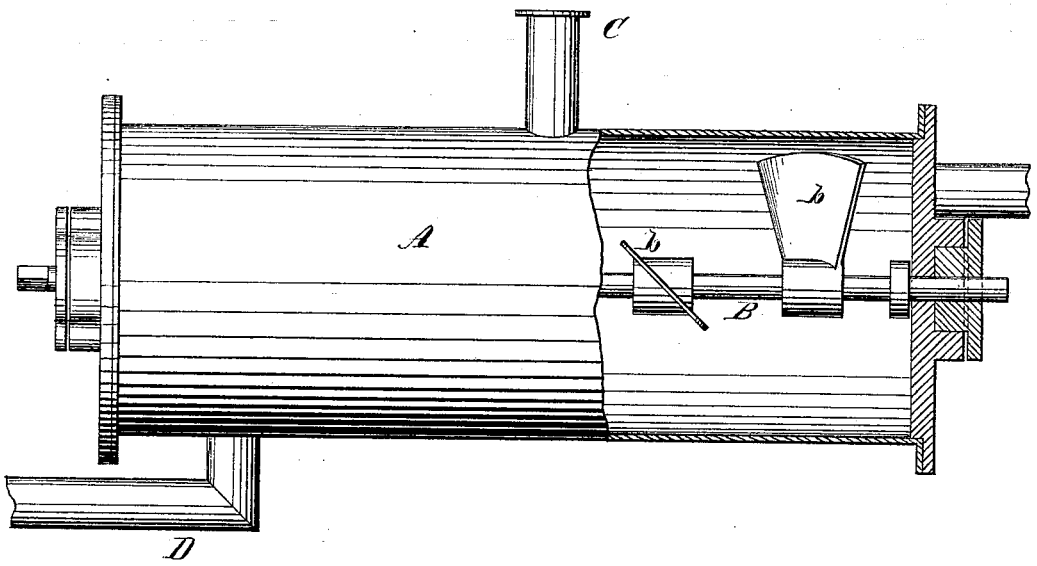
H. GREEN.

Mud Pipe Cleaner.

No. 201,410. Patented March 19, 1878.



WITNESSES:

H. Tydquist

J. H. Scarborough.

INVENTOR:

H. Green.

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HENRY GREEN, OF CHILTON, WISCONSIN, ASSIGNOR TO HIMSELF AND STEPHEN HOXIE JAMES, OF SAME PLACE.

IMPROVEMENT IN MUD-PIPE CLEANERS.

Specification forming part of Letters Patent No. **201,410**, dated March 19, 1878; application filed July 30, 1877.

To all whom it may concern:

Be it known that I, HENRY GREEN, of Chilton, in the county of Calumet and State of Wisconsin, have invented a new and Improved Mud-Pipe Cleaner, of which the following is a specification:

The invention will first be described in connection with the drawing, and then pointed out in the claim.

Referring to the drawing, which is a side elevation, partly in section, A is a mud-pipe similar to those in common use, in the center of which a shaft, B, is placed, which extends through stuffing-boxes *a* in the heads of the mud-pipe, and to which several blades or wings, *b*, are fixed. These blades may project horizontally and upwardly from the shaft when the latter is in its normal position, so that no blades will project in a downward direction, thus removing the liability of the blades becoming embedded in the sediment. These screw-blades are so disposed that when the shaft B is rotated the mud and water in the mud-pipe are thoroughly agitated.

One or both of the projecting ends of the shaft B are squared to receive a crank, by which it is turned.

The mud-pipe is connected with the boiler, in the usual way, by the pipe C, and the boiler is blown off through the pipe D, leading from the lower side of the mud-pipe.

When water is blown out of the boiler the shaft B is rotated, and the mud and sediment are stirred, so that it is carried out of the blow-off, and the mud-pipe is thoroughly cleaned.

I am aware that a revolving shaft having a continuous spiral flange has been located within a boiler-flue for the purpose of cleaning the same; also, that a boiler-tube and mud-drum have been provided with a stuffing-box for the passage of a sliding rod having a spiral flange at one end, which spiral flange fits snugly the bore of the tube, so that by moving the cleaner in a longitudinal direction the incrustation or sediment is scraped from the tube.

My invention is far superior to the above, because I use a series of plates or blades set in such a manner that said blades may project in a horizontal and upward direction from the shaft, but not in a downward direction.

The advantages of this construction are as follows, viz: A continuous spiral, or one fitting the bore of the tube closely, becomes blocked up and embedded in the heavy sediment, so that it cannot be started or moved, while in my invention the blades or flanges are so arranged that while the handle or crank on the shaft thereof hangs down, the flanges stand horizontally and perpendicularly from the shaft, and do not become embedded in the sediment, and by turning the crank each way the mass of sediment at the bottom of the mud-drum can be broken up, and by agitation become mixed in solution with the water, and then forced out by steam.

The gaps or spaces between the flanges are so arranged that there are no flanges on the downward or lower side, and so do not become blocked by sediment, and the crank can be started with sufficient force to break up and pulverize a heavy and hard-packed mass of sediment.

A continuous spiral conveyer interferes with the flow of water from one boiler to the other, when several boilers are supplied from one mud-box. No such result takes place in my case, my broken spiral allowing free circulation of water from one end to the other.

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

The shaft B, having a series of plates or blades, *b*, separated from each other and normally removed from the bottom space of the mud-drum, in combination with the mud-drum A, provided with end stuffing-boxes, and having the inlet-pipe C and blow-off pipe D, as and for the purpose set forth.

HENRY GREEN.

Witnesses:
H. C. FRENCH,
JOHN PAULUS.