

J. SCRIMGEOUR.
Ore-Dressing Apparatus.

No. 150,361.

Patented April 28, 1874.

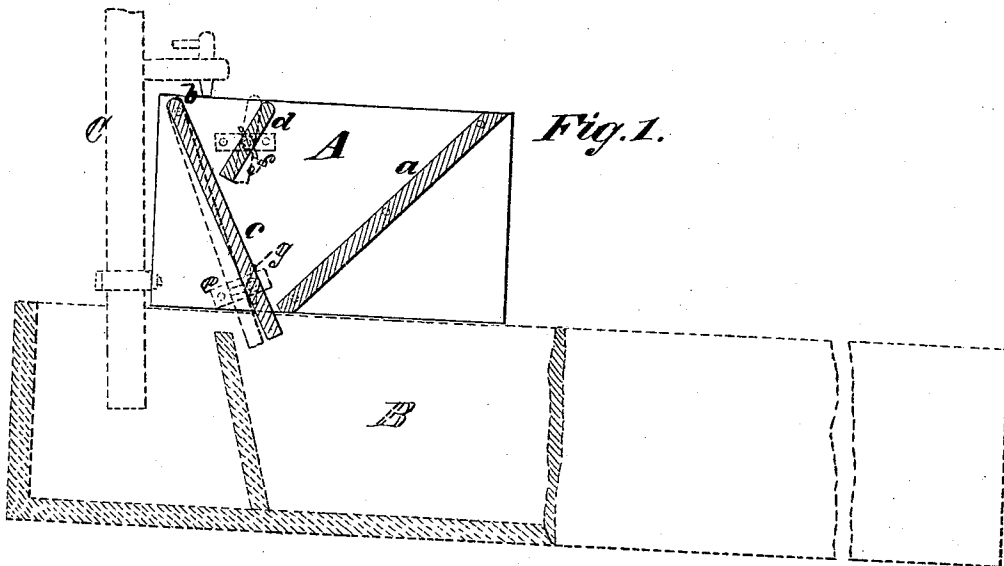


Fig. 2.

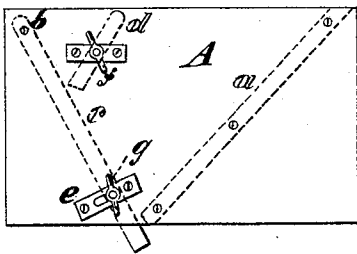
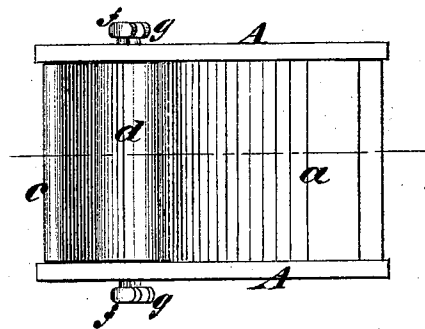


Fig. 3.



Witnesses
John Becker,
Fred. Haynes

James Scrimgeour
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

JAMES SCRIMGEOUR, OF EMMA MINE, ASSIGNOR TO HIMSELF AND GEORGE ATTWOOD, OF SALT LAKE CITY, UTAH TERRITORY.

IMPROVEMENT IN ORE-DRESSING APPARATUS.

Specification forming part of Letters Patent No. **150,361**, dated April 28, 1874; application filed March 17, 1874.

To all whom it may concern:

Be it known that I, JAMES SCRIMGEOUR, of Emma Mine, Little Cottonwood, in the Territory of Utah, have invented an Improved Self-Feeding Hopper for Ore-Dressers, of which the following is a specification:

This invention consists in the combination, as hereinafter described, of a stationary inclined plane, onto which the crushed ore is thrown, an adjustable inclined plane, to regulate the feeding of the ore to the dressing-works, and a small pivoted gate, by which the water-feed to the hopper is spread and evenly distributed. The object of the invention is to increase the working capacity of ore-dressers in general, and decrease manual labor.

In the accompanying drawing, Figure 1 represents a central vertical section of the hopper, the dotted lines indicating the trough with water-supply. Fig. 2 is a side elevation of the hopper, and Fig. 3 a plan view of the same.

Similar letters of reference indicate corresponding parts in all the views.

A A are the side boards of the hopper, having between them the stationary board or plane *a*, inclining to about forty-five degrees, whereon the crushed ore is designed to slide downward. The inclined plane *c* is pivoted near the upper ends of the side boards, at *b*, and made adjustable by thumb-screws *g g* working in slots in the side boards A A, for the purpose of increasing or decreasing the open space between the fixed and movable planes, as shown

in dotted lines in the drawing, in accordance to the finer or coarser grain of the ore to be dressed. This plane is held in an angle of about seventy degrees in the mean. The small board or gate *d* is also pivoted in the center of each end, allowing the same to be swung to or from the adjustable plane *c*, indicated by dotted lines in the drawing. The edge of the gate nearest to the plane is parallel to the same. The pivots may be formed by thumb-screws *f f*, which, when tightened, keep the gate in the desired position. The adjustment of plane *c* and gate *d* can be effectual, however, in different manners. C represents the water-supply pipe for the hopper.

In working the dresser, the crushed ore is thrown onto the plane *a*, on which it slides down to the spout formed by the adjustable plane *c*. The water requisite for carrying the ore into the trough is supplied by pipe C, and evenly spread over the plane *c* by the adjustable gate *d*, causing a continuous and even flow of the ore into the trough.

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

A hopper provided with the stationary inclined plane *a*, the adjustable inclined plane *c*, and the adjustable gate *d*, the whole combined and arranged substantially as described, for the purpose set forth.

JAMES SCRIMGEOUR.

Witnesses:

HANNIBAL WILLIAMS,
H. C. WALLACE.