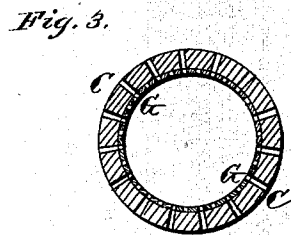
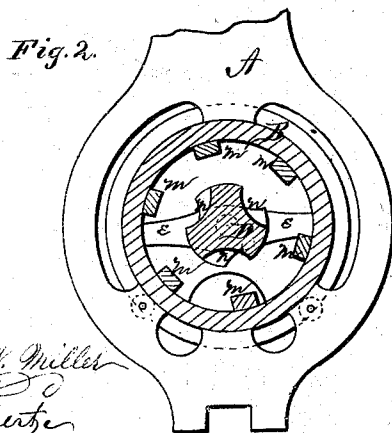
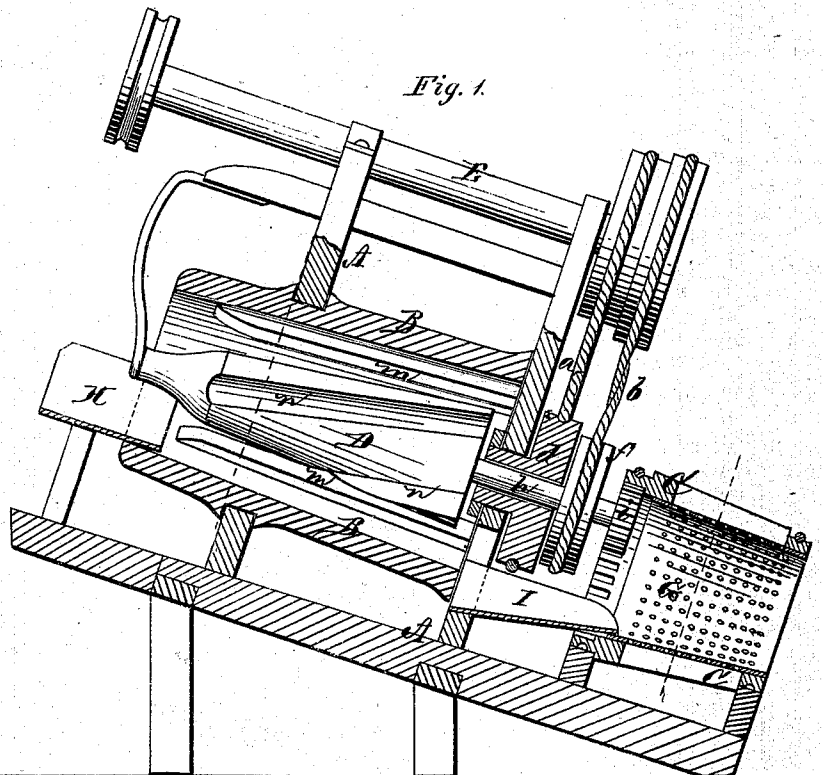


R. GIDLEY.
Ore-Washers.

No. 139,570.

Patented June 3, 1873.



Witnesses:

Henry N. Miller
C. R. Everts

Inventor.

Robert Gidley
per
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Attorneys.

UNITED STATES PATENT OFFICE.

ROBERT GIDLEY, OF MOORE'S MILL, NEW YORK.

IMPROVEMENT IN ORE-WASHERS.

Specification forming part of Letters Patent No. **139,570**, dated June 3, 1873; application filed April 29, 1873.

To all whom it may concern:

Be it known that I, ROBERT GIDLEY, of Moore's Mill, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Ore-Washing Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a machine for washing ore; as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section of my machine. Fig. 2 is a transverse section of the larger cylinder, and Fig. 3 is a similar section of the smaller cylinder.

A represents the frame of my machine, in which are placed two revolving cylinders, B and C. Both of these cylinders are placed in an inclined position, and are revolved in the same direction by means of cords or belts *a b* from pulleys on a counter-shaft, E. The cord or belt *a* is straight, and passes around a pulley, *d*, having a projecting hub, from which arms *e e* extend to and connect with the cylinder B. The cord or belt *b* is twisted, and passes around a pulley, *f*, which is attached to a shaft, *h*. This shaft passes through the center of the pulley *d* backward into the cylinder B, the pulley *f* being located immediately in front of said pulley *d*, and on the front end of the shaft *h* is secured a pinion, *i*, which gears with internal cogs on the rear end of the cylinder C. By these means the cylinders B and C are revolved, and in the same direction. On the inside of the cylinder B are lon-

gitudinal ribs *m m*, and within the cylinder is another, but solid, cylinder, D, provided with grooves *n n* running in spiral form, as shown. This cylinder D is attached on the shaft *h*, and revolves with it, thus revolving in the opposite direction to that of the cylinder B, within which it is placed. Both the cylinders B and D are tapering, as shown in Fig. 1, increasing in size from the rear to the front ends. The cylinder C is also tapering, but in the opposite direction—that is, decreasing in size from the rear to the front end. This cylinder is made of slats, as shown in Fig. 3, leaving spaces between, and it is provided around the inside with a perforated lining, G. H represents a trough conveying the water containing the ore from a curb or sluice to the cylinder B, and another trough, I, conveys it from said cylinder to the cylinder C.

This machine is particularly intended for iron ore. The fine ore that passes through the large machine commonly used at the ore-bed is cleansed from dirt by passing through my machine.

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

1. The tapering revolving cylinder B provided with internal longitudinal ribs *m m*, in combination with the interior tapering revolving cylinder D provided with twisting grooves *n n*, substantially as herein set forth.

2. In combination with the revolving cylinders B and D, constructed and operating as described, the slotted tapering revolving cylinder C provided with interior perforated lining G, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of April, 1873.

ROBERT GIDLEY.

Witnesses:

JEREMIAH WOOLVEN,
THEODORE F. WOLVEN.