

J. M. KENDALL.
EARTH PULVERIZER.

No. 181,448.

Patented Aug. 22, 1876.

Fig. 1.

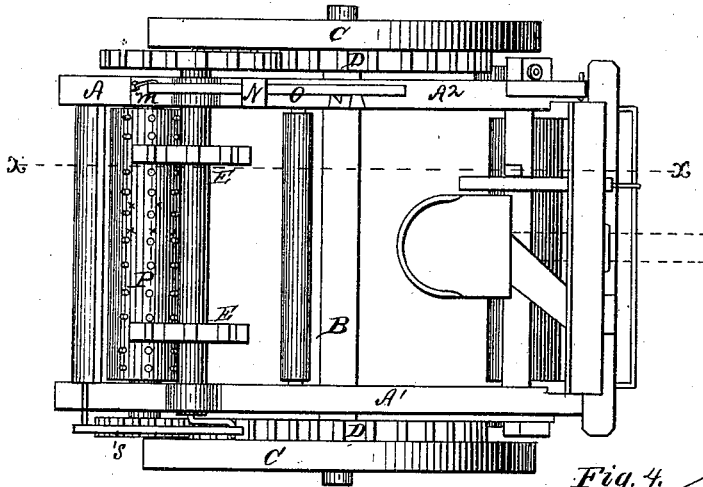


Fig. 2.

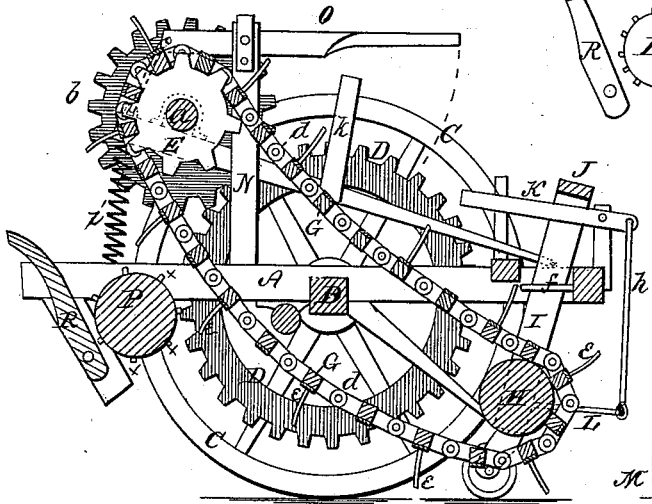


Fig. 4.

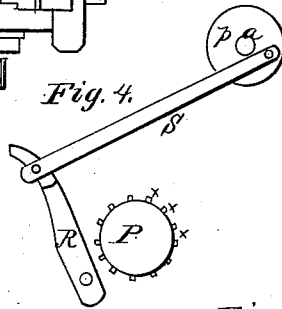
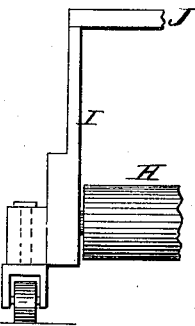


Fig. 3.



WITNESSES

Henry N. Miller
F. L. Curran

INVENTOR

James M. Kendall
By Alexander Strason
Attorneys

UNITED STATES PATENT OFFICE.

JAMES M. KENDALL, OF TRENTON, ILLINOIS.

IMPROVEMENT IN EARTH-PULVERIZERS.

Specification forming part of Letters Patent No. **181,448**, dated August 22, 1876; application filed June 20, 1876.

To all whom it may concern:

Be it known that I, J. M. KENDALL, of Trenton, in the county of Clinton, and in the State of Illinois, have invented certain new and useful Improvements in Pulverizers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a pulverizer, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view of my machine. Fig. 2 is a longitudinal section of the same through the line *x x*, Fig. 1. Figs. 3 and 4 are detached views of parts thereof.

A represents the frame of my machine, supported upon the axle B, which has a wheel, C, on each end. On the inner side of each driving-wheel C is secured a cog-wheel, D. One of these cog-wheels meshes with a pinion, *b*, on the end of a shaft, *a*, which has its bearings in the upper rear portion of the frame A. On this shaft are secured two toothed wheels, E E, which propel the endless carrier, composed of two endless chains, *d d*, connected at regular intervals by bars G G. Every alternate bar G is provided with teeth *e e*, projecting therefrom, as shown. The endless carrier thus constructed passes around a roller, H, at the front, near the bottom, said roller having its bearings in two uprights, I I, which pass through guides or staples *f f* at the front end of the frame A, and are connected at their upper ends by a cross-bar, J. K is a lever, connected by a rod, *h*, with a bail, L, attached to the uprights I I, by which means said uprights, with the roller and front end of the carrier, can be adjusted at any height desired. At the lower ends of the uprights I are castor-wheels M, as shown. The upper shaft *a* has its bearings in side arms A¹ A², forming part of the frame of the machine, both being inclined, as shown. The arm A¹ is rigidly attached to the main frame, while the arm A² is hinged at its front end to the main frame, and the rear end held down

by a spiral spring, *i*, so that the pinion *b* will be held down onto the cog-wheel D on that side of the machine. O is a lever, pivoted on a standard, N, and its rear end connected, by a link, *m*, with the rear end of the side arm A², so as to raise said arm when desired to throw the pinion *b* out of gear, the lever O being then held by a catch, *k*.

In the operation of the machine, the clods are carried up by the endless carrier *d G e*, and dropped down between a cylinder, P, and crusher R, which form, as it were, a hopper. The cylinder P is provided with spikes or teeth *x x*, and is rotated by having a pinion, *s*, on the opposite side of the machine from the pinion *b*, said pinion *s* meshing with the cog-wheel D on that side of the machine. On the end of the shaft *a* is a disk, *p*, with crank-pin, on which is placed a pitman, S, connecting with the upper end of the crusher R, the lower end thereof being pivoted in the frame. By this means the crusher R obtains a rocking motion to and from the cylinder P, so as to break up the clods in conjunction with the teeth *x* on the cylinder P.

V is the driver's seat, located in such a position that the driver can easily reach both levers, K and O.

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

1. The combination of the hinged side arm A², carrying the end of the shaft *a*, with pinion *b*, the spring *i*, lever O, link *m*, and catch *k*, all substantially as and for the purposes herein set forth.

2. In a pulverizer, the combination of a rotating toothed cylinder and a hinged rocking or reciprocating crusher, substantially as and for the purposes herein set forth.

3. The combination, in a pulverizer, of an endless rotating carrier, a rotating toothed cylinder, and a rocking or reciprocating crusher, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 15th day of April, 1876.

JAMES M. KENDALL.

Witnesses:

M. L. STOWELL,
BENJAMIN LOUDEN.