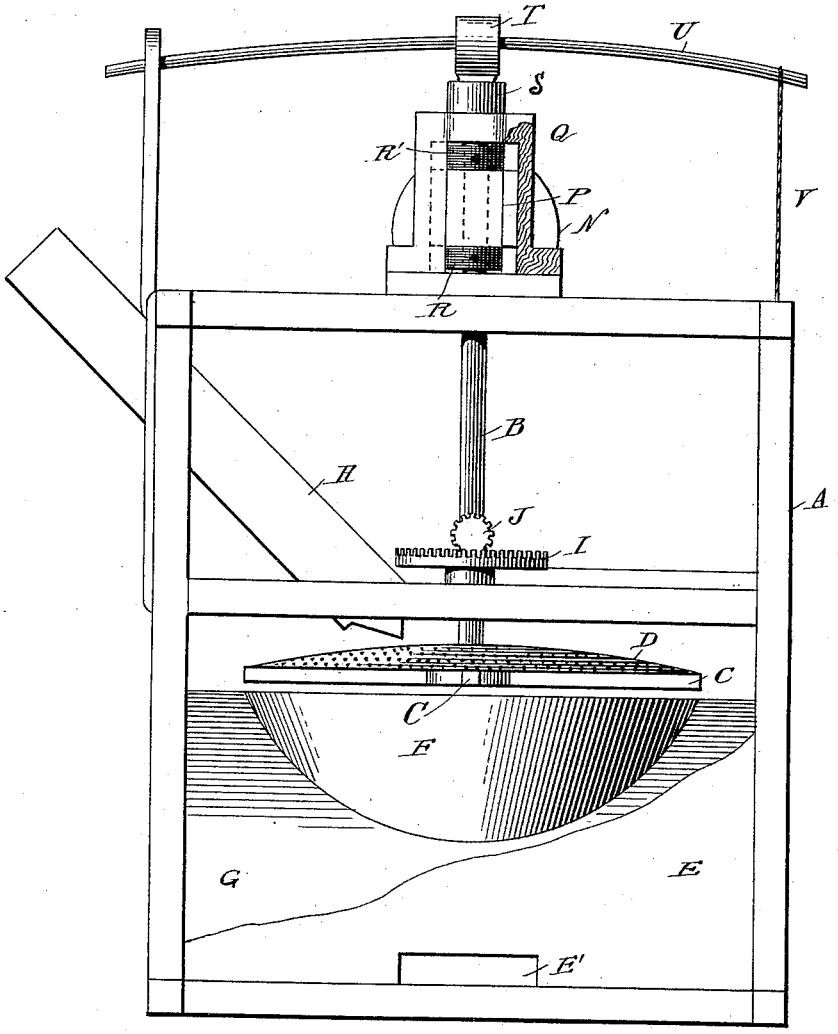
(No Model.) 2 Sheets—Sheet 1.

W. B. HODGSON & T. C. SAFFORD.

ORE JIGGER.

No. 385,515. Patented July 3, 1888.

Fig. 1.



WITNESSES:

J. E. Clark.

C. Sedgwick.

INVENTOR:

W. B. Hodgson.

T. C. Safford.

BY Munn & Co

ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

W. B. HODGSON & T. C. SAFFORD.

ORE JIGGER.

No. 385,515. Patented July 3, 1888.

Fig. 2.

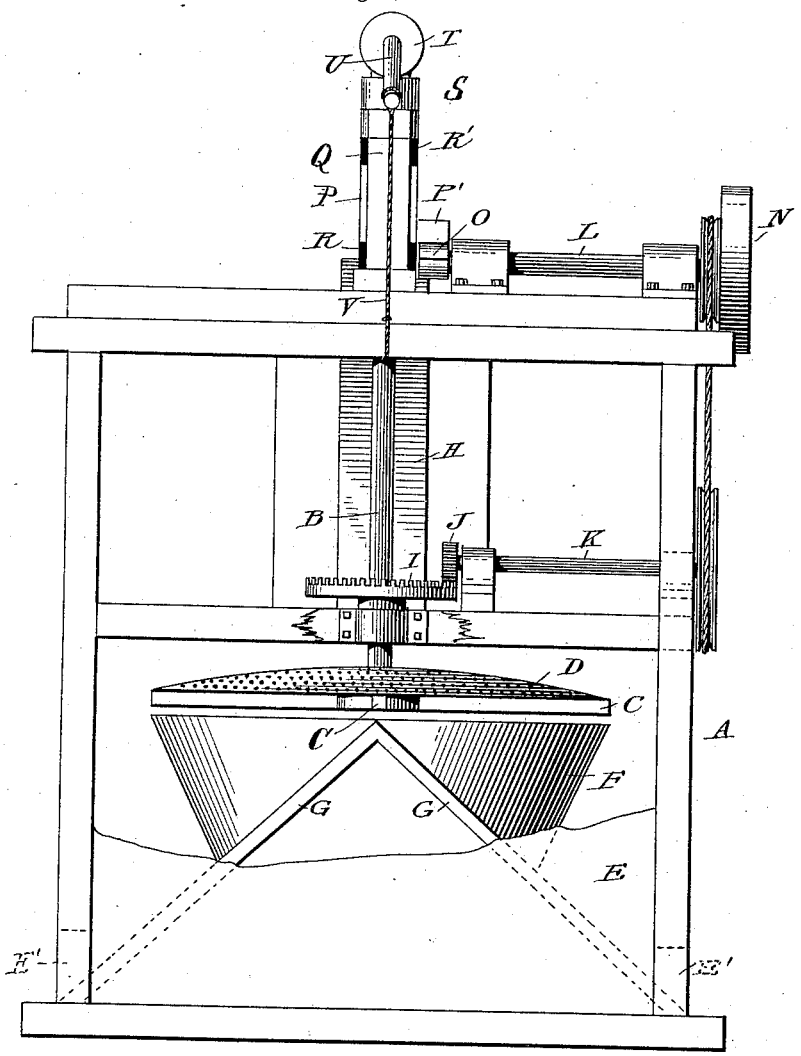
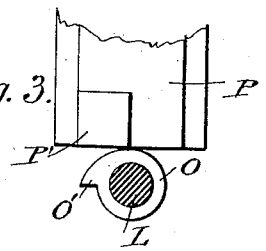


Fig. 3.



WITNESSES:

J. E. Clark.

C. Sedgwick.

INVENTOR:

W. B. Hodgson.

T. C. Safford.

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM B. HODGSON AND TRUMAN C. SAFFORD, OF LYON MOUNTAIN, NEW YORK.

ORE-JIGGER.

SPECIFICATION forming part of Letters Patent No. 385,515, dated July 3, 1888.

Application filed June 11, 1887. Serial No. 241,020. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM B. HODGSON and TRUMAN C. SAFFORD, of Lyon Mountain, in the county of Clinton and State of New York, have invented a new and Improved Ore-Jigger, of which the following is a full, clear, and exact description.

The object of our invention is to provide a new and improved jigging-screen to facilitate the sizing of wet and dry ores or other material.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of our improvement, parts being broken out and others in section. Fig. 2 is an end elevation of the same, parts being broken out; and Fig. 3 is an enlarged end elevation of the means for raising the revolving screen.

On a suitably-constructed frame, A, is mounted to rotate a vertical shaft, B, carrying on its lower end the arms C, supporting on top the convex or conical screen D, which revolves with the shaft B in the casing E, formed on the frame A. The screen D revolves directly over the upper end of the hopper F, secured to the frame A, and said hopper F is provided on two opposite sides with the downwardly-extending inclined boards G, leading to the discharge-openings E', formed in two opposite sides of the casing E. A spout, H, secured to the frame A, delivers the ore to be screened and sized upon the top of the convex or conical screen D.

On the shaft B is held to slide and to rotate the gear-wheel I, meshing into the pinion J, secured to the shaft K, mounted in suitable bearings formed on the main frame A, and connected by pulleys and belts or other means with the shaft L, provided with the pulley N, connected with suitable machinery for imparting motion to our improved jigging-screen. On the inner end of the shaft L is secured a cam, O, provided with one, two, or more steps, O', acting alternately on the foot P', extending from the slide P, held to slide in the bracket Q, secured to the upper part of the frame A. Through the slide P passes loosely the shaft B, on which are adjustably secured above and below said slide the collars R and R', for purpose of adjusting the stroke of the screen.

On the upper end of the shaft B is secured a collar, S, resting on the top of the cross-piece of the bracket Q, and on said collar S presses the collar T, secured to the spring-bar U, fastened by one end on the extension of the frame A and held adjustably at its other end by a cord or chain, V, secured by its lower end to a cross-beam of the frame A. By tightening or slackening said rope or chain V the tension of the spring-bar U is increased or decreased.

The operation is as follows: The ore to be screened or sized is passed into the chute H, which delivers the ore upon the top of the convex or conical screen D, which is set in motion by rotating the shaft L, which transmits its rotary motion to the shaft K, and the latter imparts a rotary motion to the shaft B by the pinion J and the gear-wheel I. The screen D receives an up-and-down motion by means of the cam O, which by its steps O' acts against the foot P' and lifts the slide P, whereby the shaft B is raised as said slide presses against the collar R'. As soon as the step O' passes the foot P', the shaft B and its screen D are forced downward by gravity and by the pressure of the spring-bar U against the collar S of the shaft B. The downward motion of the shaft B and its screen D is very sudden, so that the proper-sized ore held in the perforations of the screen is forced through the same and into the hopper F. The revolving motion of the screen is to distribute the ore or material evenly as it is delivered to the screen through the spout H, and the jigging motion is to cause the material of the proper size to pass through the holes in the screen D into the hopper C, where it is carried away by elevators or chutes, while the material which is larger than the holes in the screen D will pass over the edge of the same and fall upon the inclines G, which deliver them through the openings E' to the outside of the casing A.

Having thus described our invention, what

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

The combination, with the frame, of the vertical rotary shaft journaled therein, the screen D, and the collars R R′ S on the upper part of the shaft above the frame, the bracket Q, and the slide P, through which said shaft freely passes between its collars R R′ within the bracket, the foot P′ at one side of said slide, the shaft having a stepped cam engaging said foot, and the horizontal spring-bar U, having a collar, T, resting on the collar S, and means for adjusting its downward pressure on the shaft, substantially as set forth.

WILLIAM B. HODGSON.
TRUMAN C. SAFFORD.

Witnesses:
EDWARD HALL,
FRED E. SMITH.