented by G, G, and should extend upward to, at least, the extent of the diameter of the globe, above the table C;
30 H, is a hole in the bottom of the globe for the withdrawal of the mercury or amalgam, this hole can be closed with a wooden plug or otherwise.

Operation: The hole H, being closed, the globe is filled with mercury, say, to the line 35 G, G; the tailings or slum from quartz mills, and arrastres, or from tail-races, flumes or ditches used in placer gold or silver washings, or matter containing precious metals are received into the globe through 40 the pipe E, upon the mercury at the bottom, the air space A, A, will prevent these tailings or other matter from rising higher within the globe than, about, the line at I, I, the superabundant mass of water and other 45 matter will pass off through the hollow shaft B, over the table C, through the opening D, the precious metals having been deposited in the mercury; the pressure upon the contents of the globe below the line I, I, is uniform 50 in consequence of the compressed air in the chamber A, A, and the mercury-bath at the bottom of the globe, by reason of this uniform pressure, presents an unbroken surface to the tailings or other matter as they pass 55 over it.

What I claim as new and desire to secure by Letters Patent, is:

An airtight vessel A, partially filled with mercury, in combination with two concentric 60 tubes B, E, and table C, all constructed as and for the purposes described.

S. E. WOODWORTH.

Witnesses:

M. H. HAVLAND,
F. F. COFFIN.