

I. B. HAMMOND.
Ore-Feeder for Stamp-Mills.

No. 223,906.

Patented Jan. 27, 1880.

Fig. 1.

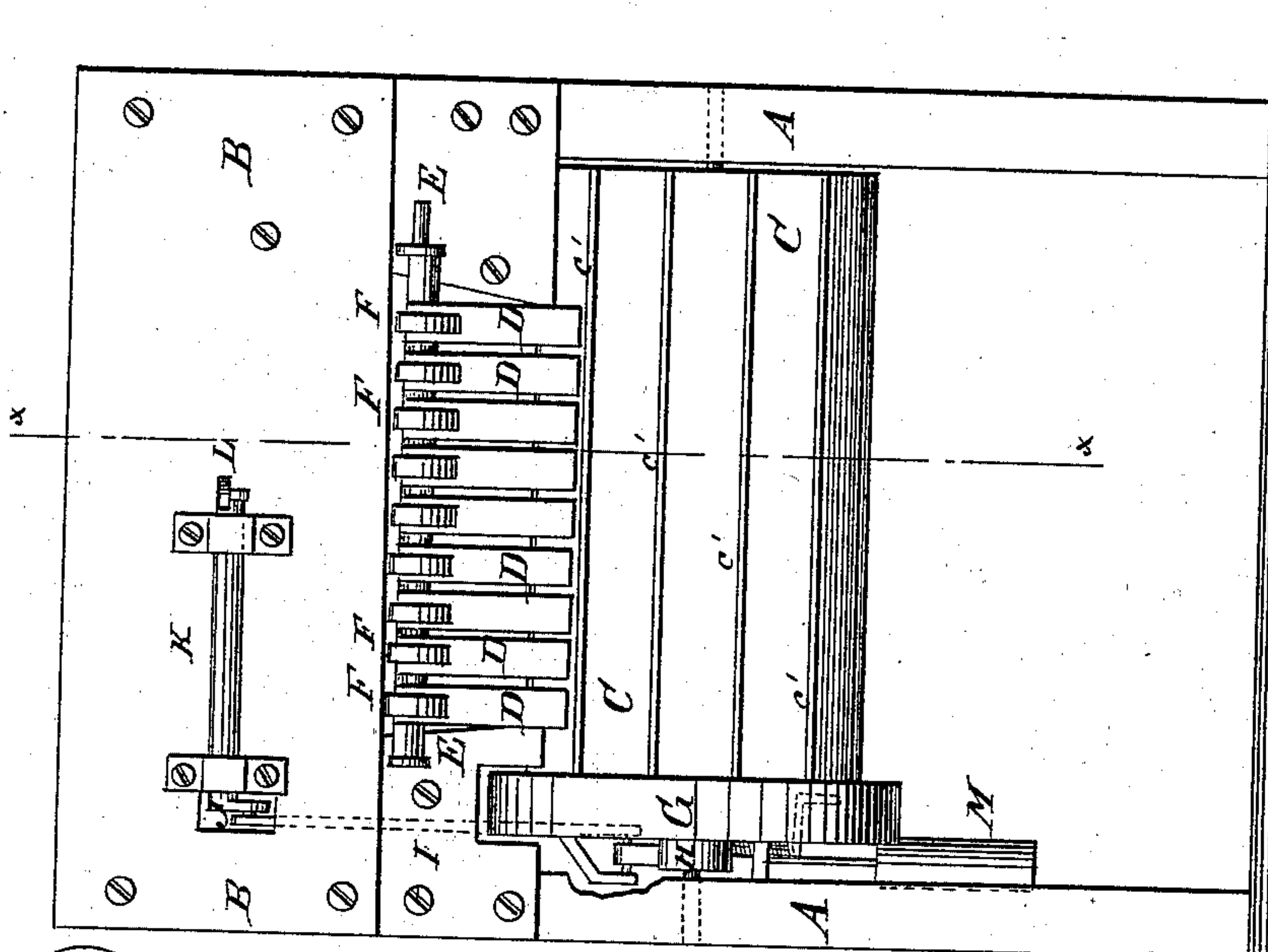
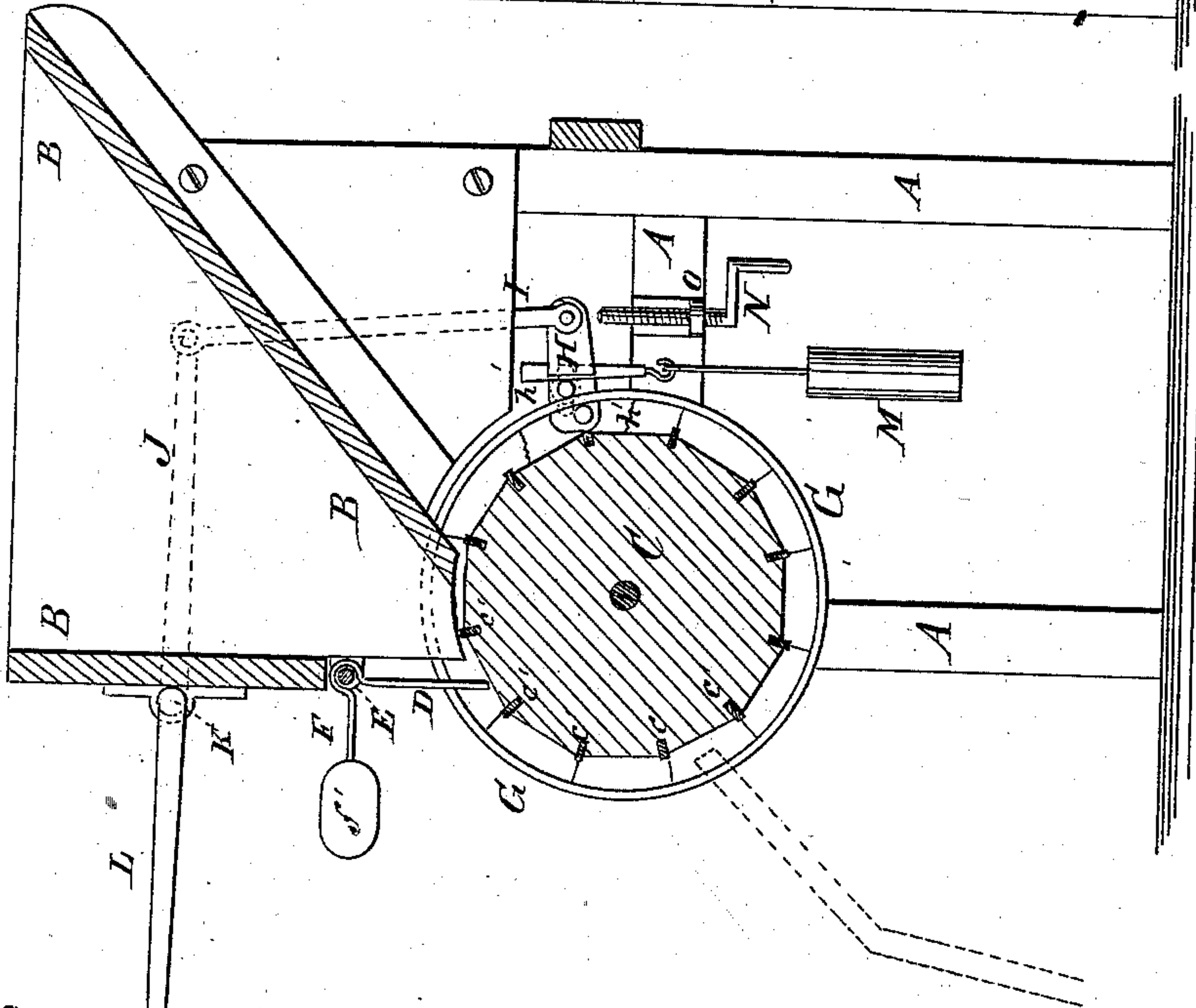


Fig. 2.



WITNESSES:

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ISAAC B. HAMMOND, OF DEADWOOD, DAKOTA TERRITORY.

ORE-FEEDER FOR STAMP-MILLS.

SPECIFICATION forming part of Letters Patent No. 223,906, dated January 27, 1880.

Application filed April 11, 1879.

To all whom it may concern:

Be it known that I, ISAAC BARTON HAMMOND, of Deadwood, in the county of Lawrence and Territory of Dakota, have invented
5 a new and useful Improvement in Ore-Feeders for Stamp-Mills, of which the following is a specification.

Figure 1 is a front view of my improved feeder. Fig. 2 is a vertical section of the same,
10 taken through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine which shall be so constructed as to feed the ore to the mortars as
15 it is required automatically, and which may be adjusted to feed more or less ore, as required.

The invention consists in the combination
20 of a band on the cylinder, a vibratory clutch-block having pins, and a slot in which works a shoulder-pin, all as hereinafter described.

A represents the frame, and B the hopper of the feeder. C is a polygonal cylinder, the
25 surface of which forms the bottom of the hopper B, and its journals revolve in bearings attached to the frame A. In the cylinder C, at the angles between its sides, are inserted iron
30 ribs *c'*, to prevent the said angles from wearing down and making the polygonal cylinder cylindrical.

D are fingers pivoted to a rod, E, attached to the forward side of the hopper B in such a position that the fingers D may close the discharge-opening of the said hopper.
35

Upon the upper ends of the fingers D are formed outwardly-projecting arms F, which are provided with weights *f'*, formed upon or attached to them, sufficient to keep the ore in
40 the hopper B, except as it is carried out by the polygonal cylinder C. The weights *f'* may be replaced by equivalent springs, if desired.

To the end of the polygonal cylinder C is attached a band, G, upon the opposite sides
45 of the edge of which are placed two clutch-pins, *h'*.

The clutch-pins *h'* are attached to a clutch-block, H, and the rear or shoulder pin is placed in a slot in the said block, where it is
50 supported by a key, so that it may be set forward when desired to take up the wear.

The rear end of the clutch-block H is pivoted to the lower end of a rod, I, the upper end of which is pivoted to the rear end of the
55 arm J, the forward end of which is attached

to or formed upon the outer end of a shaft, K. The shaft K rocks in bearings attached to the forward side of the hopper B, and to its inner end is attached, or upon it is formed, an arm, L, which projects forward into such a position
60 that its forward end, or a rod attached to or resting upon its forward end, may be struck by the tappet of the stamp-stem to cause the clutch H *h'* to clamp the band G and turn the polygonal cylinder forward to feed the ore to
65 the mill.

The arms J L and rock-shaft K form a bent lever, and are so arranged that it will not be struck and operated by the tappet of the stamp-stem while there is sufficient ore in the
70 mortars; but when the ore gets low in the mortars the stamps will descend lower, and will operate the cylinder C to feed more ore into the said mortars, so that they will be supplied with ore automatically, as required, and
75 will thus be kept from becoming clogged.

The clutch H *h'* may be so formed as to grasp both edges of the band G, and from it is suspended a weight, M, to draw it down when the arm L is released from the tappet
80 of the stamp-stem, so that it will be ready to again turn the cylinder C when required.

If desired, the polygonal cylinder C *c'* and the weighted fingers D F *f'* may be replaced by some other feeding device—as, for instance,
85 with a revolving disk or an endless belt; but the device herein described is preferred.

N is a crank or hand-screw working in a nut, O, attached to the frame A in such a position that the forward end of the said screw
90 may be directly below the clutch-block H, so that by adjusting the said screw the downward movement of the clutch may be regulated as desired, to regulate the amount of movement of the polygonal cylinder C *c'* as it
95 is fed forward, and thus regulate the amount of ore fed to the stamp-mill at each movement of the said cylinder.

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

The combination, with band G on cylinder C, of the vibratory weighted clutch-block H, having pins *h'*, and a slot in which the shoulder-pin works, as shown, and for the purpose
105 specified.

ISAAC B. HAMMOND.

Witnesses:

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