

(No Model.)

J. A. JONES.
ORE CONCENTRATOR.

No. 370,145.

Patented Sept. 20, 1887.

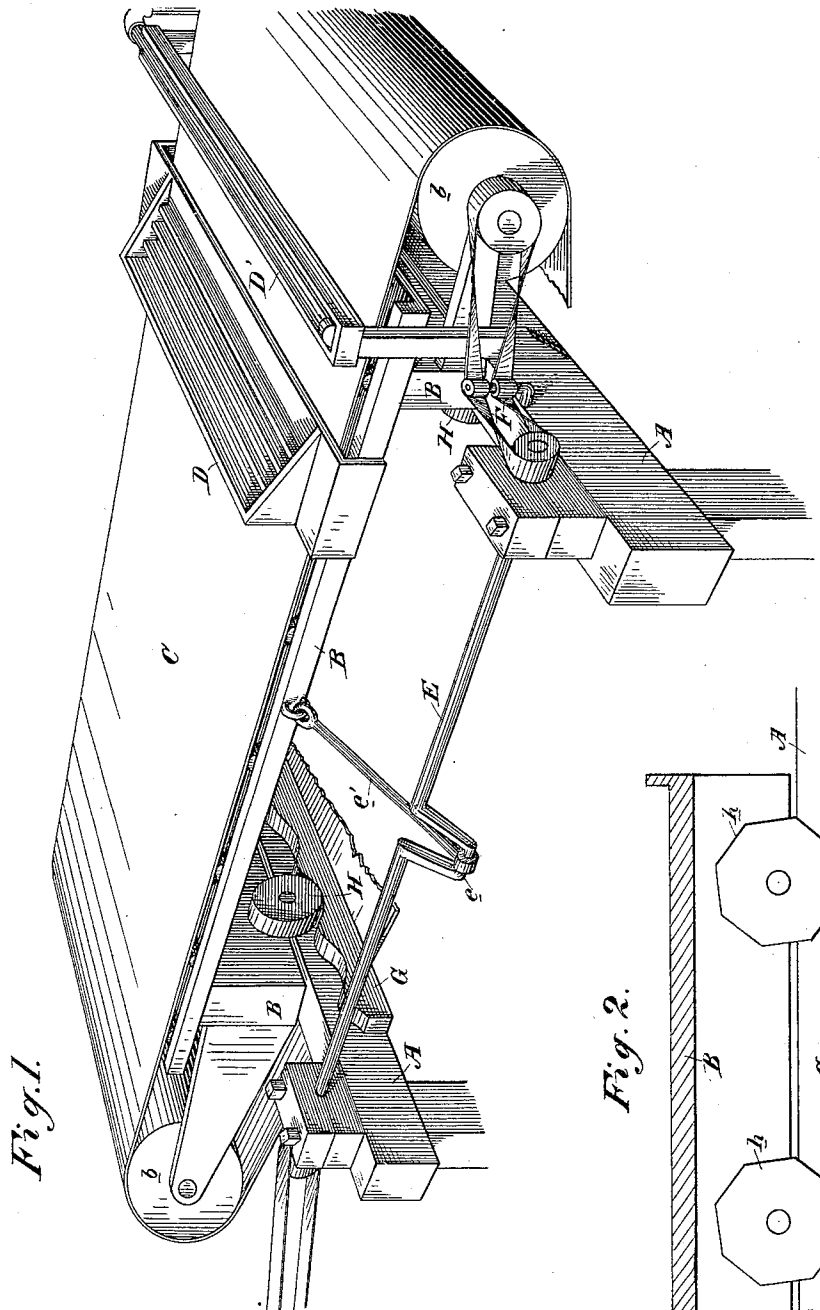


Fig. 1.

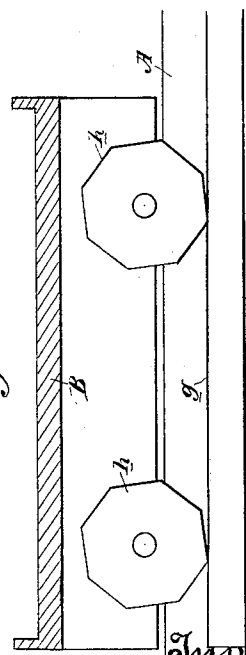


Fig. 2.

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UNITED STATES PATENT OFFICE.

JOHN A. JONES, OF TUSCARORA, NEVADA.

ORE-CONCENTRATOR.

SPECIFICATION forming part of Letters Patent No. 370,145, dated September 20, 1887.

Application filed October 7, 1886. Serial No. 215,625. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. JONES, of Tuscarora, in the county of Elko and State of Nevada, have invented an Improvement in Ore-Concentrators; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to the class of ore-concentrators, and particularly to those machines in which an endless traveling belt is carried by a shaking frame or table, the ore being fed upon the surface of said belt, together with a stream of water, whereby the lighter or worthless particles are carried down the incline of the belt, while the heavier particles or sulphurets cling to its surface, are carried up by it, and are finally washed off below in a tank through which the belt passes.

My invention consists in the constructions and combinations of devices which I shall hereinafter fully describe and claim.

Referring to the accompanying drawings, Figure 1 is a perspective view of my ore-concentrator, the belt C being broken away below. Fig. 2 is a cross-section showing a modified rolling-surface.

A is the frame of the machine. B is the frame or table carrying the drums *b* at the head and foot, and C is the endless traveling belt passing over said drums. This belt is of the usual construction, and there is located over it, near its upper end, the usual ore and water distributors, designated respectively, by D D'.

The frame or table B may have any of the ordinary movements imparted to it—such, for example, as a side shake or an end shake. I have here shown ordinary means for accomplishing a side shake, and which consist of the shaft E, having the crank *e*, and the link *e'* connecting said crank with the shaking frame or table. I have also shown mechanism, which I designate generally by F, for accomplishing the travel of the belt, which I do not deem it necessary herein to particularly explain, as it may be of any suitable character.

Upon the main frame, near each end and transversely thereof, is secured a track, G, which has an uneven or corrugated surface, as shown. Under the shaking frame or table

are the wheels or rollers H, which travel upon the serpentine tracks and bear the weight of the frame. It will be seen that as the frame is moved from side to side by means of the crank and link, it will also move up and down as its wheels travel over the serpentine tracks.

In Fig. 2 I show an equivalent rolling-surface consisting of a straight or flat track, *g*, on the main frame, and a polygonal wheel or roller, *h*, on the shaking-frame. This reversal, it will readily be seen, will produce the same result of moving the frame or table B up and down as it moves from side to side. This movement, in addition to the ordinary shake I have found gives very satisfactory results. The up and down movement tends to keep the ore in suspension, whereby the heavier portions or sulphurets are more effectively separated from the tailings.

In the case of an end-shake machine, the tracks, instead of being transverse, would be longitudinal of the main frame.

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

1. In an ore-concentrator, the combination of the main frame A, the frame B, the endless traveling belt C thereon, means for reciprocating frame B, and a corrugated or uneven support between frames A and B, substantially as described.

2. In an ore-concentrator, the combination of the main frame A, the frame B, the traveling endless belt C thereon, means for reciprocating frame B, the corrugated or uneven support, and the rollers H, supporting frame B thereon, substantially as described.

3. The combination of a main frame, corrugated tracks thereon, a frame, B, rollers supporting it on the tracks, the endless traveling belt C on frame B, and means, substantially as described, for reciprocating frame B transversely of the travel of the belt.

In witness whereof I have hereunto set my hand.

JOHN A. JONES.

Witnesses:

CHAS. E. ABBOT,
H. W. BROWN.