J. M. McFARLAND.
Stamp Mill.

No. 201,692. Patented March 26, 1878.

Fig. 1.

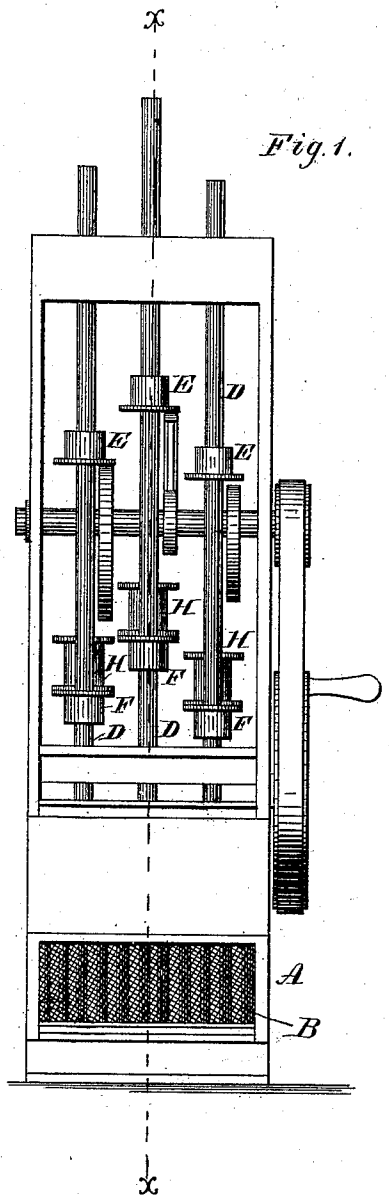
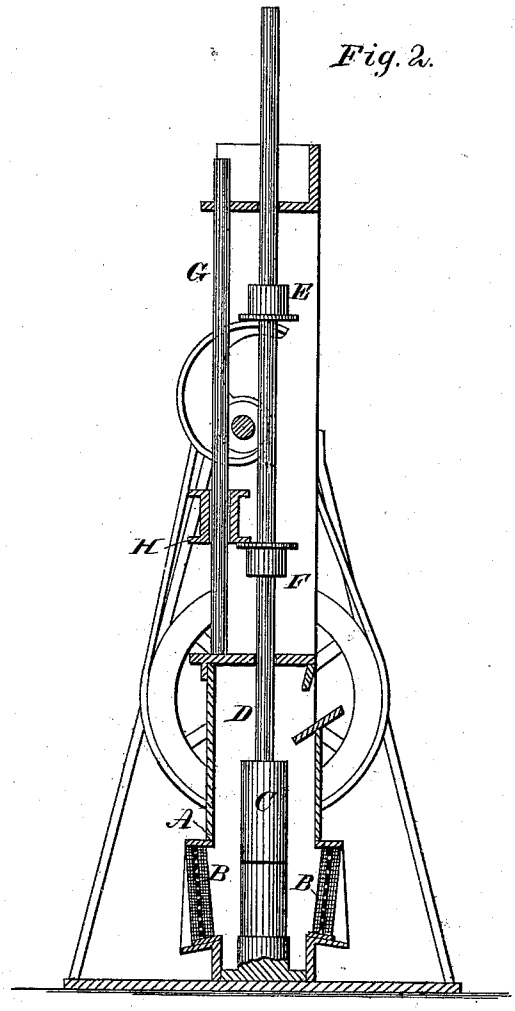


Fig. 2.



WITNESSES:

Henry N. Miller
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INVENTOR:

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UNITED STATES PATENT OFFICE.

JAMES M. McFARLAND, OF VIRGINIA CITY, NEVADA.

IMPROVEMENT IN STAMP-MILLS.

Specification forming part of Letters Patent No. **201,692**, dated March 26, 1878; application filed December 26, 1877.

To all whom it may concern:

Be it known that I, JAMES MAXEY McFARLAND, of Virginia City, in the county of Storey and State of Nevada, have invented a new and Improved Stamp-Mill, of which the following is a specification:

Figure 1 is a front elevation of my improved stamp-mill. Fig. 2 is a vertical section taken on line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention relates to stamp-mills for crushing ore; and it consists in auxiliary tappets placed on the stamp-stems below the cams, and in double-faced loose tappets or weights placed on guide-rods behind and parallel to the stamp-stems, said loose tappets being arranged in such relation to the cams and lower tappets on the stamp-stems as to be engaged by the cams and give additional impetus to the stamp on its downward stroke when the stamp is run above the usual number of strokes per minute.

The invention also consists in a corrugated screen, through which the crushed material escapes from the mortar, the area of the perforated surface being increased by the corrugations.

Referring to the drawing, A is a mortar of the usual description, except that it is adapted to the corrugated screens B. The corrugations of these screens run in a vertical direction. By means of this construction the capacity of the screen is greatly increased.

The stamps C are attached to stems D in the usual way, and the stamp-stems are provided with the tappets E, and also with an auxiliary tappet, F, which is placed below the cam-shaft.

Behind each stamp-stem a guide-rod, G, is secured in the battery-frame parallel to the stamp-stem. Upon each of these guide-rods a double-faced tappet, H, is placed, and may be moved longitudinally on the rods. These tappets overlap and rest upon the lower tappets F, and are engaged by the cams on the cam-shaft as the stamps drop, thus increasing the rapidity and force of the stroke, and at the same time causing the stamp to rotate in the same direction when it drops as it does when it is raised by the cam.

When the stamp is run at a minimum rate of speed, the loose tappets are not engaged by the cams, and act, in this instance, as sliding weights for increasing the force of the blows of the stamps.

Thus it may be said that when the mill is run at the usual speed it operates in the same manner as mills of ordinary construction; but when the speed of the cam-shaft is increased the cams engage the auxiliary tappets, and give an impetus to the stamps.

The corrugations of the screen increase its capacity, so that the sands are freely discharged from the mortar.

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

1. In a stamp-mill, the combination of an auxiliary sliding tappet or weight and a guide-rod for the same with the ordinary cam-shaft and the stamp-stem, as herein shown and described.

2. The combination, in a stamp-mill, of the guide-rod G, tappet H, and stamp-stem D, having fixed tappet F, as herein shown and described.

3. A corrugated-metal screen for the mortars of stamp-mills, as herein specified.

JAMES MAXEY McFARLAND.

Witnesses:
JOHN MONSON,
LOUIS SCHNEIDER.