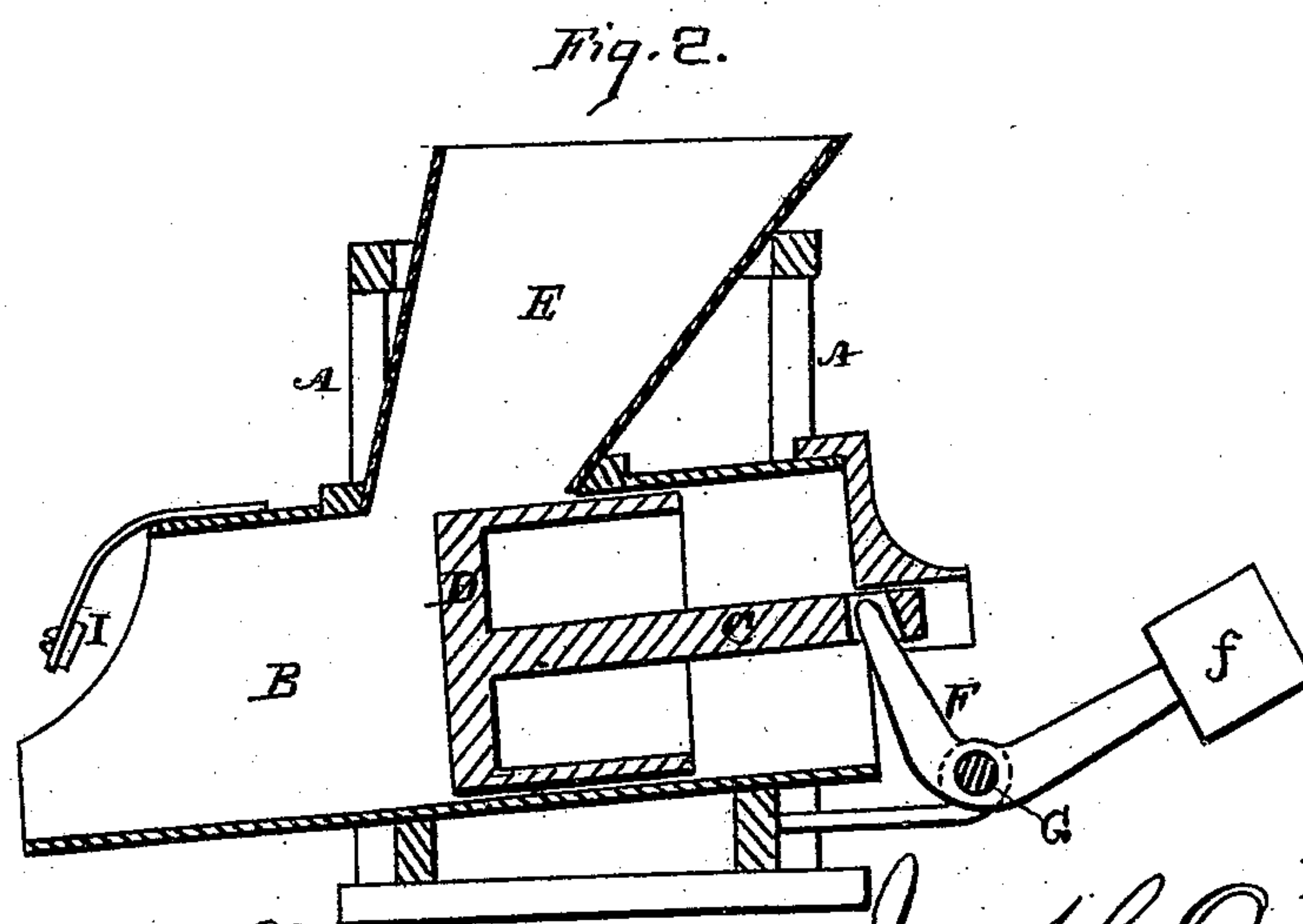
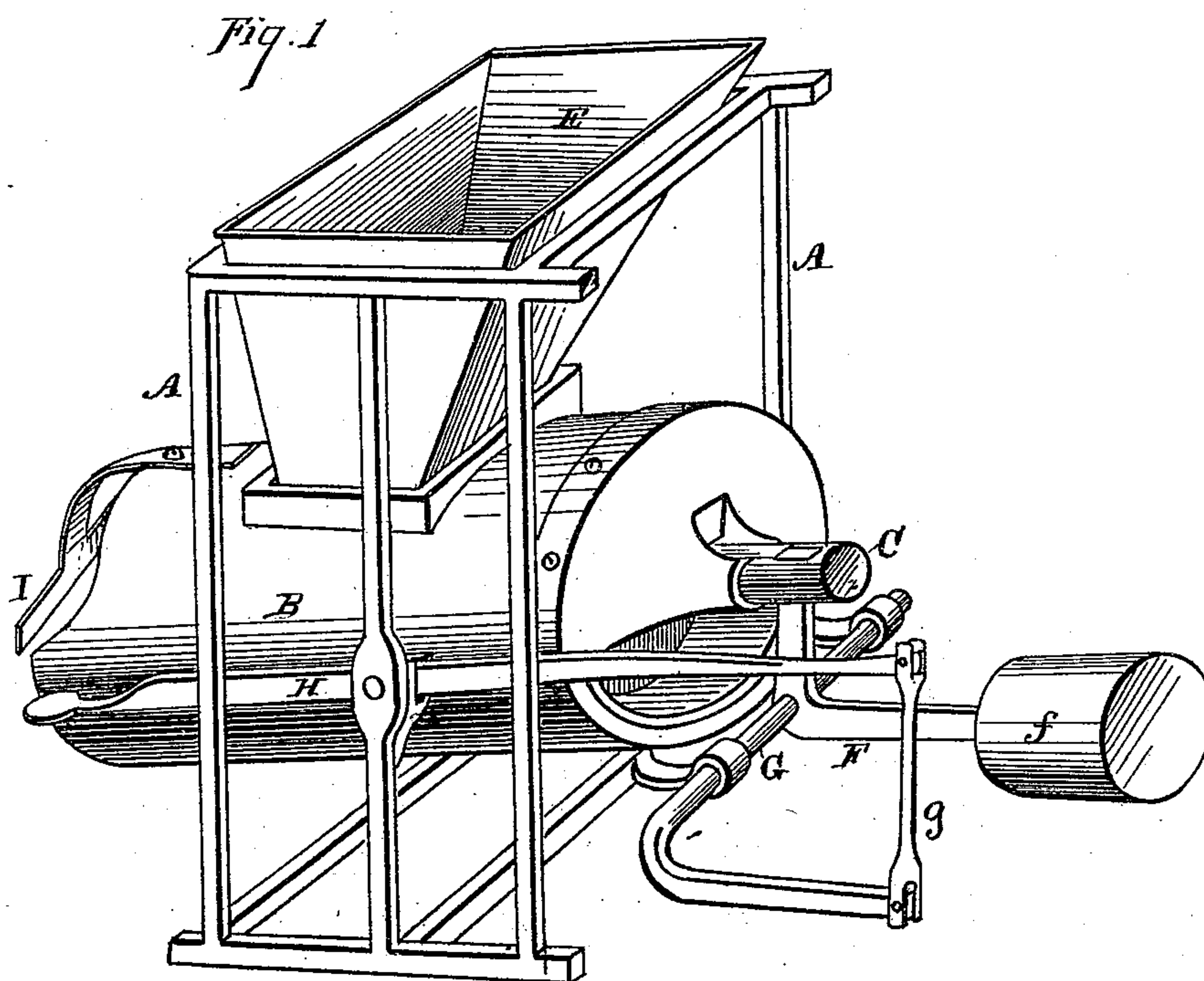


J. O. MORTZ.
Ore Feeder for Crushing Mills.

No. 229,903.

Patented July 13, 1880.



Witnesses

Frank A. Brooks
J. H. House

Inventor

Joseph O. Mortz
By Dewey & Co.
Atty

UNITED STATES PATENT OFFICE.

JOSEPH O. MORTZ, OF SAN FRANCISCO, CAL., ASSIGNOR OF ONE-HALF OF HIS RIGHT TO LEONARD GOSS AND HORACE ADAMS, OF SAME PLACE.

ORE-FEEDER FOR CRUSHING-MILLS.

SPECIFICATION forming part of Letters Patent No. 229,903, dated July 13, 1880.

Application filed November 21, 1879.

To all whom it may concern:

Be it known that I, JOSEPH O. MORTZ, of the city and county of San Francisco, and State of California, have invented an Ore-Feeder for Crushing-Mills; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to certain improvements in ore-feeders for quartz-mills; and my improvements consist in providing a cylinder or conveyer in which is a piston or plunger placed below a hopper, and so connected with an operating-lever and weight or spring that the action of the stamp and operating-lever will cause a reciprocating motion of the plunger which will feed the ore forward to the battery by a direct action, in combination with a spring check-bar, by which lumps or masses of ore are retained and prevented from falling suddenly into the battery, as is more fully described in the accompanying drawings, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is a vertical section.

On a suitable frame, A, is mounted a cylinder, B, one end of which is open, as shown, the rear end having a head, through which projects the rod C, carrying the piston D.

An opening is formed in the upper central portion of the cylinder, into which projects the lower end of the hopper E, through which the ore from the rock-breaker is fed to the cylinder of the ore-feeder.

A bell-crank lever, F, having a weight, *f*, connects with the rear end of the piston-rod C, and is fastened on the rock-shaft G, the crank of which is connected by a link, *g*, with the operating-lever H, as shown. This operating-lever is so placed that the tappet on one of the stamp-stems will come in contact with its end at each drop. As the outer end of this lever H is forced down by the tappet of the stamp-stem the bell-crank lever pushes the piston forward, which, in turn, forces forward the body of ore in the cylinder B. As the lever H is released the weight or spring on the lever F draws the piston back. A certain portion of the ore in the hopper can then fall into the cylinder in front of the piston.

Across the front open end of the cylinder or conveyer is placed a check-bar, I, the object of which is to prevent any mass of ore from dropping suddenly into the battery.

While working, the cylinder will remain

nearly full at all times, each accession of ore dropping in behind that already in, and the forward part of the mass falling off into the mortars.

When the ore is damp it will stick together more or less, and were it not for the check-bar more than is wanted might fall out of the cylinder at one time. The check-bar will prevent any mass falling into the mortar, and only that at the bottom of the cylinder will be pushed out by the piston.

The whole body of ore in the cylinder is moved forward at once; but the natural slope of said ore is such that only a certain proportion at a time of that at the lower front of the cylinder will fall.

The ore is entirely inclosed and confined in the cylinder, and the action is such that the feed is direct, and there is no chance for the ore to spread.

The cylinder will admit of the ore being fed for any required distance, and it will not be necessary to put the feeder immediately in front of the battery.

The ore-carrying conveyer (represented by the cylinder) need not be round, but may be oblong, or any desired shape in which a plunger or piston may be operated.

This machine will feed directly, and the amount may be regulated by the operating-lever in any of the ordinary methods. It will feed dry or wet ore equally well.

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

1. The ore-conveying cylinder B, provided with a piston, D, and piston-rod C, connected by a weighted or spring bell-crank lever, F, with the rock-shaft G, in combination with the operating-lever H, the stem of a stamp-mill, and a feeding-hopper, E, substantially as herein described.

2. In combination with the ore-conveying cylinder B, with its piston D connected with the operating-lever H, the spring check-bar I across the opening of the conveyer, whereby masses of ore are prevented from falling from the conveyer, substantially as herein described.

In witness whereof I have hereunto set my hand.

Witnesses: JOSEPH O. MORTZ.
FRANK A. BROOKS,
S. H. NOURSE.