A. M. STETSON.

Ore Amalgamator.

No. 15,619. Patented Aug. 26, 1856.

Fig: 1.

Perspective

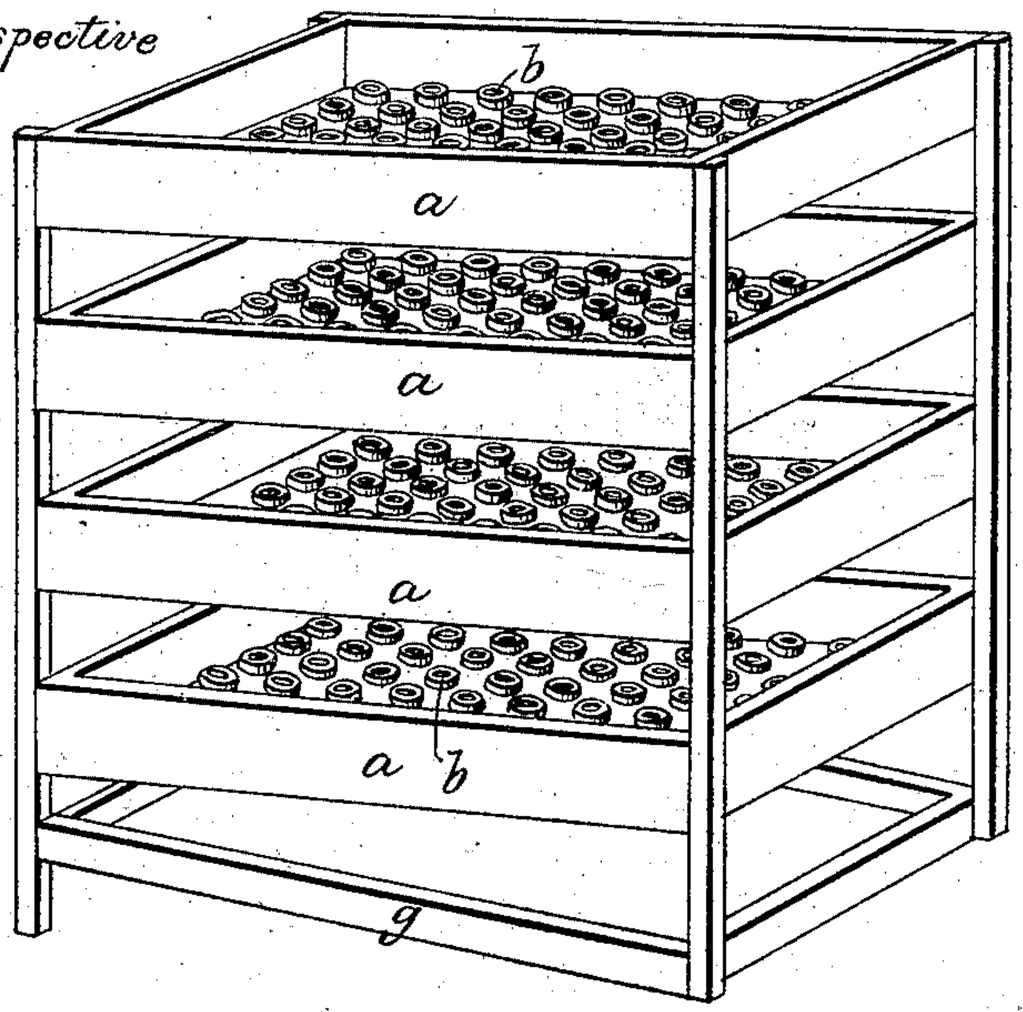


Fig: 2.

Ground Plan.

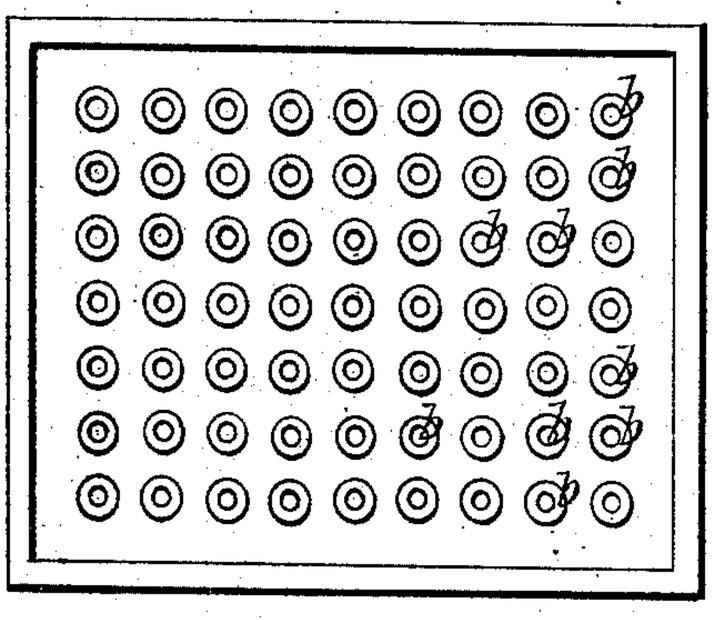
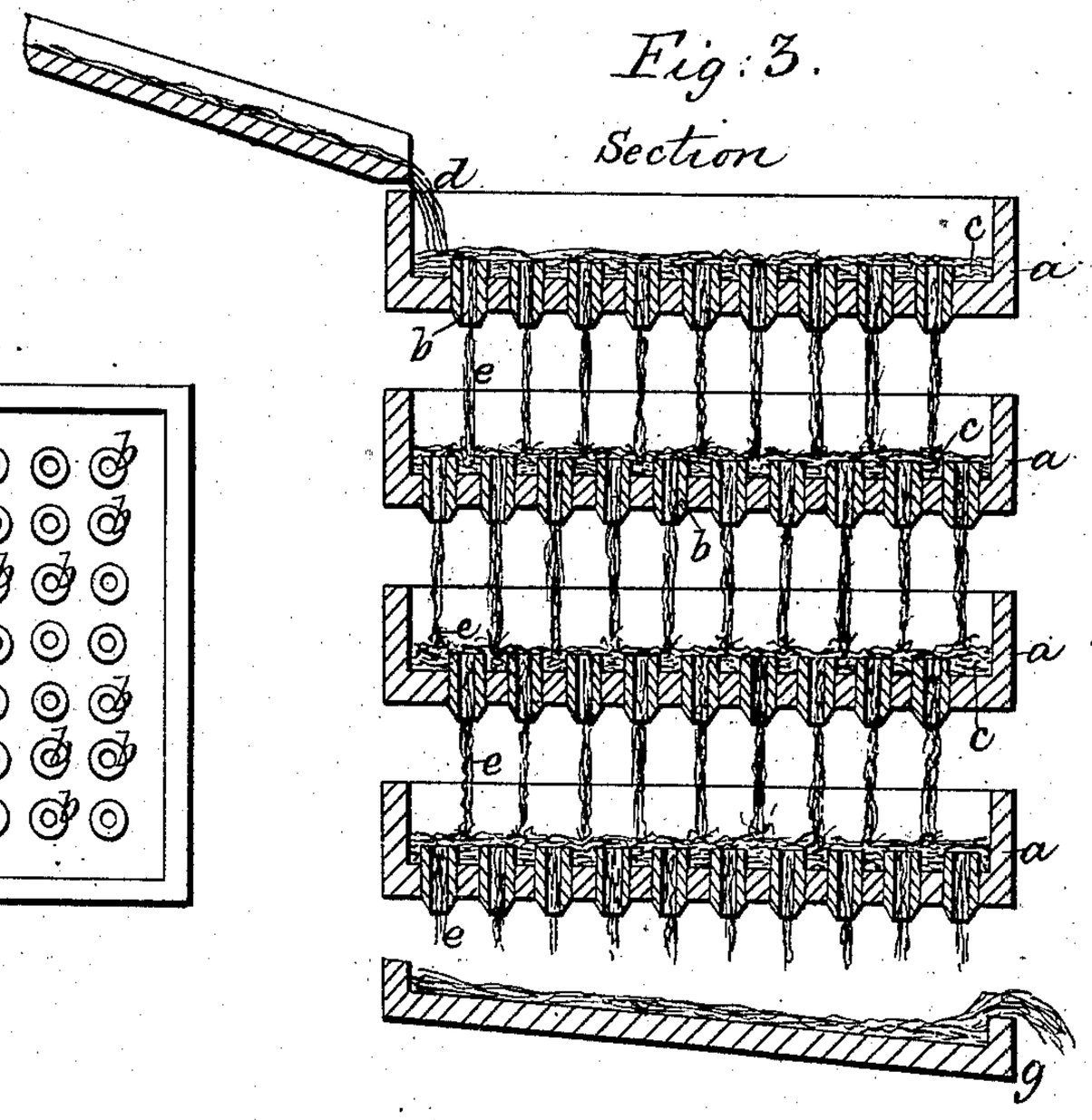


Fig: 3.

Section



UNITED STATES PATENT OFFICE.

ALVA M. STETSON, OF SAN FRANCISCO, CALIFORNIA.

AMALGAMATOR.

Specification of Letters Patent No. 15,619, dated August 26, 1856.

To all whom it may concern:

Be it known that I, ALVA M. STETSON, of the city and county of San Francisco and State of California, have invented a new and useful machine for amalgamating fine or coarse gold or other valuable mineral or by a new process distributing water in such manner as to save gold in quartz and placer mining, the said machine being called a self-operating amalgamator; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view; Fig. 2, the ground plan, and Fig. 3 a transverse section.

The letters "*a*" denote a series or succession of boxes, one upon another, which are about two and a half inches in depth and can be constructed of any size as to width, &c., the number of said boxes to be determined by the character of the diggings—from three to twenty, as may be necessary.

The letters "*b*" indicate tubes from one half to three quarters of an inch in diameter of wood, iron, or other metal, fixed in the boxes, as appear in Figs. 1 and 3, projecting above and below and placed at equal distances, about two inches apart or thereabout.

Letters "*c*" show the quicksilver which covers the whole surface of the boxes between the tubes.

Letter "*d*" denotes the water falling from a trough or sluice into the upper box, and letters "*e*" indicate the same water as it passes from one box to another, the boxes being so arranged that the water flowing through the tubes of the upper box falls on the spaces between the tubes of the succeeding one and so on through the boxes successively. The tubes may be constructed round, square or oblong.

The "amalgamator" is placed at the foot of a trough or sluice and so disposed that the auriferous dirt which flows down said trough with the water falls directly into the upper box. The surface of the boxes or spaces between the tubes are changed or covered with quicksilver. The boxes are so arranged, as referred to in the foregoing description, that as the water flows through the tubes it will fall on the spaces between the tubes in the succeeding box, the flow of water from the trough being so graduated that it will not rise to the top of the boxes and overflow. The motion of the water falling on the quicksilver keeps the dirt in constant agitation, separating the gold from the dirt, which at once amalgamates, the dirt being carried off through the tubes, and the same operation goes on in each box successively. The lower box in Fig. 1, denoted by the letter "*g*," is slightly inclined so that the water flows off, carrying away the dirt, from which the gold has been extracted by its amalgamation with the quicksilver.

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

The employment of the boxes *a*, *a*, *a*, placed in vertical succession when said boxes are fitted with tubes or pipes *b*, *b*, *b*, as described, for containing the quicksilver and for distributing the water as set forth.

ALVA M. STETSON.

Witnesses:
R. R. PROVINES,
ROBT. C. ROGERS.