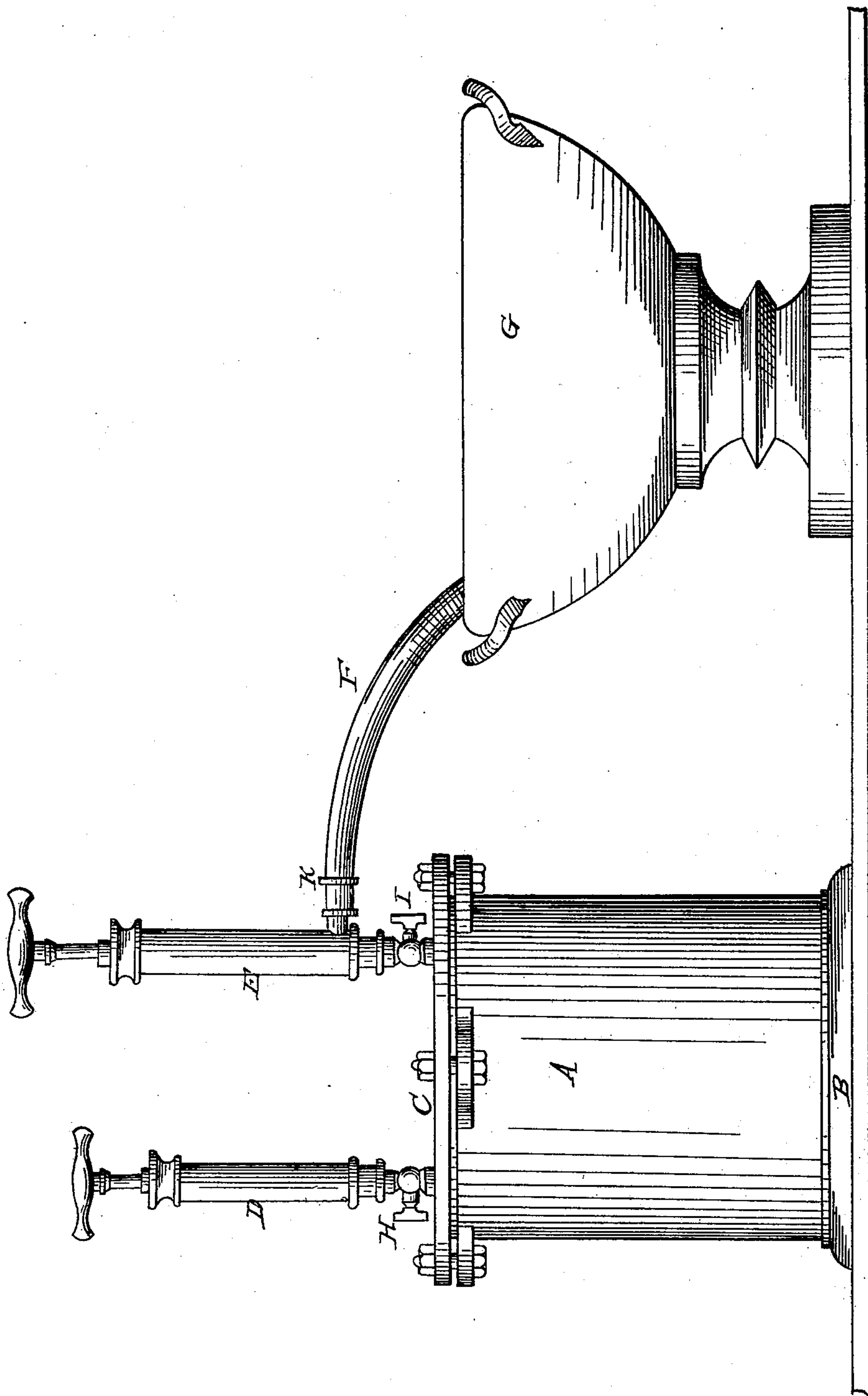


L. R. STREETER.

Amalgamator.

No. 12,988.

Patented May 29, 1855.



UNITED STATES PATENT OFFICE.

LEANDER R. STREETER, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO
LEANDER R. STREETER AND IRA LEONARD.

IMPROVEMENT IN AMALGAMATING THE PRECIOUS METALS.

Specification forming part of Letters Patent No. 12,988, dated May 29, 1855.

To all whom it may concern:

Be it known that I, LEANDER R. STREETER, of the city of Lowell, county of Middlesex and State of Massachusetts, have invented a new and Improved Mode of Amalgamating upon Ores of Gold, Silver, and Platina; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in forcing mercury into an air-tight or mercury-tight chamber or receiver, after said chamber has been filled with the ore to be amalgamated, at any degree of pressure required to diffuse the mercury through every part of the ore, obtaining the required pressure by first exhausting the air from the receiver after it is supplied with ore, and next by forcing the mercury with a properly-constructed exhaust and force pump through all the interstices of the ore.

To enable others interested to use my invention, I will proceed to describe its operation.

I construct my chamber or receiver in any form that is mercury-tight, and any convenient form of exhausting the air, (if desirable,) and also any convenient form of forcing the mercury into the ore in the chamber are to be used.

The accompanying drawing and following description will correctly illustrate the principles and action of my invention; but I do not confine myself to the precise details therein set forth, provided I use any other means which are substantially the same.

A represents a mercury-tight cylinder. B is the support for the same.

C is a movable cap or cover, which must be packed so as to fit the cylinder mercury-tight.

D is an exhausting air-pump fastened to the cap C and communicating with the inside of cylinder A.

E is a suction and forcing pump fastened to cap C and communicating with the inside of cylinder A and mercury-fountain G.

F is the mercury-tube, with a valve at K, which prevents the return of the mercury to the fountain, when once raised.

G is the fountain.

H and I are stop-cocks.

First, fill the cylinder A full of ore to be amalgamated, then place the cap C in position and secure it firmly by means of screws or otherwise, now exhaust the air from the cylinder by the pump D, leaving the stop-cocks H I open until the air is exhausted from the mercury-tube F and the tube is filled with mercury, then close I, and, with H open, exhaust the air from cylinder A. Now close H and open I, and with the pump E fill the cylinder with mercury to the required degree of pressure. This process amalgamates the ore with the mercury perfectly, leaving no particle of the metal unamalgamated.

What I claim as my invention, and desire to secure by Letters Patent, is—

The forcing mercury at any required degree of pressure into ores to be amalgamated when the ores are inclosed in a mercury-tight cylinder or receiver, substantially as and for the purpose as herein set forth.

In witness whereof I have hereunto set my signature this 28th day of February, A. D. 1855.

L. R. STREETER.

In presence of—

PETER POWERS,
O. E. CUSHING.