

E. & C. Chambers, Jr.
Screw Grinding Machine.

No 101,431.

Patented Apr. 5. 1870.

Fig. 1.

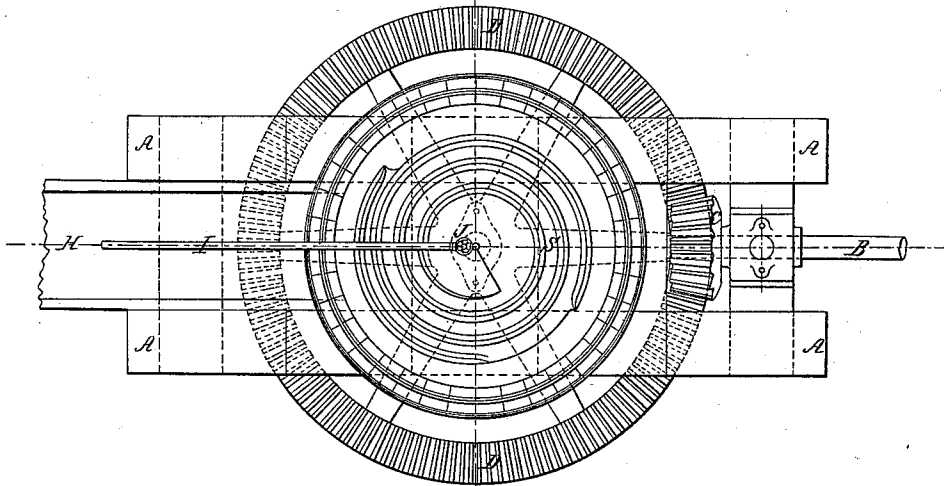
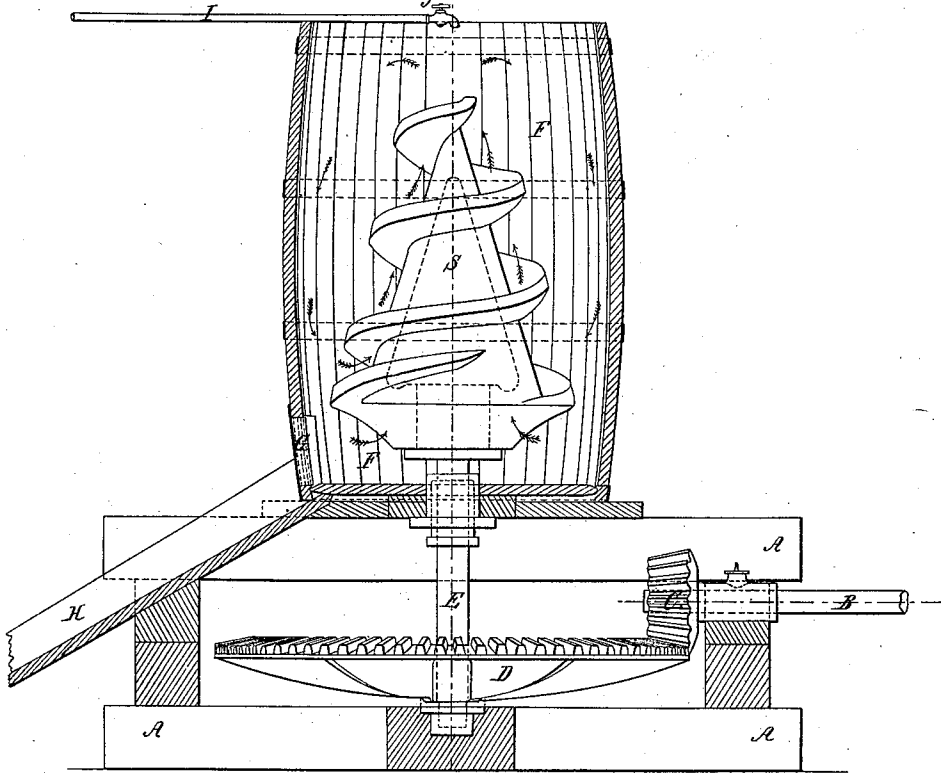


Fig. 2.



Witnesses;
H. Price Davis
Samuel C. Gamberg.

Inventors,
Edwin Chambers
Ernest Chambers Jr.

UNITED STATES PATENT OFFICE.

EDWIN CHAMBERS AND CYRUS CHAMBERS, JR., OF PHILADELPHIA, PA.

IMPROVEMENT IN MACHINES FOR GRINDING SCREWS.

Specification forming part of Letters Patent No. **101,431**, dated April 5, 1870; antedated March 24, 1870.

To all whom it may concern:

Be it known that we, EDWIN CHAMBERS and CYRUS CHAMBERS, Jr., of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Machinery for Grinding and Polishing Screws; and we do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a top view or plan of our machinery or apparatus, and Fig. 2 is a vertical section, some of the parts being in view.

The same letter marks the same part in both figures.

This invention has been devised by us for the purpose of grinding and polishing the large conical screws used in the brick-making machinery patented by Cyrus Chambers, Jr.

It consists in machinery and apparatus for supporting and turning such large conical screws in a reservoir of gravel or other abrading material, and for washing away the sand and iron dust formed by the wearing away of the gravel and screw during the grinding and polishing operation, as hereinafter fully set forth.

In the drawings, A marks a stout frame, which supports a large cask or reservoir, F, in which the large conical screw S is supported and turned. A perforated slide, G, allows the escape into the inclined trough H of the water which is introduced into the top of the reservoir through the pipe I, controlled by the cock J.

B marks the shaft to which the driving-power is applied. On its inner end is the beveled pinion C, which engages with the beveled wheel D, on whose shaft E the screw S is supported and turns.

The operation is as follows: The screw S being fixed upon the upper end of shaft E, the reservoir F is filled with gravel or other abrasive material, and the shaft E is set in rotation. As the screw turns the gravel follows up the threads, and is discharged at the apex, forming a current, as indicated in the arrows. The effect of this operation is to grind and polish the surface of the metal, and to reduce a portion of the gravel to sand. A small stream of water admitted through the pipe I washes out the iron dust and sand, and facilitates the movement of the gravel.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

A machine for grinding and polishing large screws, constructed as set forth, in which the screw is rotated in a reservoir of gravel or other abrading material supplied with a stream of water, as described.

The above specification of our said invention signed and witnessed at Philadelphia this 27th day of July, A. D. 1869.

EDWIN CHAMBERS.
CYRUS CHAMBERS, JR.

Witnesses:

WILLIAM MENDHAM,
THORWALD CHR. DAMBERG.