D. NEVIN.

Ore-Sizing Machine.

No. 167,191. Patented Aug. 31, 1875.

Fig. 1

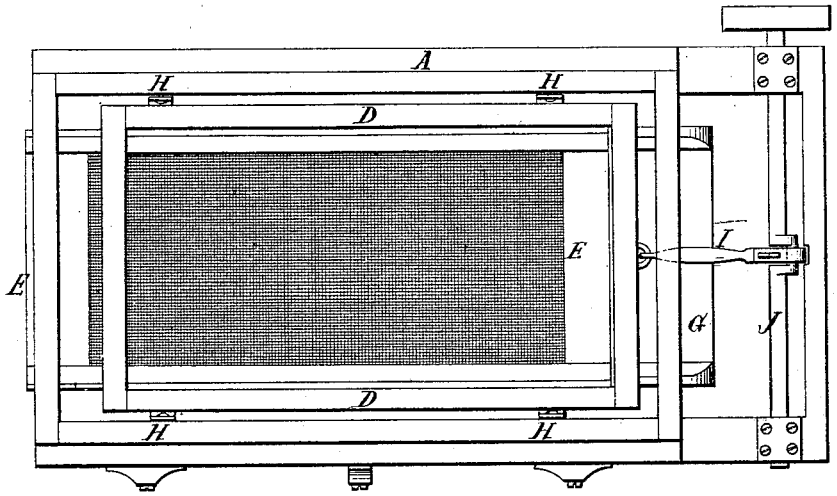
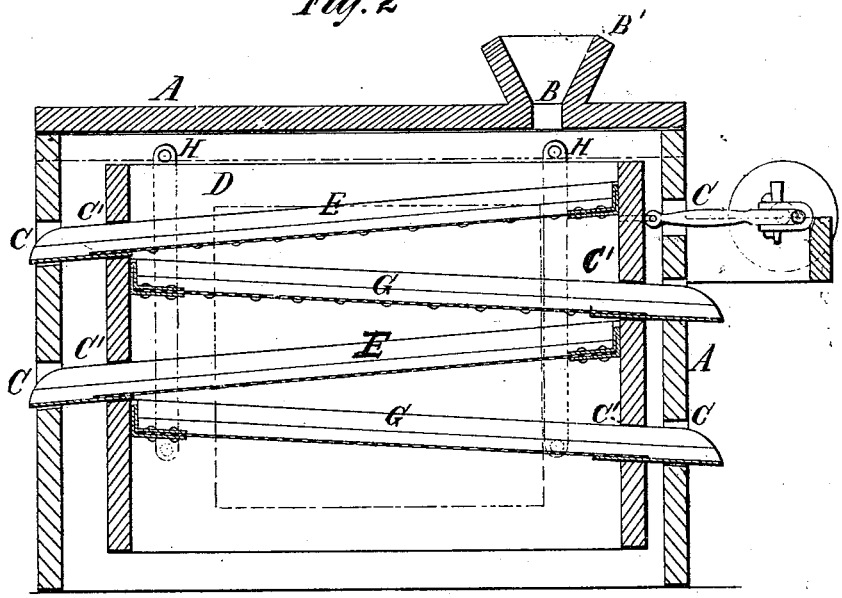


Fig. 2



Witnesses.
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UNITED STATES PATENT OFFICE

DAVID NEVIN, OF GEORGETOWN, COLORADO TERRITORY, ASSIGNOR TO HIMSELF, ROBERT A. NEVIN, AND JAMES OSCAR STEWART, OF SAME PLACE.

IMPROVEMENT IN ORE-SIZING MACHINES.

Specification forming part of Letters Patent No. **167,191**, dated August 31, 1875; application filed August 2, 1875.

To all whom it may concern:

Be it known that I, DAVID NEVIN, of Georgetown, county of Clear Creek and Territory of Colorado, have invented a new and Improved Ore-Sizing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a top view, and Fig. 2 a vertical longitudinal section, of the machine.

The object of my invention is to provide a simple, cheap, and effective machine for use in connection with "concentrating-machines," whereby ore can be assorted or sized in a rapid and perfect manner. The sizing-machines in use have been constructed with revolving screens, and such screens have not been found to answer the purpose intended near as well as the plan which I have invented.

The nature of my invention consists in two or more sieves, with meshes or openings of appropriate sizes, arranged fixedly on a vibrating frame, so as to incline in opposite directions, and have their respective ends extend through the sieve-frame and through an outer supporting-frame. This construction is such that the ore not discharged over the end of the first sieve is discharged through meshes of this sieve upon a second sieve, and caused to move in a reverse direction to that in which it moved when on the first sieve. This construction is also such that the refuse or finer particles of matter are confined and prevented from flying about, and finally pass through the sieves upon the floor or into a receiver.

To enable others skilled in the art to make and use my invention, I will proceed to describe it.

A is an outer frame closed in at top and on all sides, and left open at its bottom, and provided with suitable inlet and outlet openings B and C. The opening B, which is in the top of the frame, is for the introduction of the ore to be sorted or sized, and it is surrounded by a feed-hopper, B′, and the openings C, which are in the ends of the frame, are for the discharge of the sorted or sized ore. D is an interior sieve-frame, open at top and bottom, and provided with flow-passages C′ in its ends. E and G are sieves rigidly fastened within the frame D. The discharge ends of these sieves extend through the flow-passages C′ and discharge-passages C of the two frames A and D, as shown in the drawing. The top sieve E is inclined in one direction, and the sieve directly under it in an opposite direction. The meshes or openings of the respective sieves will be graduated in size to suit the requirements of the operator. The sieve-frame D, with its sieves, is suspended within the frame A by means of pendulous straps H. This frame is also connected to a pitman, I, of a revolving crank-shaft, J, which is mounted on the frame A, and by means of said shaft and pitman the frame D, with both sieves, is reciprocated within said frame A.

The ore is passed through the hopper upon the first sieve, and the finer portions pass through and fall upon the second sieve. The two sizes of ore pass off in different directions through flow-passages C′ of frame D, and through discharge-openings C of frame A into proper receivers. The refuse falls upon the floor or into a receiver.

In the drawings two sets of sieves are shown, and the second set works precisely the same as the first. The number of sets may be increased, as described. Three sieves might be used instead of four, or any other unequal number above three.

What I claim is—

Two or more reversely-inclined ore-sizing sieves, partly inclosed in frames A and D, one of which frames is stationary, and the other reciprocating, substantially as and for the purpose set forth.

DAVID NEVIN.

Witnesses:

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