J. WALKER.

Stamp-Mill Feeder.

No. 167,042. Patented Aug. 24, 1875.

Fig: 1.

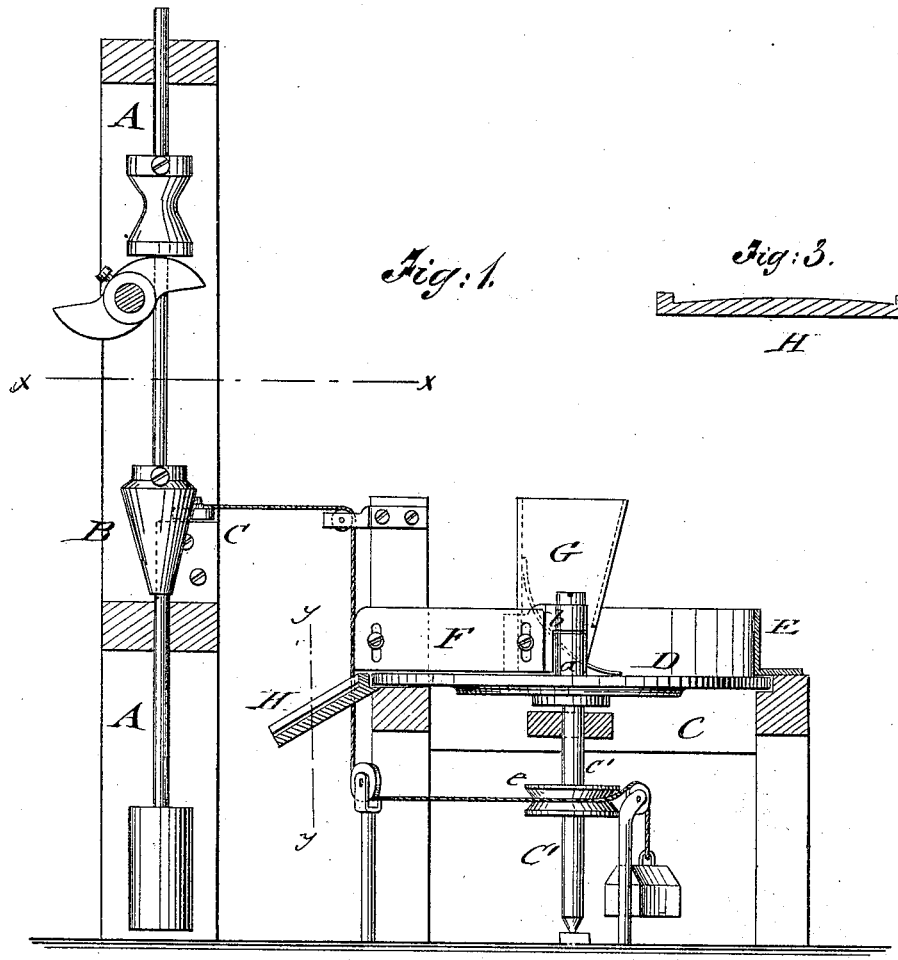
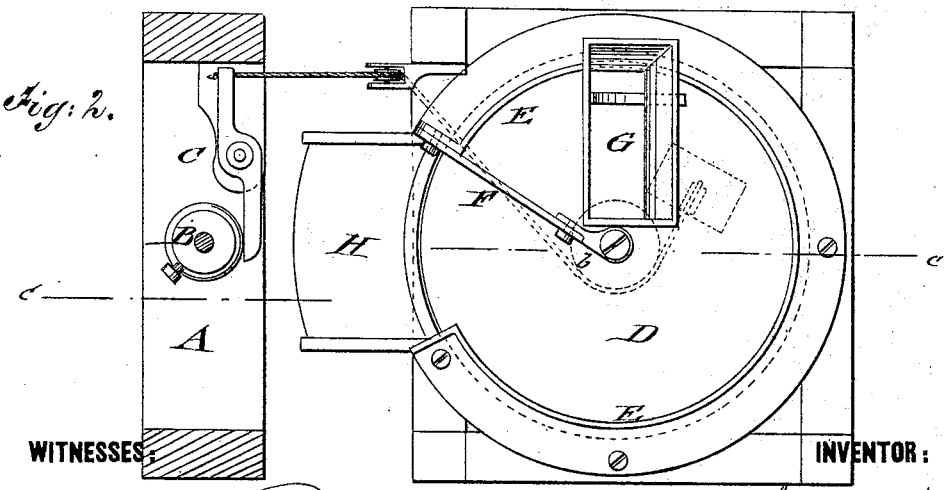


Fig: 3.

Fig: 2.



WITNESSES:

Chas. Nida.

A. F. Terry

INVENTOR:

BY J. Walker

ATTORNEYS.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN WALKER, OF SONORA, CALIFORNIA.

IMPROVEMENT IN STAMP-MILL FEEDERS.

Specification forming part of Letters Patent No. **167,042**, dated August 24, 1875; application filed April 24, 1875.

To all whom it may concern:

Be it known that I, JOHN WALKER, of Sonora, in the county of Tuolumne and State of California, have invented a new and Improved Stamp-Mill Feeder, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation of my improved stamp-mill feeder, partly in section, on line *c c*, Fig. 2. Fig. 2 is a top view of the same, partly in section, on the line *x x*, Fig. 1; and Fig. 3 is a detail section of the discharge-apron on line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention relates to an improved feeder for stamp-mills which is operated, in combination with the stamp and so constructed that a uniform and continuous feed of ore is secured.

The invention consists of a feeding-disk, with stationary hopper, directing gage-piece, and discharge-apron, the disk being rotated by pulley, rope, and weight connection of its shaft with a pivoted lever and conical collar of the stamp-shaft.

In the drawing, A represents a stamp-mill of the usual construction, which is connected, by an inverted conical collar, B, of a vertical stamp-shaft, with a pivoted and adjustable lever, C, that operates, by pulley, rope, and weight connection, the feeder-shaft, C^1.

The feeding mechanism consists of a horizontal disk or table, D, keyed to its vertical shaft, C′, which turns in upper supporting and lower conical bearings. The disk D is surrounded at its upper surface by a rim, E, made stationary to the supporting frame-work and open toward the battery, to admit the passage from the disk to the feed-arms. A central hub, *a*, of the upper side of the disk is provided with a supporting-piece, *b*, attached by set-screw, to which and to the end flange of the surrounding rim E a vertical gage-plate or director, F, is applied by slots and set-screws, that it may be raised or depressed to regulate quantity of ore to face of disk.

A stationary hopper, G, extends radially between central hub and rim, and conveys the ore by a bottom opening to the disk, which, by its gradual forward motion, carries it to the director, and then over the discharge-apron to the mill. The rope from the pivoted lever of the stamp-shaft passes over a pulley, *e*, of shaft *e′*, revolving the disk by the friction of the weighted rope and the sudden movement of the swinging lever. The sliding motion of the collar along the lever rotates the disk, while the weight at the end of the rope draws the rope back, the backward rotation of the disk being prevented by the pressure or friction of the ore on the same, which may, however, be also effected by the application of a ratchet-wheel and check-pawl to the shaft. The discharge-apron H is made with convex surface and widening end, as shown in Fig. 3, for distributing and spreading the ore in uniform manner. The apron is made with a shoulder or continuation that is level with the face of the disk, for protecting the wear of its edge or periphery. The feed-actuating lever may be adjusted to its support in any position, so as to increase or decrease the speed of the disk by its longer or shorter strokes. It is moved by the conical collar with ease, regularity, and precision, and does not interfere by its noiseless working with the natural sound produced by the stamp when in regular operation. The regular forward feeding of the ore prevents choking of the hoppers, or the irregular flow or escape of ore to the stamps, securing thereby a more reliable working of the mill by the absolute and reliable discharge of the ore.

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

1. The combination, with collar B and lever C, of disk D, having ring E, director F, and hopper G, as and for the purpose specified.

2. The combination of the rotating disk-shaft, fixed pulley, and weighted rope and pulley connection with adjustable actuating-lever and inverted conical collar of stamp-shaft, to revolve gradually the disk in connection with strokes of shaft, as set forth.

3. The combination of ore gage-piece or director, having guide-slots and set-screws, with supporting-piece of shaft-hub and surrounding rim, to be set to feed greater or less quantity of ore, substantially as described.

JOHN WALKER.

Witnesses:
J. P. DART,
C. L. STREET.