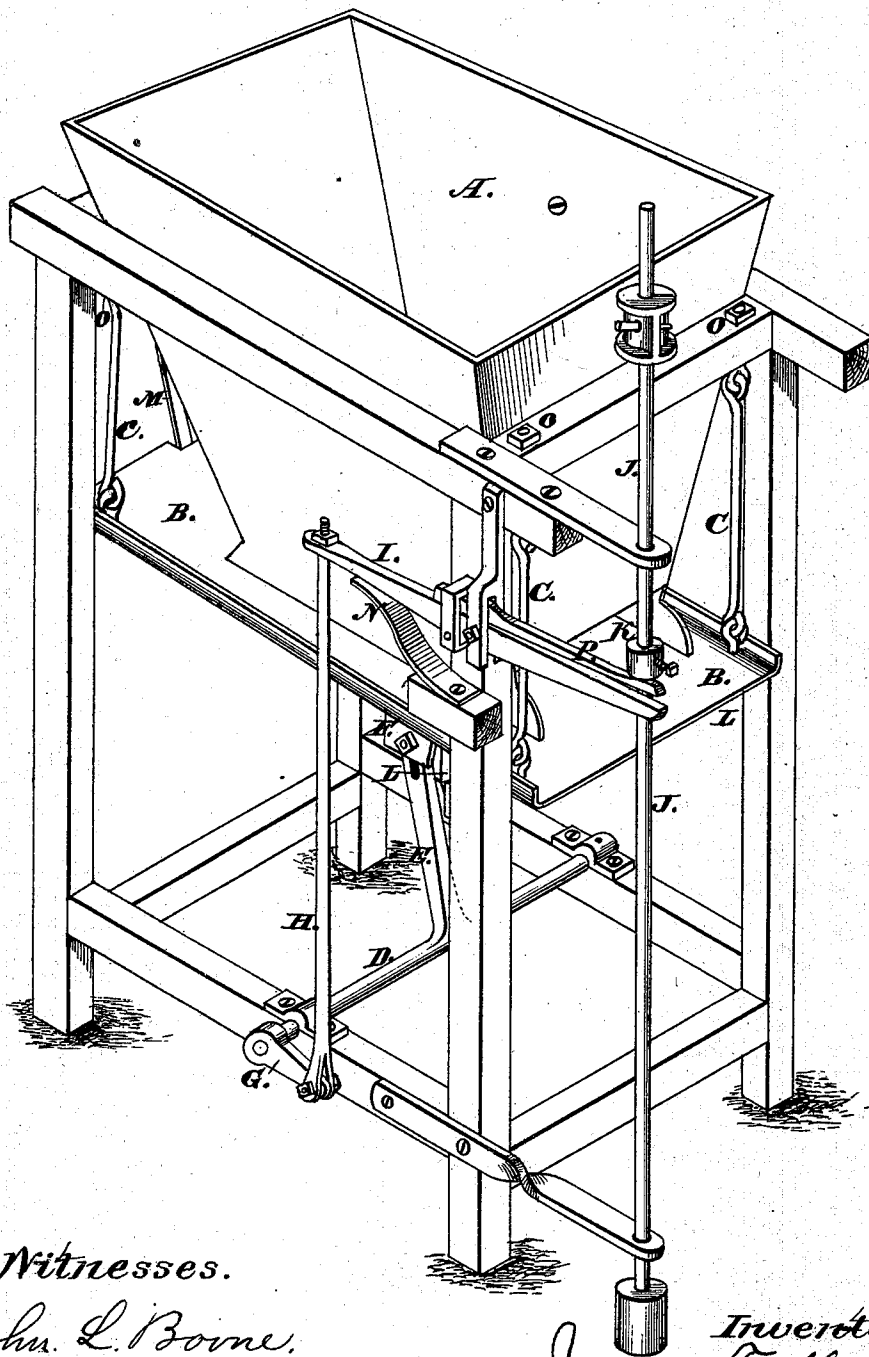


J. TULLOCK.
Ore-Stamp Feeders.

No. 144,714.

Patented Nov. 18, 1873.



Witnesses.
John L. Boorne.
Chas. Richardson.

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Attys.

UNITED STATES PATENT OFFICE.

JAMES TULLOCK, OF JAMESTOWN, CALIFORNIA.

IMPROVEMENT IN ORE-STAMP FEEDERS.

Specification forming part of Letters Patent No. 144,714, dated November 18, 1873; application filed September 2, 1873.

To all whom it may concern:

Be it known that I, JAMES TULLOCK, of Jamestown, Tuolumne county, State of California, have invented a Feeder for Crushing-Mills; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement without further invention or experiment.

My invention relates to an improved device for feeding ore or other substances to crushing-mills; and it consists in the use of a tray placed beneath a hopper from which it receives the ore. This tray is suspended by links, and is given a vibrating movement by means of a rock-shaft and arm, and an intervening mechanism which connects the rock-shaft with the stamp-stem. The tray is stopped abruptly at the end of each forward vibration by concussion against a stationary block or bar, so that all trouble by the sticking of damp or wet ore is avoided.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is an elevation of my feeder in perspective.

A is an ore-hopper supported by a suitable frame-work. Beneath this hopper is the tray B, which receives the ore from the hopper as fast as may be desired, a suitable regulating-gate being employed. The tray B is inclined as much as may be desired, and is suspended by the links C from the frame O, so that it can receive an oscillating motion forward and back. Beneath the tray a rock-shaft, D, crosses the frame transversely, and an arm, E, extends upward, and is secured by a pin passing through the lugs F on the bottom of the tray and through the slotted upper end of the arm E. The end of the shaft D has a crank, G, formed upon it, and from this crank the rod H connects with one end of a lever-arm, I. This lever is pivoted near its middle to the frame,

and the other end extends to a point near the stamp-stem J. An adjustable collar, K, is secured to the stem J, and whenever the stamp falls this collar will strike the end of the lever, and through the connecting-rod H the rock-shaft will be operated so as to draw the tray back. When the stamp is again raised, the tray will be allowed to swing forward until the lugs F strike a bar or post, L, which will abruptly stop the tray, and thus tend to loosen and throw forward its contents, this feature being especially valuable when the ore is wet. A spring, M, may be employed behind the tray to assist its forward motion, and a spring, N, can be employed beneath the end of the lever I, but ordinarily the force of gravitation will be sufficient to operate these parts.

If desired, a spring, P, can be placed upon the end of the lever which is struck by the collar K, so as to relieve the strain and transmit the force gradually. Suitable adjusting-screws, to regulate the movements of the different parts and the amount of ore beneath the stamp, will regulate the amount fed.

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

1. The oscillating tray B, supported by the links C, and operated by the shaft D, with its rocker-arm E and crank G, together with the lever I, the whole operated from the stem J by means of the adjustable collar K, substantially as and for the purpose described.

2. In combination with the oscillating tray B, operated as herein shown, the post or bar L for giving a concussive or abrupt stop to the tray, substantially as and for the purpose described.

In witness whereof I hereunto set my hand and seal.

JAMES TULLOCK. [L. S.]

Witnesses:

J. Y. DIXON,
WM. D. NEWTON.