

G. B. HAMILTON.
Ore Washer.

Ore Washer.

No. 53,221.

Patented March 13, 1866.

Fig. 1.

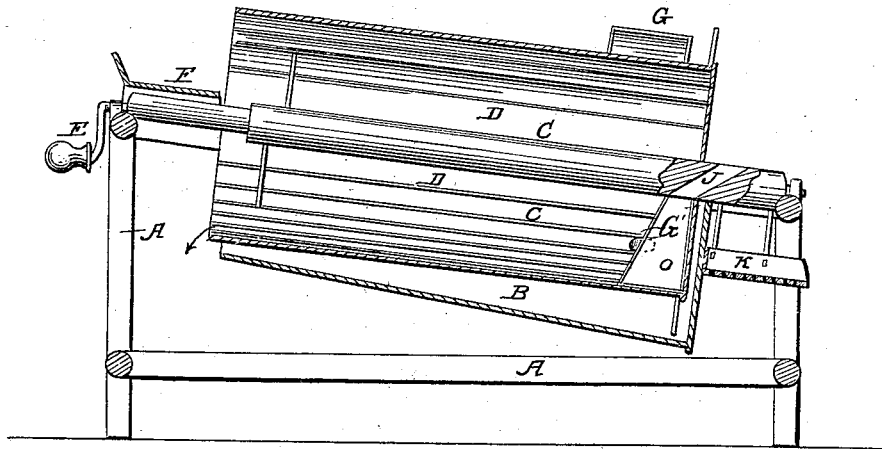
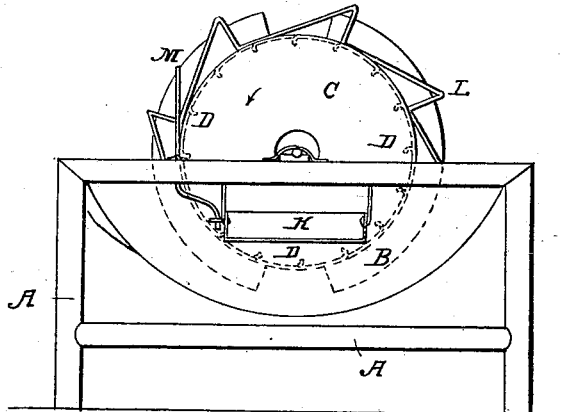


Fig. 2.



Witnesses:

G. Breed
Amy Browne.

Inventor:
Geo. B. Hamilton
by Samuel C. Reed
Att.

UNITED STATES PATENT OFFICE.

GEORGE B. HAMILTON, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR
TO HIMSELF AND ANDREW NOERR, OF SAME PLACE.

IMPROVED ORE-WASHER.

Specification forming part of Letters Patent No. 53,221, dated March 13, 1866.

To all whom it may concern:

Be it known that I, GEORGE B. HAMILTON, of Washington, in the county of Washington and District of Columbia, have invented a new and useful Improvement in Ore-Washers; 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.

My invention consists in a peculiar construction and arrangement of machine for washing ore.

In the accompanying drawings, Figure 1 is a vertical section near the center of my machine. Fig. 2 is an end view of the machine.

Upon any suitable frame, A, Fig. 1, I arrange a semicircular trough or cistern, B, with one end higher than the other. In this cistern is placed a hollow cylinder or washer, C, provided with ribs or lifters D, set obliquely, as indicated in dotted lines, Fig. 2, at D. The cistern or trough B is furnished with a constant stream or supply of water, and the cylinder or agitator C is set in revolution by the crank E, or other suitable means. The ore is shoveled into the cylinder C from the platform F. As the cylinder revolves water is dipped up by the trunks G and flows into cylinder at holes G', Fig. 1. As soon as the water rises to the red line, Fig. 1, there is a constant overflow at the left-hand end of the cylinder, as indicated by the arrow, while a continuous supply of water is dipped up by the trunks G. As the water thus flows from the right to the left, washing away the dirt, the ore slowly passes to the right on account of the oblique position of the cylinder, and at the same time the lifters D seize the ore and carry it up the side of the revolving cylinder to fall back

again into the water. Thus the ore is thoroughly agitated and washed and finally collected at the right-hand or lower end of the cylinder, where a portion of the same is taken up at each revolution of the cylinder by the discharger O and carried into the oblique passage I, from which it falls upon the sieve K. A portion of water being carried forward with each discharge of ore washes the finer particles through the sieve to be collected and settle in a reservoir below.

I propose to employ several sieves, if necessary, the same being shaken by trips L striking the lever M in the usual manner.

I do not confine myself to the proportions above set forth; but I propose to vary the dimensions and details of construction, using substantially the same machine.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The construction and use of the oblique agitator or hollow cylinder, so arranged and operated that the water flows from the lower to the upper end of the cylinder, substantially as described.
2. Discharging the washed ore through the shaft of the cylinder, substantially as set forth.
3. The use of the trunks G for dipping the water into the cylinder C, substantially as specified.
4. The combination of the cylinder C with the trips L, lever M, and sieve K, substantially as described.

GEO. B. HAMILTON.

Witnesses:

DANIEL BREED,
E. H. BATES.