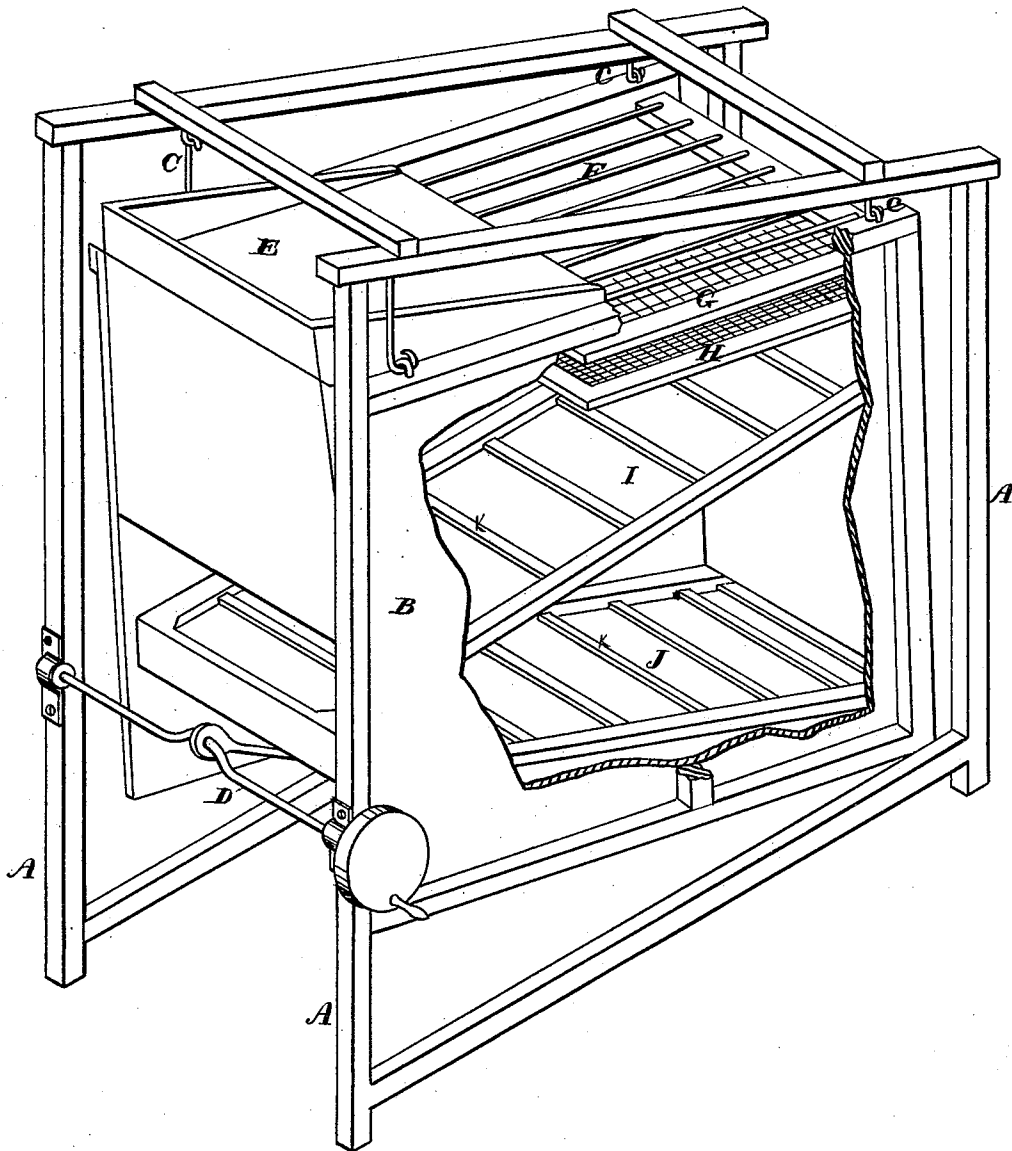


G. GINN.
ORE CONCENTRATOR.

No. 178,289.

Patented June 6, 1876.

Fig. 1



Witnesses

Geo. H. Strong,
Jno. L. Borne

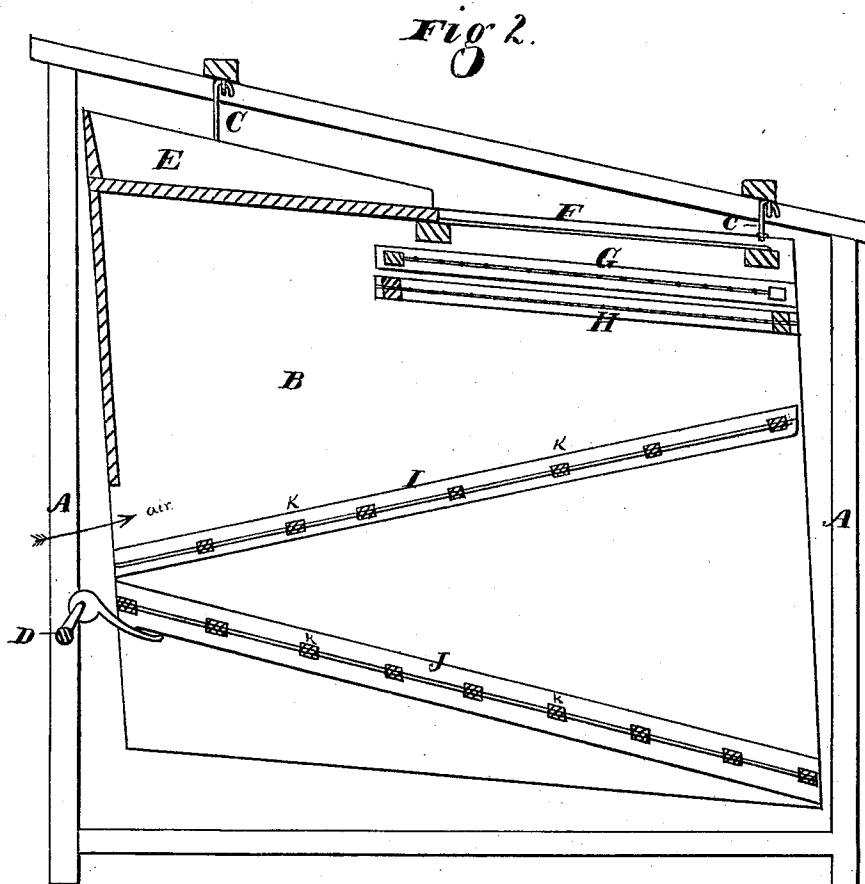
Inventor

George Ginn
by Dewey & Co.
Attys.

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UNITED STATES PATENT OFFICE

GEORGE GINN, OF BELMONT, NEVADA.

IMPROVEMENT IN ORE-CONCENTRATORS.

Specification forming part of Letters Patent No. **178,289**, dated June 6, 1876; application filed April 3, 1876.

To all whom it may concern:

Be it known that I, GEORGE GINN, of Belmont, Nye county, State of Nevada, have invented a Machine for the Dry-Washing of Gold Ores; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention without further invention or experiment.

My invention relates to a novel machine for dry-washing or separating gold from sand and earth in places where water is not attainable; and it consists in combining, in a swinging frame, provided with an air-blast, two alternately-inclined tables or chutes, provided with cross riffle-bars, laid on a flexible surface, the elasticity giving an additional impulse to the agitation, with shaking screens or sieves of different-sized meshes, arranged above said flexible-surfaced tables.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1, Sheet 1, is a perspective view of my device. Fig. 2, Sheet 2, is a sectional elevation.

A is a frame, within which swings the operative part of my machine. This consists of box or case B, which is suspended from links C, so as to swing freely. This box is given a vibrating, oscillatory, or shaking motion by means of a crank, eccentric, or cam upon the shaft D, in a manner similar to that used for grain-separators. At the top of this case is a receiving hopper or incline, E, and from this the auriferous earth which is discharged upon it is carried by the shaking motion upon the bars F of the first screen, thence falling upon a second and third screen, G and H, of different fineness. Below these screens are two or more inclined tables, I J, placed as shown, and crossed by riffle-bars K. The bottoms of the tables are made, preferably, of rawhide or canvas, which, being elastic, gives an additional impulse to the agitation.

Between the lower screen and the upper table a blast of air is introduced at the end

where the shaft D lies, and this may be furnished by any well-known apparatus for such a purpose. The discharge-nozzle of the blast should extend, preferably, the entire width of the tables and screens.

The operation will then be as follows: The dirt falling upon the bars F, the larger stones and other substances will roll off, and the dirt, sand, coarse gravel, and gold will pass through and upon the screens G and H, where the blast of air meets it, and carries off all the dust and most of the fine light sand. The coarse sand, gravel, gold, and heavy valuable black sand will then fall upon the tables I J, where the constant motion concentrates the gold and black sand in the riffles, allowing the coarse gravel to pass off, when the part remaining in the riffles will be found to contain upward of ninety-five per cent. of the gold originally contained in the dirt placed in the machine. This residue will then be so concentrated that it can easily be transported to some point where water is obtainable, for the purpose of complete reduction or separation.

Various modifications of the device or changes in the arrangement of the parts may be made without materially changing the invention.

I am aware that heretofore in an ore-separator sieves and tables with inelastic surfaces, having riffle-bars, have been arranged, all parallel to each other, and hence I make no claim to such an arrangement; but

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

A machine for the dry concentration of gold and valuable substances, consisting of the shaking-screens F G H and alternately-inclined tables I and J, having flexible surfaces, provided at intervals with riffle-bars K, in combination with the swinging box B, air-blast, and frame A, as set forth.

GEORGE GINN.

Witnesses:

M. B. HOWARD,
ELWARD POYANSINE.