2 Sheets—Sheet 1.

P. PLANT.

Ore-Separators.

No. 204,083. Patented May 21, 1878.

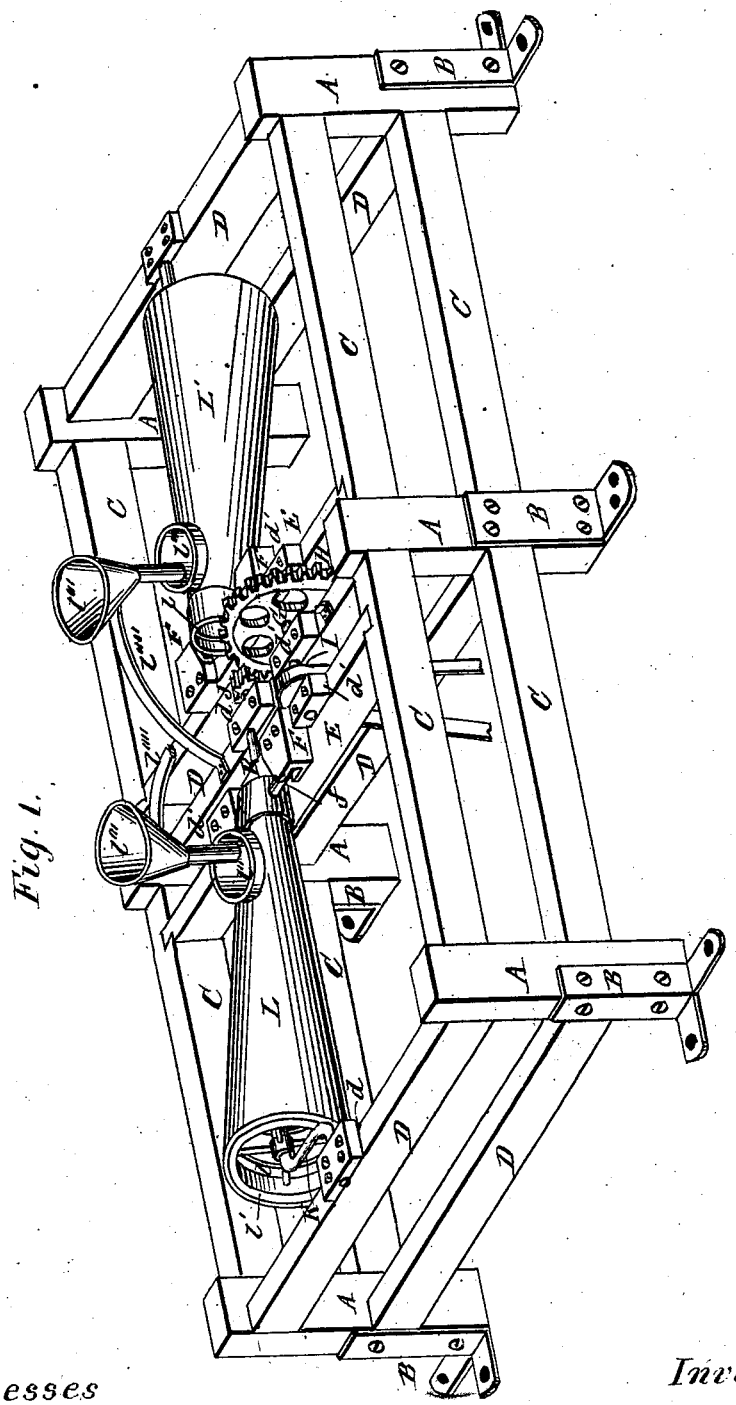


Fig. 1.

Witnesses

Jas. B. Vanderwerken

C. J. Anderson.

Inventor

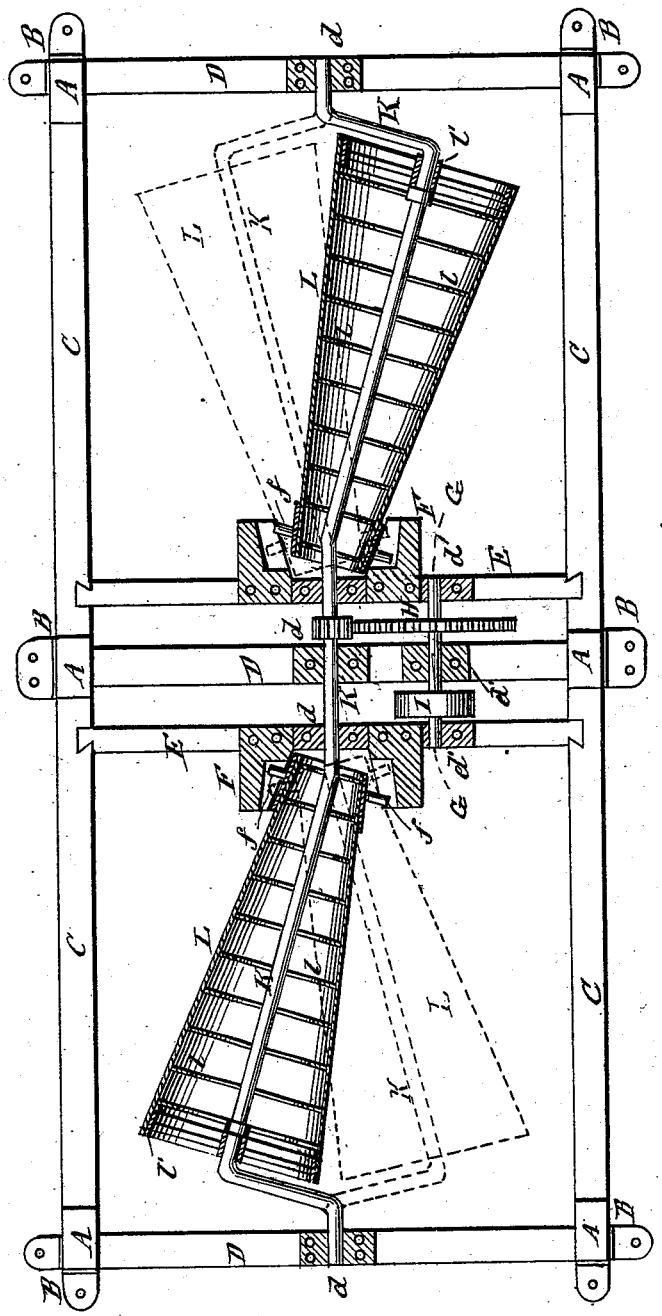
Paschal Plant

P. PLANT.

Ore-Separators.

No. 204,083. Patented May 21, 1878.

Fig. 2.



Witnesses

Jas B Vanderwerken
C. Sanderson.

Inventor

Paschal Plant

UNITED STATES PATENT OFFICE.

PASCHAL PLANT, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN ORE-SEPARATORS.

Specification forming part of Letters Patent No. **204,083**, dated May 21, 1878; application filed January 8, 1878.

To all whom it may concern:

Be it known that I, PASCHAL PLANT, of the city of Washington and District of Columbia, have invented a new and useful Improvement in Apparatus for Separating Gold from Quartz or other earthy matter, of which the following is a clear and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view, and Fig. 2 is a plan, with the cylinders and journal-boxes in section.

In the drawings, A are posts. B are metallic strips fastened to the posts A, having ears on the bottom to be fastened on the floor. C are longitudinal cross-pieces, and D are vertical cross-pieces to make the frame stationary. On the top vertical cross-pieces D are journal-boxes *d* and *d'*, in which the shaft-gearing and driving-pulley revolve. E E are extra vertical cross-pieces, on which guides F F are supported. An axle, G, with a large gear-wheel, H, and a driving-pulley, I, revolves in journal-boxes *d' d'*, to set the apparatus in motion, by a gear-wheel, J, which is fastened to a horizontal inclined crank-shaft, K. This shaft K revolves the cylinder L L in a rotary and inclined motion, which produces a forward and rotary motion to the quartz or other matter. These cylinders are provided in the interior with ribs or rings *l*, and on the outer ends with collars *l'*, fastened or cast to it. *l''* are boxes on the inner ends to receive the ore from hoppers *l'''*, which are fastened to the frame by standards *l''''*. On the same end of the cylinders there are trunnions *f f* cast or fastened to them, which move to and fro in the guides F F.

The object of my invention is to separate gold from quartz or other earthy matter, dry—independent of water.

The rotation of the cylinders causes the separation of the heaviest substances from the lightest by centrifugal force. The heaviest is retained within the cylinder by the ribs or rings, while the lightest floats over the ribs or rings and out the end of the cylinder.

In the drawing I have shown the cylinders set and operated horizontally; but it is obvious that for some purposes it may be necessary to arrange the cylinders vertically or at any degree of inclination between a vertical and horizontal line.

The frame may be made with three upright posts connected together on the top, and the cylinders may be made perpendicular or conical, and may be guided by hinges or connecting-rods instead of trunnions.

The cylinders also may be fixed on wagons or other conveniences for easy transportation.

The ribs or rings may be made inclined or curved. Water and mercury may be used. Air may also be used by means of fans fixed on the shaft, inside or otherwise.

I claim—

1. The bent shaft K, in combination with the cylinder L, substantially as shown and described, and whereby a conical motion is imparted to the cylinder, for the purpose set forth.

2. The bent shaft K, with the cylinder loosely attached thereto, in combination with the guides F and pins *f*, substantially as described.

3. The bent shaft K, with the cylinders L loosely attached, in combination with the guides F, guide-pins *f*, and gear-wheel H and pinion I, as described, and for the purpose set forth.

PASCHAL PLANT.

Witnesses:
J. A. TAUBERSCHMIDT,
PETER WYNNE.