(No Model.)

E. COLEMAN.

ORE FEEDER FOR STAMP BATTERIES.

No. 249,010. Patented Nov. 1, 1881.

Fig. 1.

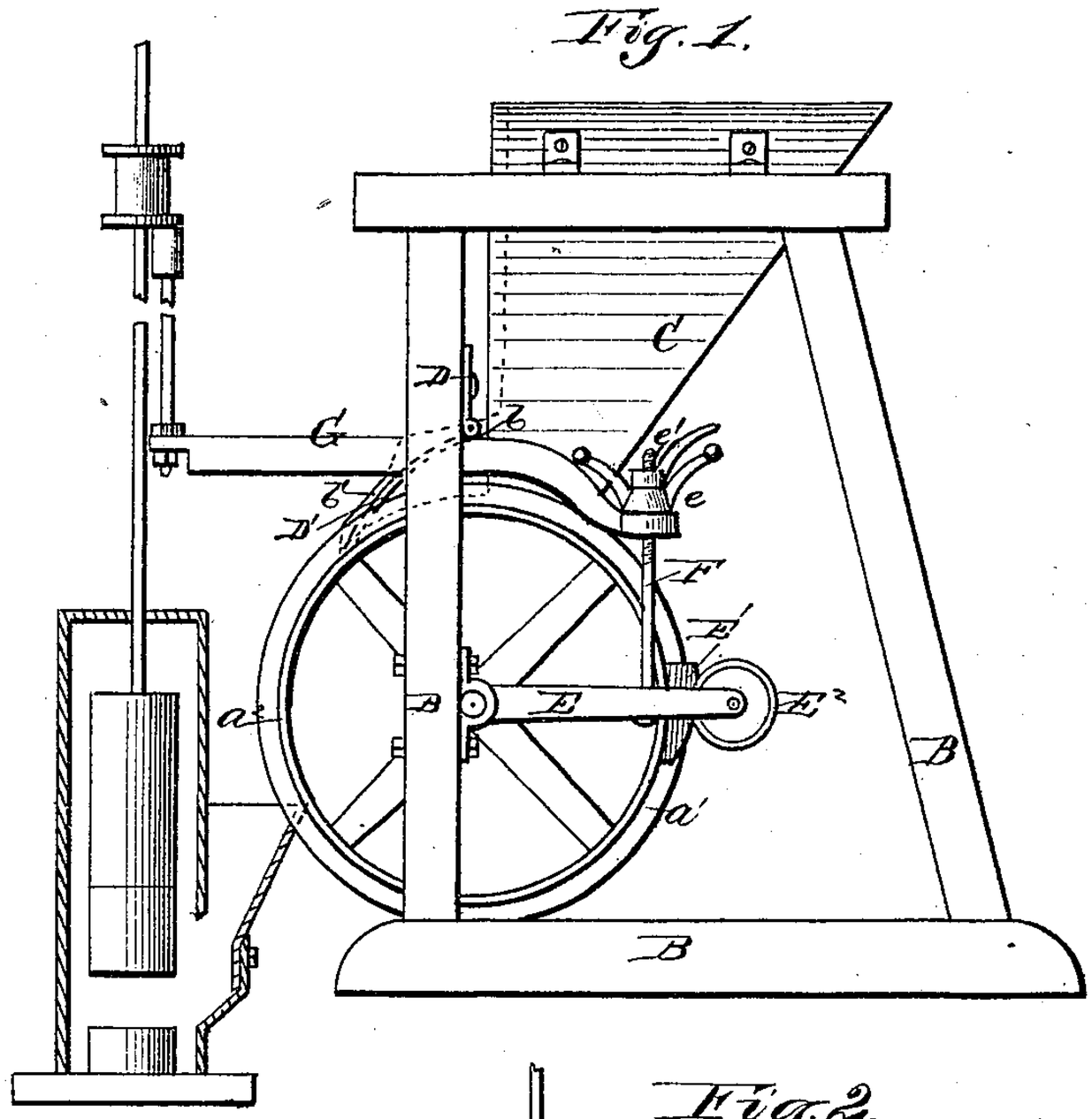


Fig. 2.

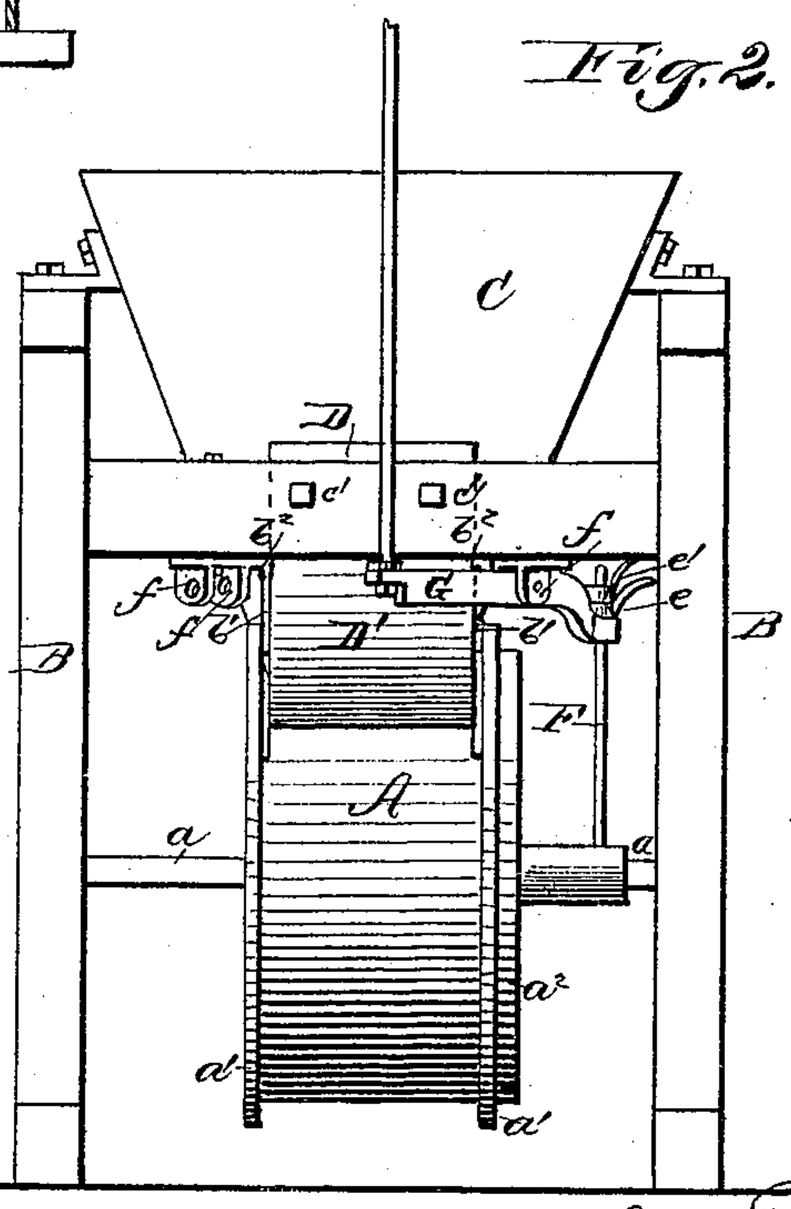


Fig. 4.

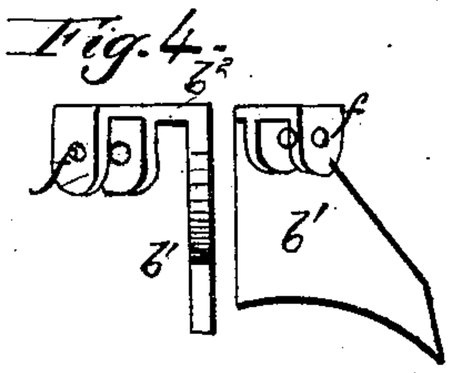
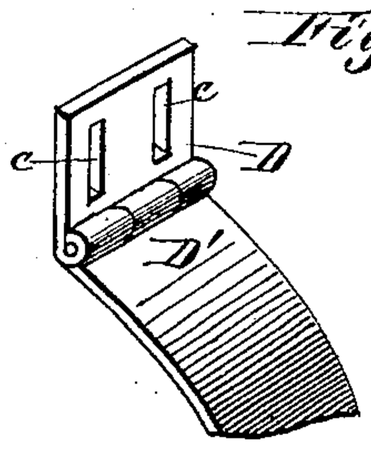


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

EZRA COLEMAN, OF NEW YORK, N. Y.

ORE-FEEDER FOR STAMP-BATTERIES.

SPECIFICATION forming part of Letters Patent No. 249,010, dated November 1, 1881.

Application filed February 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, EZRA COLEMAN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Ore-Feeders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a side elevation of my improved ore-feeder. Fig. 2 is a front elevation of the same, and Figs. 3 and 4 are detail views thereof.

This invention has relation to improvements in ore-feeders, particularly of that class employing as a means for feeding the ore to the stamp-battery a rotary cylinder or drum, having for its object to control the feeding of the ore and greater convenience and simplicity of operation of the feeding or rotary cylinder or drum; and it consists of the construction and combination of parts, substantially as hereinafter more fully set forth.

Referring to the accompanying drawings, A is the rotary or feeding cylinder or drum, suitably hung upon a shaft, *a*, bearing in boxes bolted to the front uprights of a frame, B. This cylinder or drum has peripheral flanges *a'* standing at right angles to its periphery. This cylinder is provided upon one side with a supplemental periphery, a^2.

C is the hopper secured to the frame B above the cylinder or drum A, with its lower end resting nearly thereon and between the side or peripheral flanges, *a'*, which prevent the escape thereat of fine particles or sediment. It is also suitably protected at its rear lower edge, to likewise avoid the escape thereat of sediment. The front side of the hopper is provided with an opening, *b*, of suitable size to feed the ore through. This opening is guarded to prevent the lateral escape of the ore by side plates, *b'*, fastened to the under side of the front cross-piece of the frame B, they having right-angled flanges b^2, through which the fastening-bolts are inserted, entering and passing through the cross-piece. The inner ends of these side plates rest against the front of the hopper, while their outer ends extend some distance forward and rest above the cylinder, to prevent a grinding action that would be produced by particles getting or wedging themselves under the guard or side plates. In front of the hopper-opening a plate or slide, D, vertically adjustable by means of slots *c* in the plate and adjusting-nuts and screw-bolts *c'* upon the cross-piece of the frame B, to permit of increasing or diminishing the size of the said opening, is arranged.

D' is a leaf or valve hinged or articulated to the lower end of the slide or plate D, and set so as to occupy a forwardly-inclined position, and to permit its outer end to rest upon the cylinder some distance beyond the hopper-opening. The object of the leaf or valve is twofold: first, to prevent the accidental rolling out of the hopper or off the cylinder of the ore; and, secondly, to obviate the connecting therewith of the tappet-rod to open and close it as the ore is fed under it by the intermittently rotary motion of the cylinder, it being self-acting, as its arrangement with relation to the hopper-opening and the cylinder, as above described, permits it to rise and fall simply by the intermittent passage of the ore under it.

E is a lever, hung at one end upon the cylinder-shaft, and with its other end adapted, by having an L shape, among other ways, to hold against the supplemental periphery of the cylinder a curved wedge or weight, E', which gripes said periphery of the cylinder as the lever is intermittently operated, and imparts a similar rotary motion to the cylinder to cause it to feed the ore out of the hopper, under the self-acting valve D', and into the battery. To reduce friction a roll, E^2, is located at the end of the lever E, bearing against the wedge.

G is a second lever, connected at its rear end, so as to permit of its vertical adjustment thereat, by a nut, *e*, and screw *e'*, to a pitman or rod, F, provided with said screw and nut, connected to the lever E. This adjustment of the lever G, in addition to permitting of taking up of wear of the wedge, permits of the increasing or diminishing of the movement of the feeding-cylinder at each stroke of the tappet, which will accordingly affect the feeding of the ore

from the hopper into the battery. The lever G is hung between plates *f f*, cast with and depending from the right-angled flange b^2 of the side plates, *b'*. These depending plates are arranged obliquely to their securing-plate or the flange b^2, to permit the lever G to extend obliquely forward and allow its forward end to stand at a point to be conveniently struck by the tappet. The hanger-plates *f f* are duplicated upon the opposite side of the hopper, and by shifting the lever G with the other mechanism engaging with the cylinder to that side, and reversing the cylinder, so as to bring its supplemental periphery upon the same side, the feeding-cylinder may be operated from that side, or, in other words, it may be operated upon the more convenient side.

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

1. The combination, with the vertical rotary cylinder or drum A, having the supplemental periphery a^2, of the lever E, having the wedge E' and roll E^2, the wedge griping the said periphery and the roll bearing against the wedge, and lever G, connected to the lever E, substantially as and for the purpose set forth.

2. The combination of the lever E, having the wedge E' and roll E^2, the cylinder A, having the supplemental periphery a^2, rod or pitman F, having the adjusting-nut *e*, and the lever G, substantially as and for the purpose set forth.

3. In an ore-feeder, the combination, with the hopper C and cylinder A, of the side plates, *b'*, having right-angled flanges b^2, bolted to a cross-piece of the frame B, the inner ends of said plates resting against the front of the hopper and one upon each side of its opening, substantially as and for the purpose set forth.

4. The combination, with the lever G, connected to the lever E, having the wedge and roll, the wedge griping the supplemental periphery of the feeding-cylinder, of the depending oblique hangers *f f*, one set arranged upon each side of the hopper, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EZRA COLEMAN.

Witnesses:

JOSEPH FORREST,

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