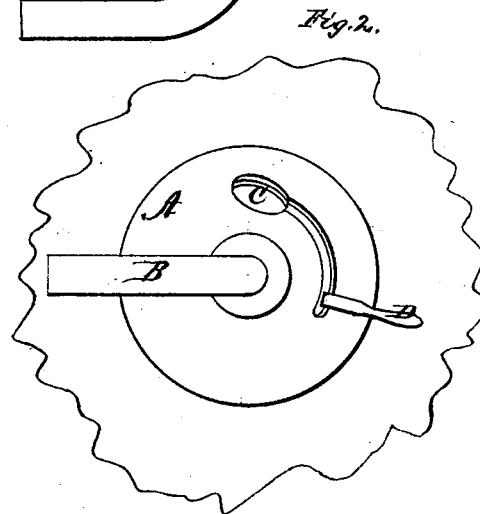
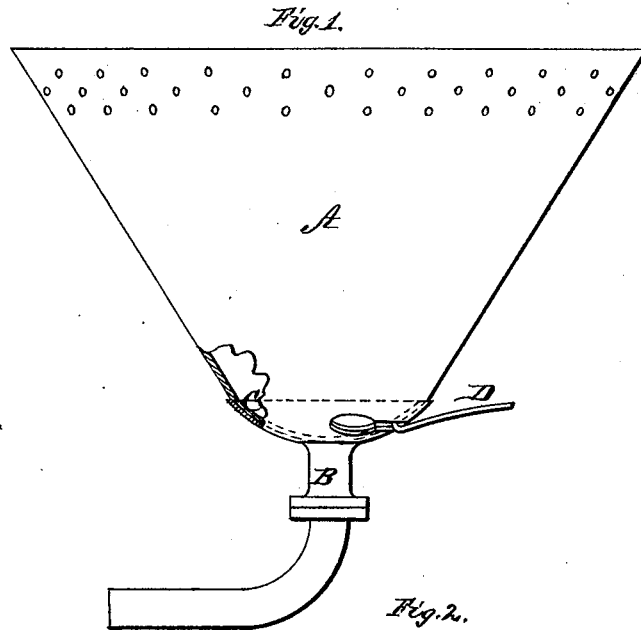


N. H. LEBBY.

Ore Washer.

No. 101,890.

Patented April 12, 1870.



Witnesses  
Jno. A. Ellis.  
J. V. White.

Inventor  
N. H. Leiby  
Per.  
J. H. Alexander  
Att'y

# United States Patent Office.

N. H. LEBBY, OF CHARLESTON, SOUTH CAROLINA.

Letters Patent No. 101,890, dated April 12, 1870.

## IMPROVEMENT IN ORE-WASHING MACHINES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern :

Be it known that I, N. H. LEBBY, of Charleston, in the district of Charleston and State of South Carolina, have invented certain new and useful Improvements in Machines for Washing Ore; and I 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, which form a part of this specification.

The nature of my invention consists in a new and improved method of agitating, circulating, and scouring ore by means of the impinging force of one or more streams of water against the ore in any vessel so formed that each lump of ore is repeatedly brought to or near the entrance of the stream or streams.

It also consists in the construction of the vessel in which the ore is so agitated, circulated, and scoured by the impinging force of one or more streams of water.

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 drawings, in which—

Figure 1 is a side view, and

Figure 2, a bottom view of my washer.

A represents a funnel-shaped vessel, of any suitable dimensions, having a pipe, B, leading into its bottom or lower end.

In the bottom of the vessel A is placed a valve, C, which is opened or closed at will from the outside by means of the lever or handle D.

I do not confine myself to the particular construction shown of the vessel A, as it may be of any form that will allow the circulation of the ore placed in it to be washed.

Into this vessel, through the pipe B, is projected a stream of water, with sufficient force to produce a rapid agitation and circulation of the ore. That portion of

the ore acted on by the pressure and impinging force of the entering stream will ascend, and, as it approaches the top of the vessel, where the force of the current is diminished, will radiate toward the side of the vessel and descend, and be again brought in contact with the entering stream, the operation to be continued, if necessary, until each side or face of every lump of the ore has been subjected to the impinging force and scouring action of the entering stream.

At the top or around the upper part of the vessel A is a strainer, as shown in fig. 1, to prevent the escape of the ore with the water.

When the washing is completed, the ore is discharged by means of the valve C.

I do not confine myself to a single stream of water; several very small streams around a large stream may be used, the small streams to wash the mud out of the holes and crevices in the lumps of ore.

Having thus fully described my invention,

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

1. The method herein described of washing ore by the agitation, circulation, and scouring of the ore by means of the impinging force of one or more streams of water against the ore in any vessel, so formed that each lump of ore is repeatedly brought to or near the entrance of the stream or streams, substantially as set forth.

2. The funnel-shaped vessel A, provided with a strainer at or near the top, and a valve, C, in the bottom, and with one or more pipes conducting one or more streams of water into the vessel, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

N. H. LEBBY.

Witnesses:

WM. H. GIBSON,  
H. A. DUC, Jr.