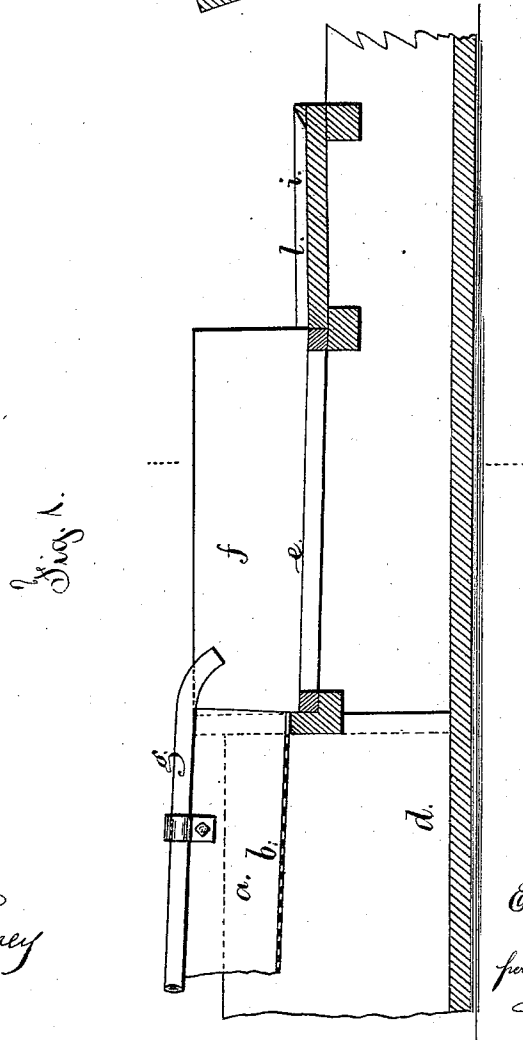
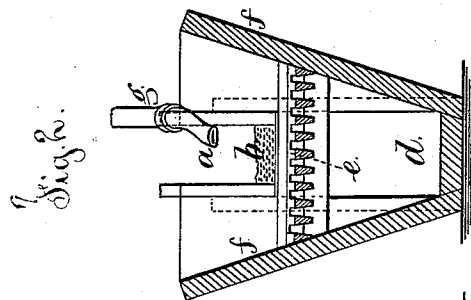


E. PAUL.
Ore-Washers.

No. 148,622.

Patented March 17, 1874.



Witnesses

Chas. H. Smith
& Co. J. Pinckney

Inventor

Edward Paul.

per L. W. Penell

att'y.

UNITED STATES PATENT OFFICE.

EDWARD PAUL, OF SYLVAN LAKE, NEW YORK.

IMPROVEMENT IN ORE-WASHERS.

Specification forming part of Letters Patent No. 148,622, dated March 17, 1874; application filed February 3, 1874.

To all whom it may concern:

Be it known that I, EDWARD PAUL, of Sylvan Lake, in the county of Dutchess and State of New York, have invented an Improvement in Ore-Washers, of which the following is a specification:

The object of this invention is to save the fine portions of the ore that pass away from the large rotary or other washers with the water that carries off the earth, sand, and other foreign matters from such ore. This improvement is especially valuable with hematite iron ores that are mixed with sand and clay as they are quarried, and in which the fine portions of the ore usually have passed away with the water employed to wash the larger lumps.

Ore-washers have been made in which the ore is delivered upon an incline and passes to a rotary screen, and then runs upon an incline, as in the Patents No. 132,642 and No. 108,962, and the chute through which the water and refuse matter pass has been provided with a perforated bottom and inclined grate, as in my Patent No. 146,275; and with a grate in the bottom of the chute, and an inclined grate, as in the Patent No. 132,642.

My present invention is made for the purpose of delivering the pieces of ore that are detained upon the perforated bottom in the line of the trough or chute, instead of throwing them off laterally. Thereby the ore will be more freely delivered, and there will be a better opportunity for thorough washing and subsequent draining than in cases where the movement of the pieces of ore is obstructed, either by a revolving screen or by a lateral delivery over an inclined grate.

In the drawing, Figure 1 is a longitudinal section of the apparatus, and Fig. 2 is a cross-section of the same.

The trough *a* brings the muddy water and fine ore to the perforated plate *b*, that is in the bottom of the trough, and through this plate the said water runs into the trough or delivery-chute *d* below. At the end of the perforated plate *b* is the grate *e*, that is of sufficient area to receive and contain the ore that accumulates from time to time and previous to removal. The sides *f* of the trough or hopper serve to retain the ore upon the grate, and also to prevent water supplied by the pipe *g* splashing over. This supply of water serves the twofold purpose of washing the ore as it passes upon such grate *e*, and of moving the ore along upon the grate toward the lower end thereof. The platform *l* receives the ore previous to delivery into carts or cars. This platform should have a rim, *i*, around it, and be placed at an inclination to throw any water that may drain from the ore back through the grate.

A hoe or scraper may be used from time to time to draw the fine ore from the grate *e* to the platform *l*.

I claim as my invention—

The ore-washing apparatus, consisting of the stationary grate *e* at the lower end of the trough *a*, inclined in the same direction as said trough *a*, and the platform *l* in line with the said trough *a*, and continuing beyond said grate *e*, for the reception of ore as moved over the grate *e* by the current of water, as specified.

Signed by me this 19th day of January, A. D. 1874.

EDWARD PAUL.

Witnesses:

GEROME WILLIAMS,
JOHN S. VAN WYCK.