

D. POLLOCK.

Ore Washer.

No. 16,495.

Patented Jan. 27, 1857.

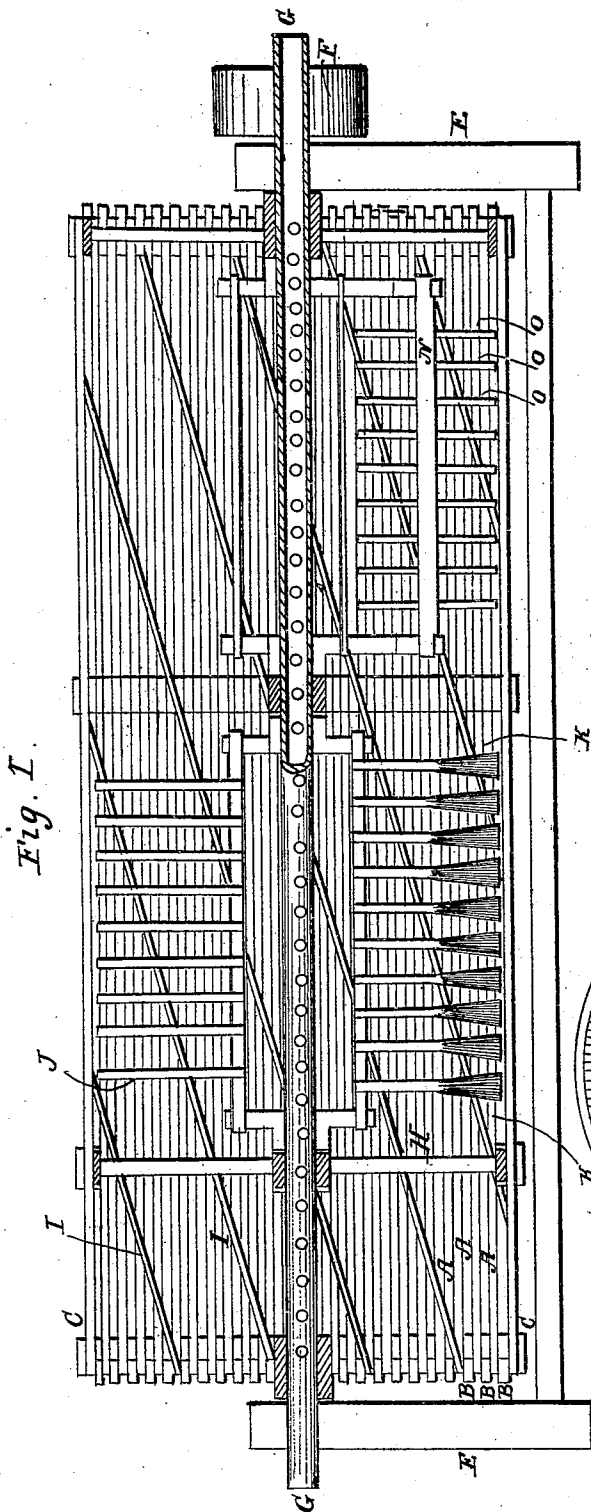


Fig. 1.

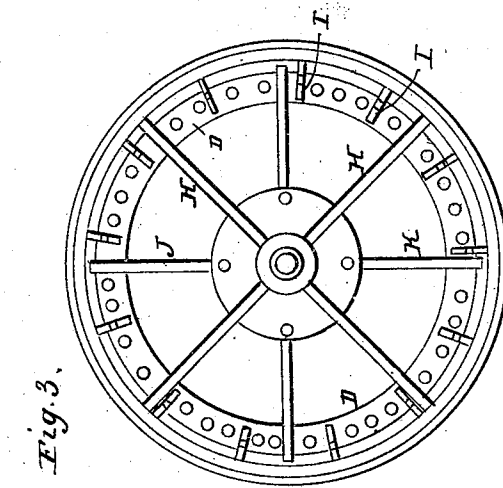


Fig. 3.

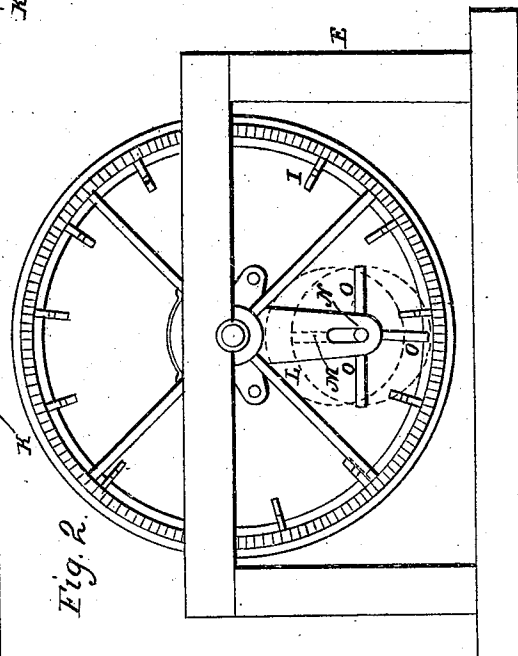


Fig. 2.

UNITED STATES PATENT OFFICE.

DAVID POLLOCK, OF LANCASTER, PENNSYLVANIA.

IMPROVED ORE-CLEANER.

Specification forming part of Letters Patent No. **16,495**, dated January 27, 1857.

To all whom it may concern:

Be it known that I, DAVID POLLOCK, of the city of Lancaster, county of Lancaster, and State of Pennsylvania, have invented new and useful Improvements in Machines for Crushing, Washing, and Cleaning Ore, which I call the "Adjustable Ore Washer and Cleaner;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the construction of an open cylinder with adjustable bars to regulate the spaces between of the width required; a perforated guard to relieve the cylinder; a hollow perforated shaft for the purpose of supplying and distributing water to any or all parts of the cylinder, and an adjustable traveling roller and lifters for crushing and stirring up the ore.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation as follows, to wit:

The adjustable cylinder is formed of parallel bars or rods A, so as to be moved wider apart or closer together any required space to allow the sand or dirt to pass through.

B are keys or wedges at ends of cylinder for the purpose of equalizing and regulating the spaces between the bars A.

C are outside clasp-bands secured by keys to hold the bars A firmly in their places.

D is the perforated guard or end of cylinder, being open or perforated so that the sand, dirt, and water may pass off and relieve the cylinder A; E, the frame upon which the machine operates; F, the driving-pulley; G, the shaft, which is hollow and closed at one end and perforated, and extends through the whole length of the cylinder A. It is hollow so that water can be forced in at the open end, and perforated so that it supplies and distributes the water as required to any or all parts of the cylinder A.

H are the spiders or wheels upon which the bars or cylinder A rest and are adjusted.

I are perforated ledges or projections for the purpose of stirring and agitating the ore and allowing the sand or dirt and water to escape, so as to relieve the operation of the

machine. The arms J and lifters K are located in the center of cylinder A and extend from the center outward to the cylinder A, but not attached to the cylinder A. The arms J are of any desirable shape, and the lifters K are flat at their outer ends for the purpose of lifting and agitating the ore.

L L are hangers suspended from the shaft or centers G, having a slot M, in which a traveling roller N, with pins or projections O, operates. These pins or projections O on the traveling roller N are for the purpose of stamping and crushing the ore and dirt, and the roller N raises and lowers the pins O and adjusts itself to the size of the ore by means of the slot M.

I am aware that machines for washing, cleaning, or crushing ore or other material have been made with parallel hollow cylinders, either perforated or close, provided with pins, projections, or close ledges. I am also aware of conical hollow cylinders, close and perforated, provided with projections, pins, or shovels on the inner side of cylinders. I am also aware of cylinders or rollers, working single or double, one beside the other, provided with pins, projections, segments, or close ledges on the outer circumference. I am also aware of two or more cylinders of woven wire or perforated, working one within the other, hung and revolved by the same shaft for screening and cleaning ore and other material. I am also aware of cylinders composed of parallel bars or rods made permanently fixed and stationary. These I do not claim.

The advantages of my invention are that the cylinder is adjustable for all sizes of ore, sand, or dirt to escape, and the stamping or crushing roller likewise adjusts itself to the size of the ore, while the machine is in operation for cleaning the ore dry, and by the construction of the hollow perforated shaft I distribute the water in streams within the cylinder, thus thoroughly washing the ore, while the cylinder is freed of the weight of the water, sand, and dirt, and the ore is cleaned either wet or dry. This machine is a washer and screener, and has a double operation, that of washing and screening at the same time. The ore is thrown into the one end of the cylinder and passes out at the other in a

clean state, notwithstanding the cylinder rests in a horizontal position, or any required inclination. Therefore,

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

The cylinder with adjustable bars A, the perforated guard D, the hollow perforated shaft G, the perforated ledges I, the arms J, and lifters K, the adjustable traveling roller

N, all constructed, arranged, and operated as herein described, for the purpose of crushing, washing, screening, and cleaning ores or other material, either wet or dry.

DAVID POLLOCK.

Witnesses:

I. FRANKLIN REIGART,
M. CARPENTER.