

MILTON H. STOWE.

Improvement in Apparatus for Chlorinating and Leaching Ores.

No. 126,424.

Patented May 7, 1872.

Fig. 1.

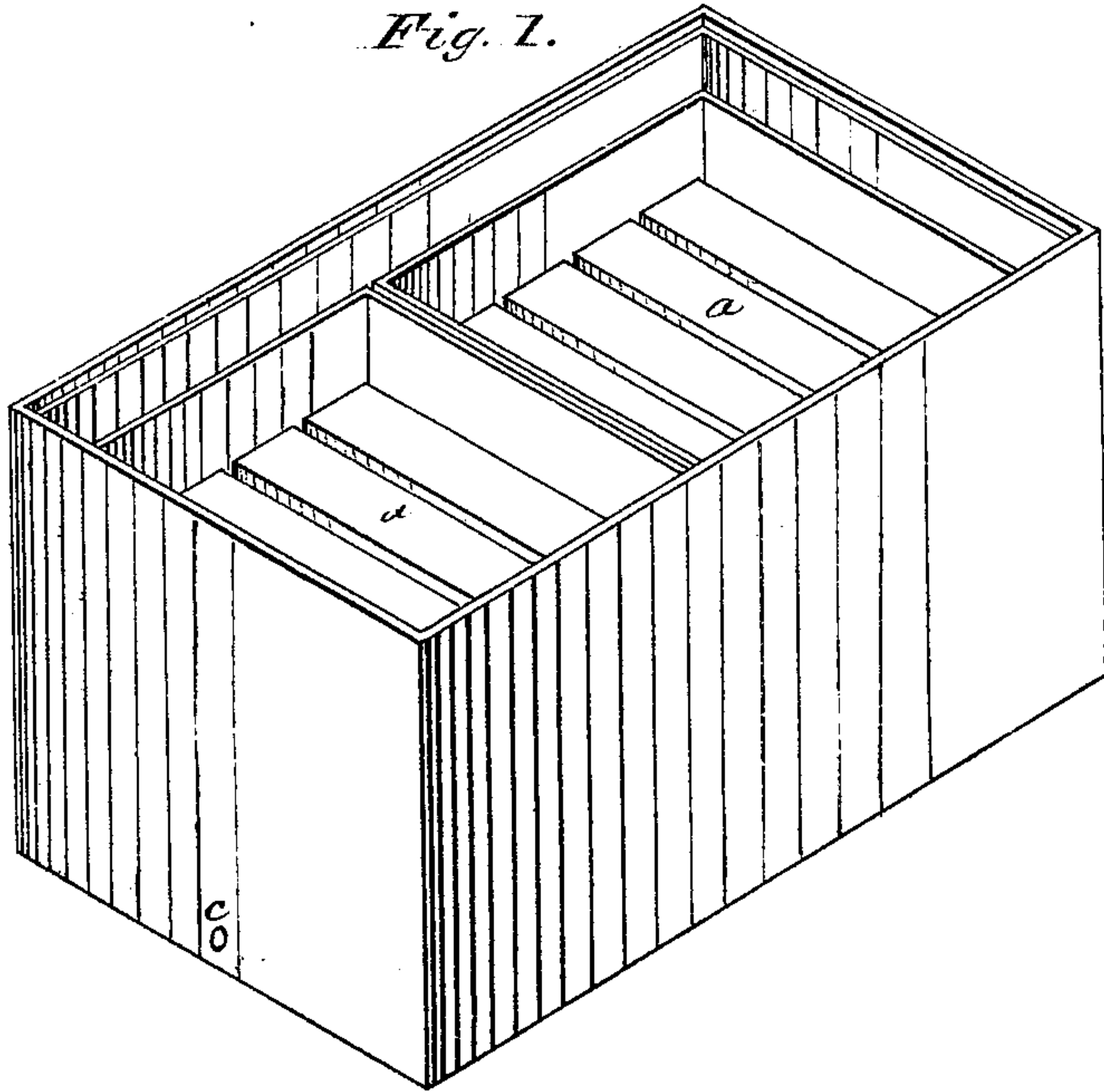


Fig. 2.

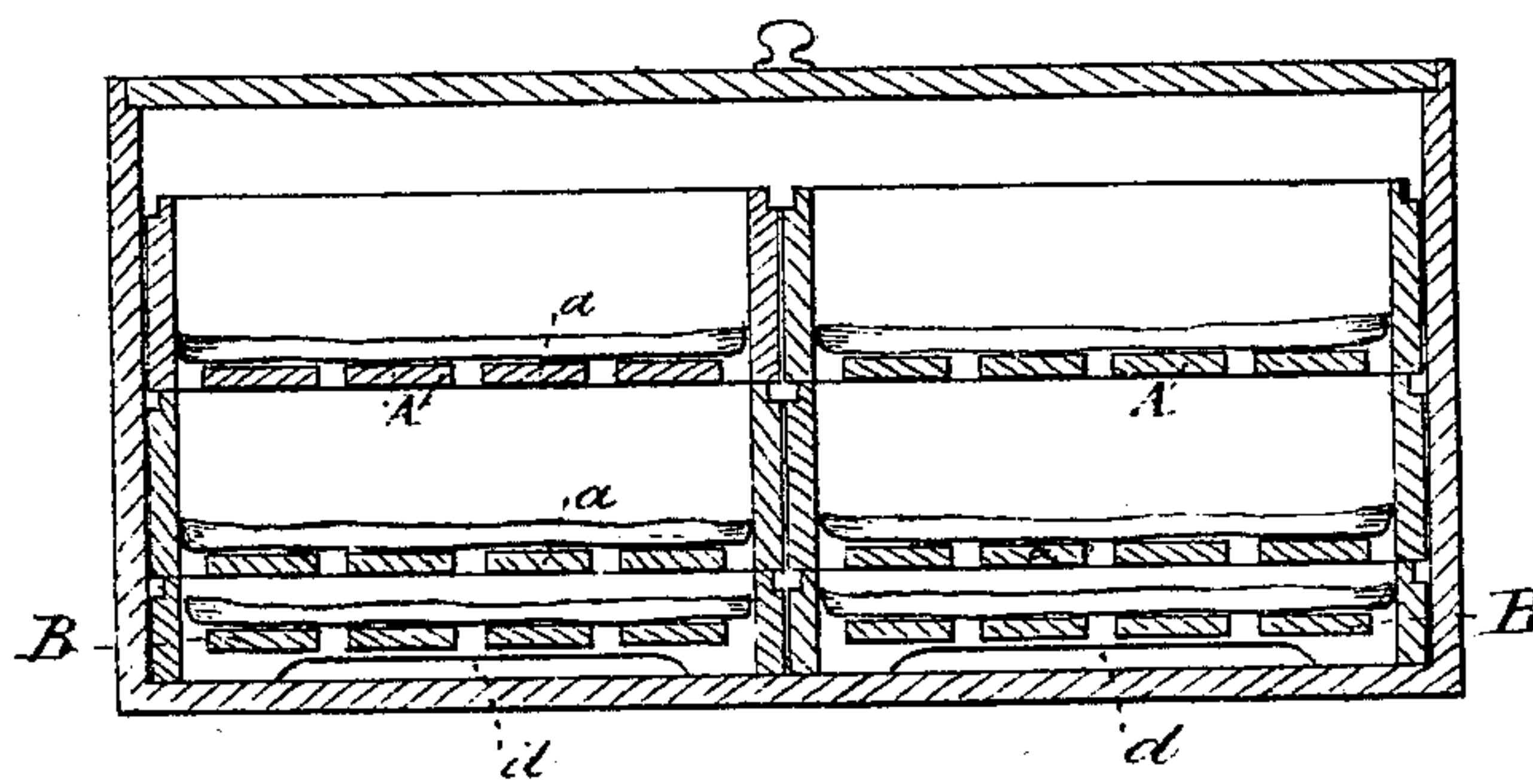


Fig. 3.

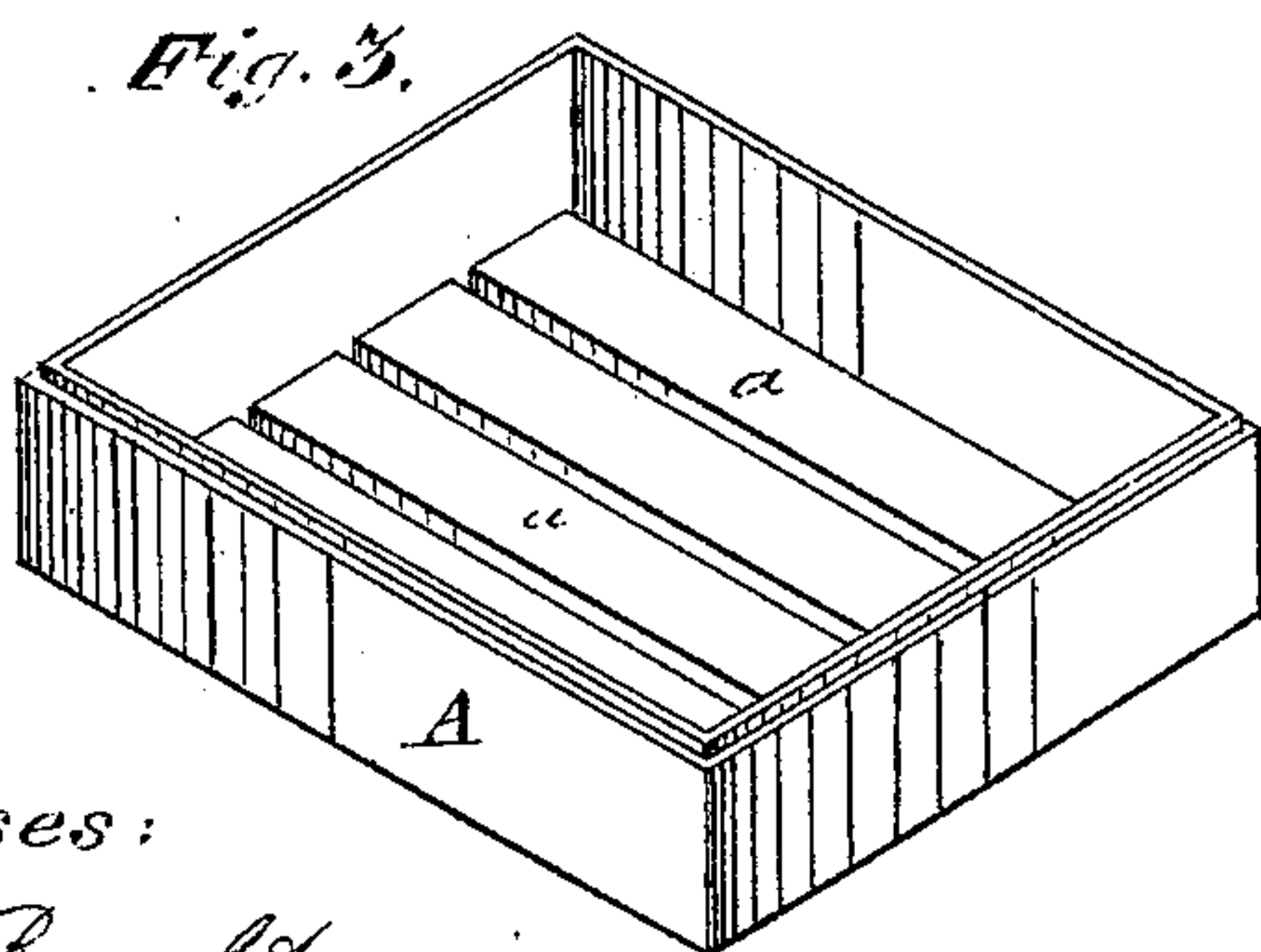
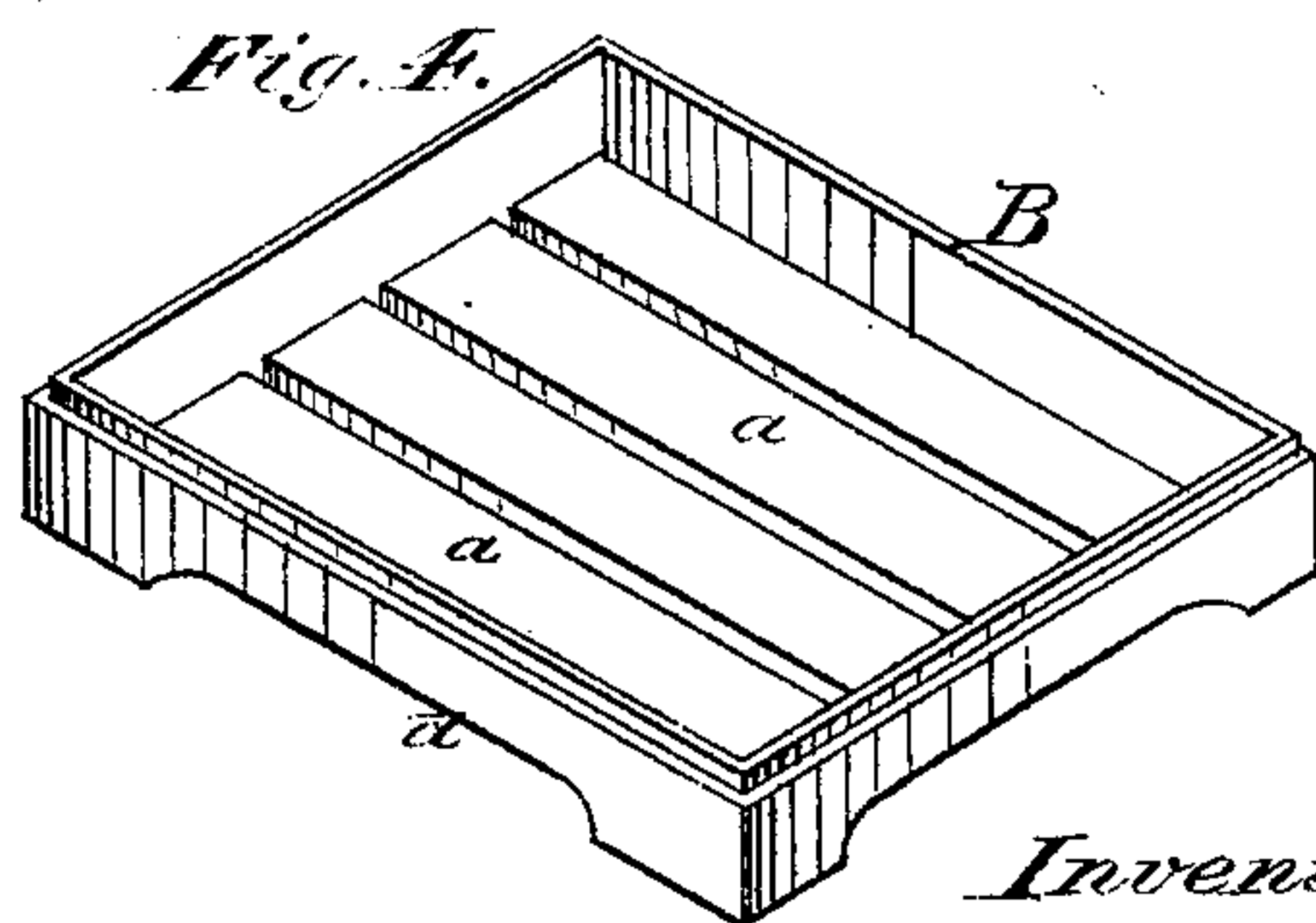


Fig. 4.



Witnesses:

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IMPROVEMENT IN APPARATUS FOR CHLORINATING AND LEACHING ORES.

Specification forming part of Letters Patent No. 126,424, dated May 7, 1872.

I, MILTON H. STOWE, of the city of Washington, District of Columbia, have invented certain Improvements in Chlorination and Leaching Tanks or Vats for the extraction of gold, silver, copper, and other metals from their ores, of which the following is a specification:

The first part of my invention relates to the construction of a tank or vat with a false bottom, composed of detachable compartments or divisions of convenient size for handling, the object of which is to provide for the easy removal of said false bottom, and to replace it by a dry and clean one, thus saving much time in the process. The second part of my invention relates to the construction of a tank with detachable ore partitions or platforms, of any desired number, arranged one above the other, the lower one resting on the false bottom, the object of which is to divide the ores into masses of less vertical thickness than is done in the old methods. This division of the ores into several horizontal layers prevents the close packing which occurs when said ores are in one mass, and greatly facilitates the chlorination and leaching operations.

Figure 1 is a perspective view of a tank or vat embodying my invention, and showing the upper partitions for supporting the ore. Fig. 2 is a longitudinal section, showing the internal arrangement of the ore-partitions and their relation to each other. Fig. 3 is an ore partition removed from the tank. Fig. 4 is a false-bottom compartment or division, in which sand is placed to act as filter.

The vat may be either circular or square, made of wood, and should be water-tight. The ore-partitions or supports A A A A are made of wood also, and that portion on which the ore rests being formed of strips *a a a* and covered with a piece of canvas. The false-bottom divisions B B are similarly constructed, and, when placed in the vat, there is a space, *d d*, formed for the reception of gases which flow into the tank at C and the solutions which flow

out at the same point. All the inside surfaces are coated with any substance impervious to the gases and liquids used in the process.

To operate my invention the false bottom B B is filled with clean sand and placed on the bottom of the tank. The lower ore partition is then placed on the false bottom and covered with ore to the proper depth. Another partition is then placed next above and covered with ore, and so on until all the partitions are thus prepared. Chlorine gas is then conveyed, by means of a pipe, into the space *b b* through the opening at C, and is forced upward through the several layers of ore to the space *d* above the ore partitions. The tank may now be covered and the supply of gas cut off at C. A few hours time is necessary for the gas to combine with the metals present and bring them to a soluble condition, after which the cover is removed from the tank and water or other liquid is brought into the space *d*, which passes downward through the ore and filter until the soluble metals are leached out, the solution passing from the space *b b* through a cock at C into vessels for further treatment. The ore residues in the tank are now taken out, first from the upper division, and so on until all are discharged. The false bottom is also removed and a dry one put in its place, if it is intended to chloridize the ore next placed in the tank; but for leaching purposes alone it need not be changed.

I claim as my invention—

1. A false bottom for a tank or vat, composed of detachable compartments or divisions B B, substantially as and for the purpose hereinbefore set forth.
2. The detachable ore partitions or divisions A A A A, substantially as and for the purpose hereinbefore set forth.

M. H. STOWE.

Witnesses:

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