

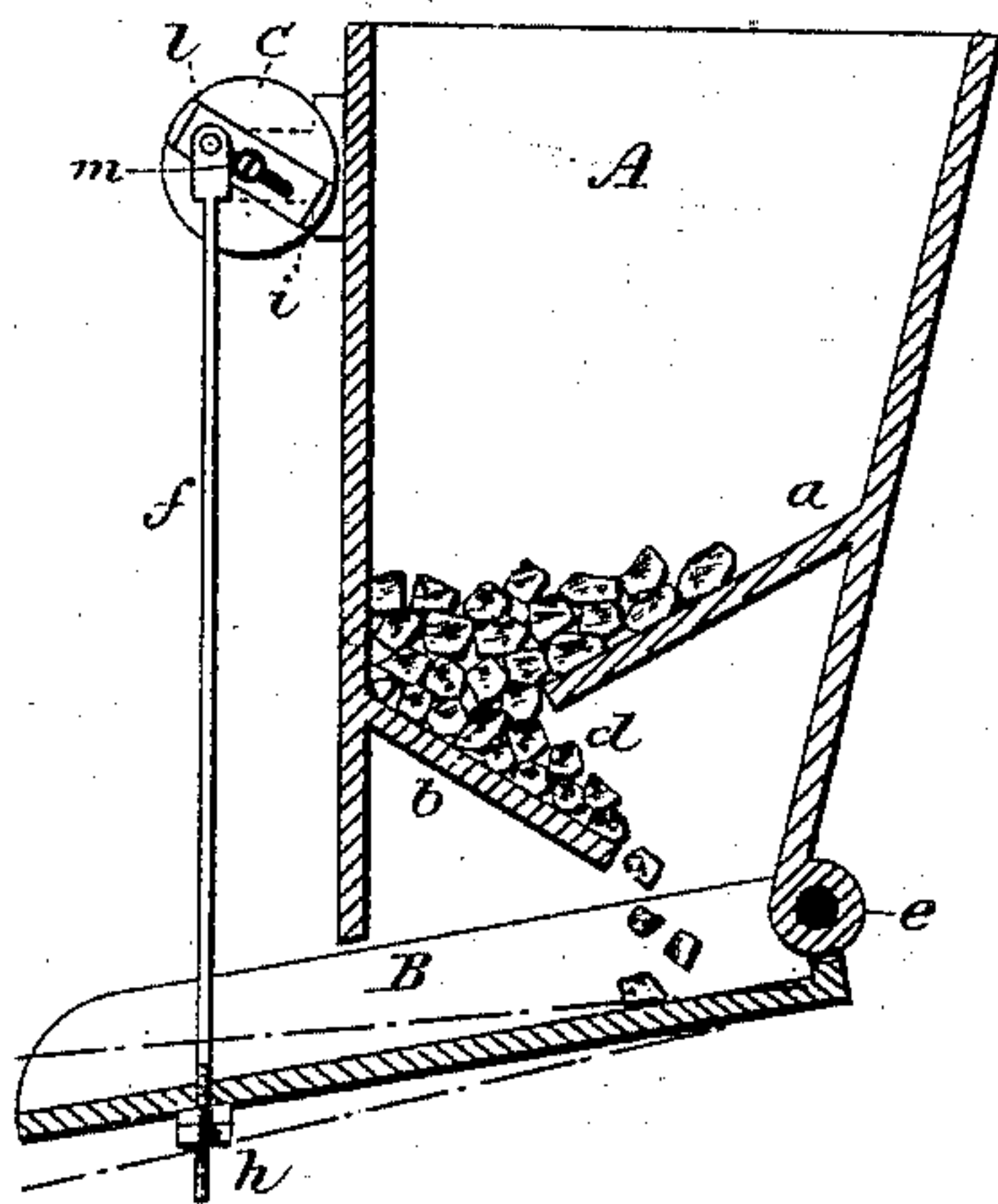
(No Model.)

T. A. BLAKE.

FEED MECHANISM FOR ORE CRUSHERS.

No. 277,666.

Patented May 15, 1883.



Witnesses.
J. H. Shumway
Joe D. Earle

Theo. A. Blake
Inventor.
By atty.
John A. Earle

UNITED STATES PATENT OFFICE.

THEODORE A. BLAKE, OF NEW HAVEN, CONNECTICUT.

FEED MECHANISM FOR ORE-CRUSHERS.

SPECIFICATION forming part of Letters Patent No. 277,666, dated May 15, 1883.

Application filed March 16, 1883. (No model.)

To all whom it may concern:

Be it known that I, THEODORE A. BLAKE, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Feed Mechanisms for Ore-Crushers; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents a vertical central section through the hopper and feed-spout.

This invention relates to a device for feeding broken ore to crushers or other grinding devices, the object being to produce a regulated feed, by which the weight of the material in the hopper shall be to a considerable extent taken from the delivering or regulating spout; and it consists in a hopper having horizontally-inclined partitions extending from opposite sides, with a passage between the partitions, said partitions serving to support the weight, combined with an automatically-vibrating delivery-trough, upon which the ore will be delivered, the said delivery-trough being made adjustable as to inclination, as more fully hereinafter described and claimed.

A represents the hopper, which may be of any desirable form, preferably so that ore may be dumped into it at the top. Near the bottom is a horizontal inclined partition, *a*, extending from one side, say, to a little beyond the center. Below this and from the opposite side is a like partition, *b*, reversely inclined, so that ore introduced from above will fall upon said partitions and must pass out between the two partitions, as at *d*, these partitions forming a support for the body of the ore above.

Below or at the bottom of the hopper is the delivery-spout B. This is hinged, as at *e*, so as to swing upon said hinge. To this spout an up-and-down vibratory movement is imparted by means of an adjustable crank-wheel, C, from a crank-pin, where the connecting-rod *f*, ex-

tends down to the spout, and is attached to the spout by an adjustable device, (here represented as nuts *h*, screwed onto the end of the rod upon the under side of the spout.)

Revolution is imparted to the crank-wheel C by the application of power thereto in any known or convenient manner. Such revolution of the crank imparts to the spout B an up-and-down vibratory movement, as indicated in broken lines. The ore is delivered onto the feed-spout as it falls from the lower partition, and because of the shaking or vibratory movement of the spout it passes down over the spout and is delivered to the grinding apparatus. The ore being supported by the partitions *a b* above, the mass of ore in the hopper does not require to be lifted by the spout B, as it would do were the partitions *a b* omitted, and thus a freedom is given to the passage of the ore and little power required to impart the requisite vibration to the spout.

To adjust the inclination of the spout it is only necessary to run the end up or down on the rod *f*, accordingly as inclination is required to be less or greater.

The crank-pin is made adjustable by making a diametrical slide, *i*, across the face of the crank-wheel C, and by fixing the crank-pin *l* to that slide the latter will be adjustable diametrically, so as to be secured by a set-screw, *m*, or otherwise, to bring the crank-pin at any desired distance from the center, whereby a greater or less extent of vibration may be given to the spout B.

I claim—

The combination of the hopper A, provided with the inclined partitions *a b*, the feed-spout B, and mechanism, substantially such as described, for imparting vibratory movement to said spout, said mechanism being made adjustable, substantially as described.

THEODORE A. BLAKE.

Witnesses:

JOS. C. EARLE,
J. H. SHUMWAY.