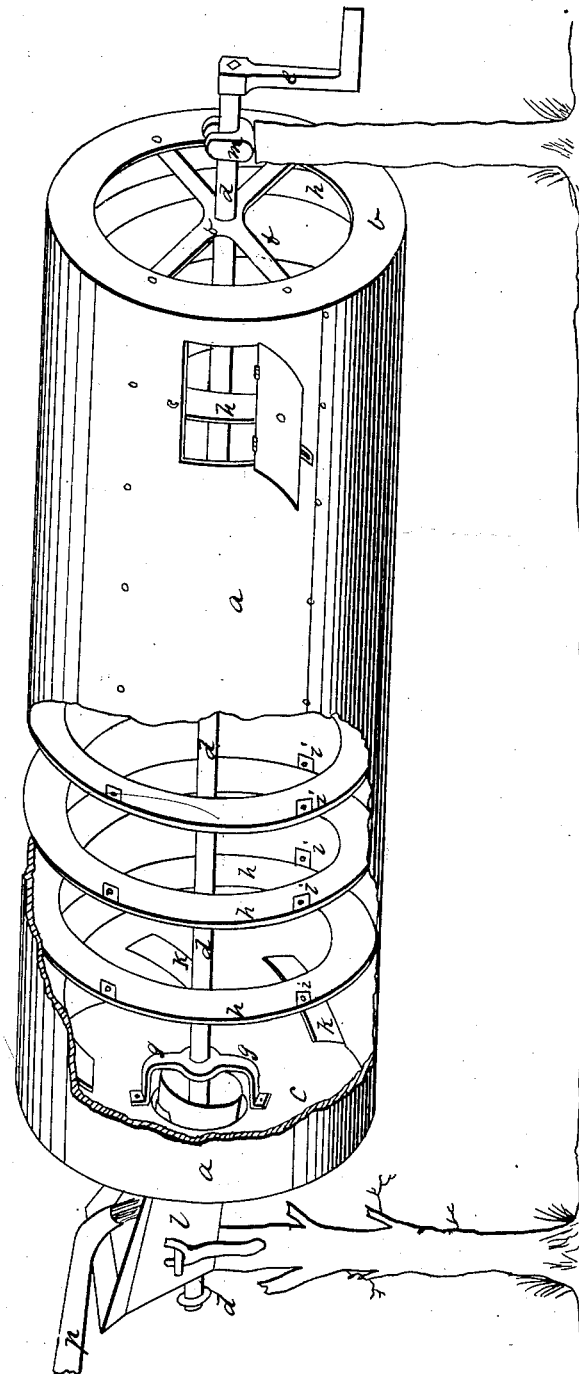


H. Parry,

Ore Washer.

No. 6308.

Patented Apr. 10. 1849.



UNITED STATES PATENT OFFICE.

HARRISON PARRY, OF PITTSBURGH, PENNSYLVANIA.

ROTARY GOLD-WASHER.

Specification of Letters Patent No. 6,308, dated April 10, 1849.

To all whom it may concern:

Be it known that I, HARRISON PARRY, of the city of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have
5 invented a new and useful Machine for Washing and Cleansing Gold, Iron Ore, and other Minerals; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation
10 of the same, reference being had to the annexed drawing, making a part of this specification, which is a perspective view of the machine, a portion of the cylinder at one end being represented as removed to exhibit
15 the interior.

My machine consists of a cylinder of sheet iron, or thin boiler iron or other suitable material (*a*, *a* see drawing) about six feet in length and two feet in diameter, the dimensions to vary however according to the amount of work it is required to perform. This cylinder is open partially at both ends, the aperture at the lower end, *b*, being considerably larger than that at the upper end
25 *c*. It is attached to and carried by an iron rod *d*, which passes through the center and forms the axis of the cylinder, with which it revolves, when turned by the crank '*e*.' The rod *d* is attached to the cylinder by means of the cross pieces *f*, at the lower end and the piece *g* at the upper. The interior of the cylinder is furnished with a helix or screw '*h*' wound round the cylinder and attached by means of small flanges *i i* or to the inner
35 surface thereof. The threads of the screw are about two inches deep, and are placed twelve or fourteen inches apart. At the upper end of the cylinder a few strips of iron *k, k*, start from the head and project a short distance down being attached to the inner surface of the cylinder, but in the reverse direction to the helix. A hopper, *l*, with a circular mouth piece is placed at the head of the cylinder, the mouth piece being
45 inserted into the upper aperture, as exhibited in the drawing. The rod *d* passes through a small hole in the back of the hopper. The movable journal pieces, *m, m*, are constructed so as to be readily driven into
50 the top of a post or stump of a tree, when required to be speedily brought into use. The door, *o*, serves to remove the mineral when washed.

Having thus described the several parts

of my machine, I will proceed to describe 55 their use and operation.

When the machine is put up for use, the end *b* should be lower than the end *c*, to carry the water off readily. The hopper *l* is supported by posts or otherwise so as not to
60 interfere with the revolution of the cylinder and rod. The door *o*, is closed and fastened, and a stream of water is conducted by a hose *p*, or trough or otherwise into the hopper *l*. The gold or mineral to be washed is then
65 thrown into the hopper and falls thence into the upper end of the cylinder, and is carried by the stream of water down toward the lower end. The crank, *e*, being turned causes the revolution of the cylinder which
70 is turned in that direction which, by the action of the screw, will cause the heavy particles of matter in the cylinder lying between the threads of the helix, to pass upward toward the end *c*. Thus the water in its pas-
75 sage will carry off the earth and sand and light particles through the lower aperture while the gold, or other mineral sinking between the threads of the helix are continually carried by the revolutions of the screw
80 against the current to the upper end. The short strips *k, k*, being placed in a direction reverse to the screw, serve to push down any particles of gold or earth which might otherwise lodge at the head of the cylinder out
85 of the reach of the current, and fall of water and also prevent any matter from settling at the upper end without being fully washed.

When sufficiently cleansed the mineral is brought down to the lower end, (the stream
90 of water being first stopped off) by reversing the motion of the cylinder and is removed through the door *o*.

The gold or other mineral after being washed is dried in the sun or otherwise, and
95 if any light particles of sand or dust remain it is replaced in the head or upper end of the cylinder and the hopper being removed a fan (similar to those ordinarily used to create a blast in iron furnaces) is
100 placed with its mouth piece in the upper aperture of the cylinder and the draft of wind passing through the cylinder will carry off the light sand and earth which may remain from the washing; while the cylinder
105 being turned as at first the heavy matter is still retained and passes to the upper end.

The fan being of the ordinary construc-

tion and not a necessary part of the machine is not represented in the drawing.

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

- 5 The application and combination of the helix or screw *h, h* with a revolving cylinder, *a*, and the short strips *k, k*, at the upper

end of the cylinder, substantially in the manner and for the purpose hereinbefore named.

H. PARRY.

Witnesses:

ANTOINE HARTZ,

WM. BAKEWELL.