

W. S. PIERCE.

Ore Washer.

No. 15,524.

Patented Aug. 12, 1856.

Fig: 1.

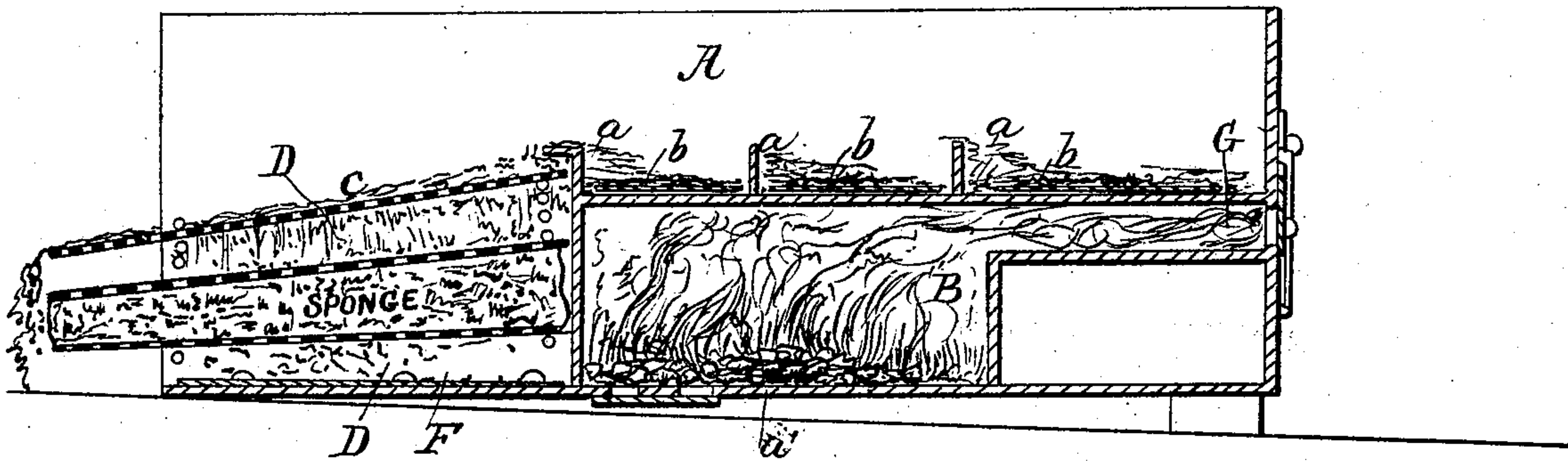
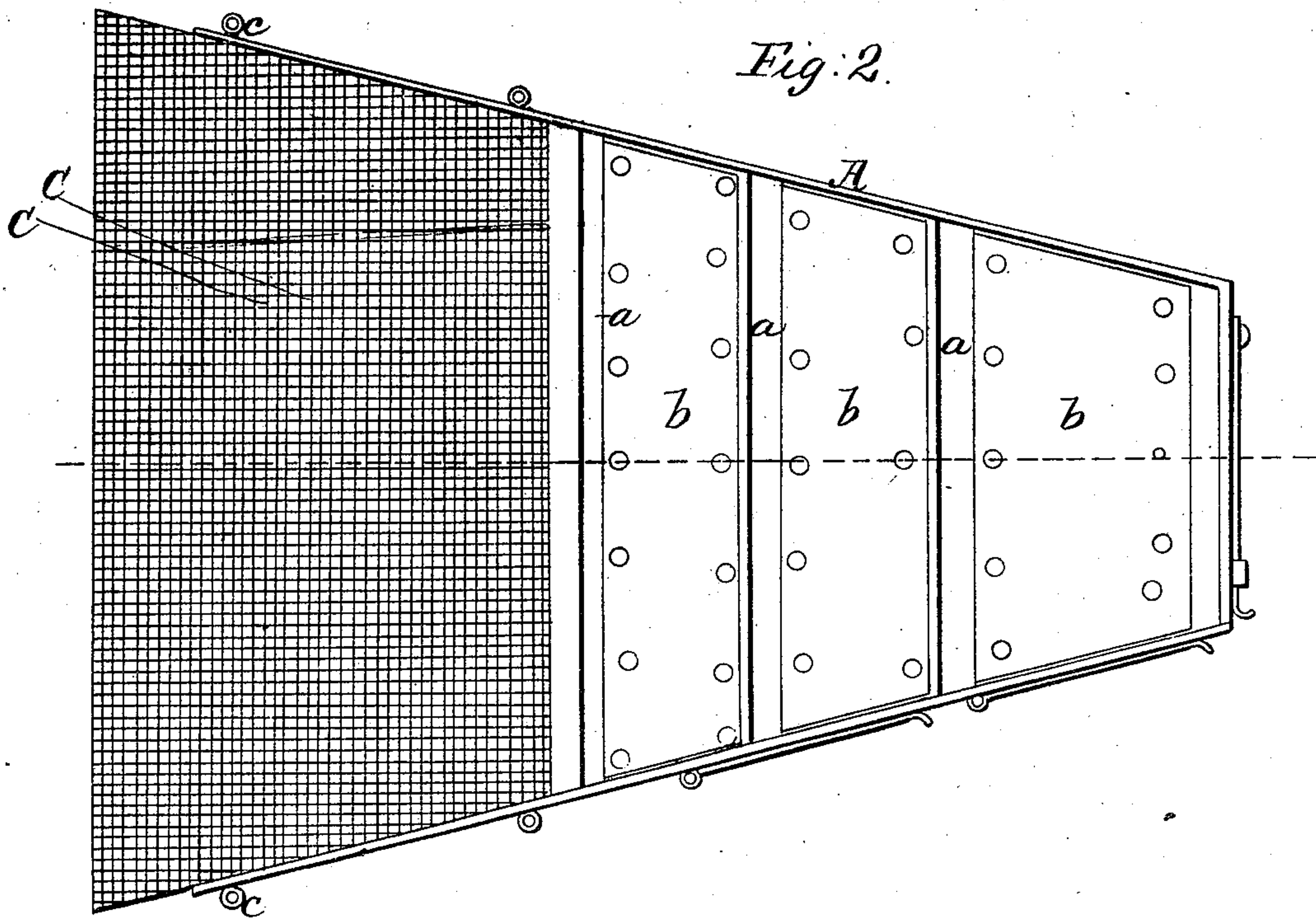


Fig: 2.





# UNITED STATES PATENT OFFICE.

WARREN S. PIERCE, OF NORTH ATTLEBORO, MASSACHUSETTS.

## GOLD WASHER AND AMALGAMATOR.

Specification of Letters Patent No. 15,524, dated August 12, 1856.

*To all whom it may concern:*

Be it known that I, WARREN S. PIERCE, of North Attleboro, in the county of Bristol and State of Massachusetts, have invented a new and Improved Gold Washer or Separator; 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 longitudinal vertical section of my improvement. Fig. 2, is a plan or top view of ditto.

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

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

A, represents the case of the implement, which may be constructed of thin cast iron, the case being of a suitable height and length, and having taper or oblique sides, as shown in Fig. 2.

B, represents a furnace or fire chamber, placed in the case A. The top plate of this furnace or fire chamber is some distance below the top of the case A, and has small plates or ledges (a), placed transversely on its upper surface, and the top of the furnace between the plates or ledges (a), has pieces of canvas (b), placed or secured upon it.

C, represents a wire cloth screen, the inner end of which is attached or secured underneath a lip on the outermost plate or ledge (a). The outer end of this screen may be raised and lowered, and secured at any desired point, by means of pins (c), to give it the proper inclination.

D, D, represent two screens, between which a sponge E, is secured. These screens and sponge are placed underneath the screen C, and their outer ends may be raised and lowered, and secured at any desired point, by pins the same as the screen C. The bottom of the case A, underneath the screens D, and sponge E, is secured by canvas F.

G, is the flue of the fire chamber or furnace B. This may be lengthened when necessary by having a pipe attached to it.

If wood is used for fuel, a long flue may be requisite, but if charcoal, oil, or fluid, is used, a pipe would not be requisite.

Quicksilver is placed on the top plate of the furnace B, between the ledges or plates (a), and a fire being kindled in the furnace, the water containing the gold is allowed to pass over the top plate of the furnace, and over the screen C. The passage of the heavier particles of gold is arrested by the plates or ledges (a), and amalgamates with the heated quicksilver, the fine gold that escapes over the top plate of the furnace, will pass through the screen C, and enter the pores of the sponge, while gravel and other foreign substances, specifically lighter than gold, and too large to pass through said screen, will pass off its depressed and outer end. As the sides of the case A, are taper, the stream of water gradually widens, and becomes thinner or more shallow, as it approaches the outlet or discharge end of the case, and consequently the water will pass in a wide shallow sheet over the screen C, and with a retarded velocity, so that the fine gold, or dust, will have an opportunity to pass through the screen C, and not be carried over it. In case any fine gold passes entirely through the sponge, it will be caught by the canvas F. The pieces of canvas (b), are also to catch and retain the gold. The bottom of the furnace is provided with dampers (a').

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

Constructing the washer or separator substantially as described, viz, having the furnace B, placed within the case A, which has oblique or taper sides, the ledges or plates (a), placed on the top plate of the furnace, and the screen C, and the sponge E, which is fitted between the screens D, placed in the case A, the whole being arranged as shown, for the purpose specified.

WARREN S. PIERCE.

Witnesses:

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