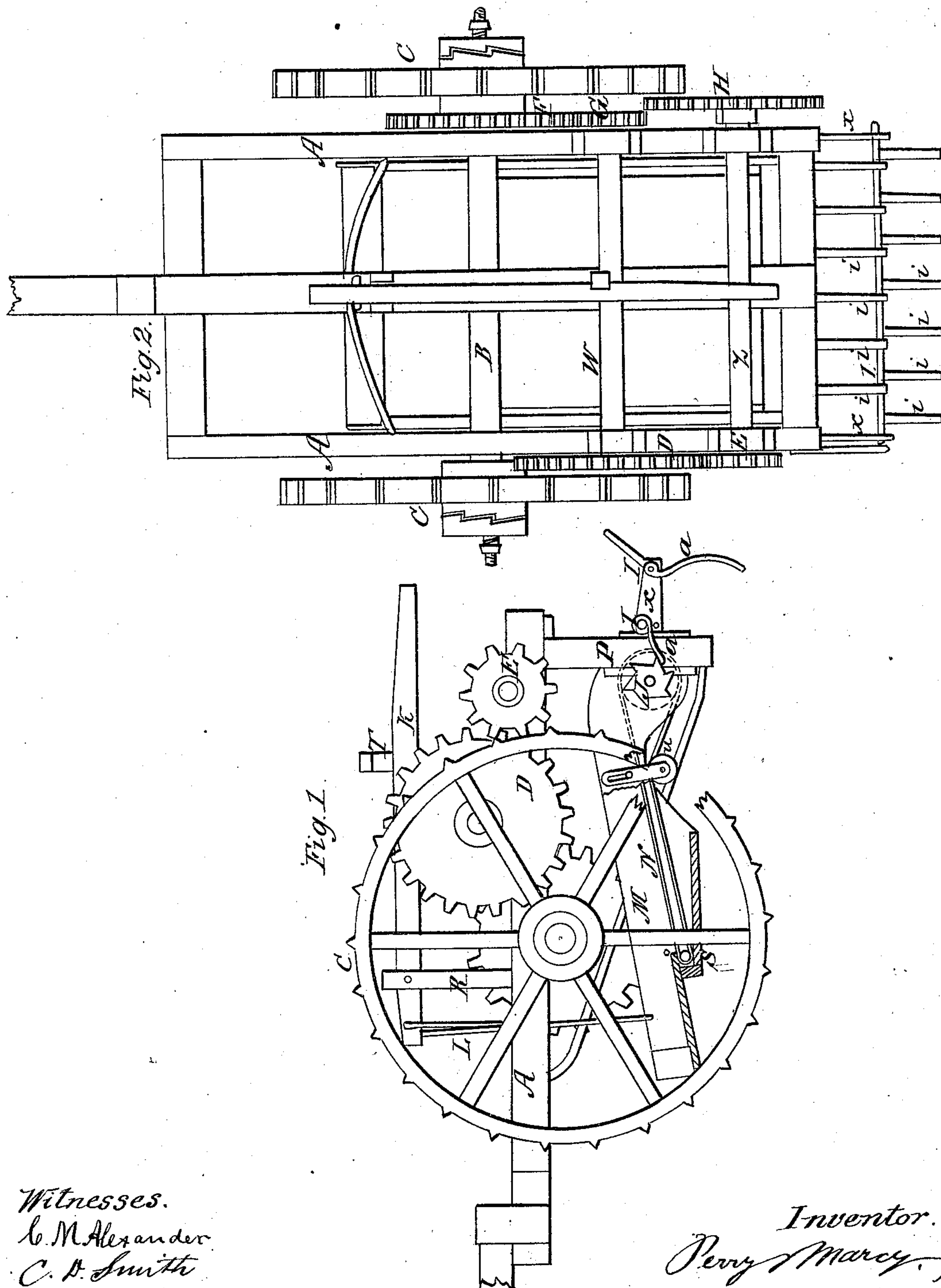


P. MARCY.  
Potato-Digger.

No. 24,474.

Patented June 21, 1859



Witnesses.  
G. M. Alexander  
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# UNITED STATES PATENT OFFICE.

PERRY MARCY, OF TUNKHANNOCK, PENNSYLVANIA.

## IMPROVEMENT IN POTATO-DIGGERS.

Specification forming part of Letters Patent No. 24,474, dated June 21, 1889.

*To all whom it may concern:*

Be it known that I, PERRY MARCY, of Tunkhannock, in the county of Wyoming and State of Pennsylvania, have invented certain new and useful Improvements in Potato-Diggers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in constructing and arranging the several parts of my machine in the manner hereinafter particularly described.

In the drawings, Figure 1 represents a side elevation. Fig. 2 represents a plan view.

In the figures, A represents the frame of the machine, which rests upon an axle, B, on which axle are secured the driving-wheels C C.

Beneath the frame A is secured a box, M, which is hinged at its rear end to an axle at the rear of the frame, which is supported on a piece, P, which extends down from said frame. The front end of this box is supported by means of rods L, which are attached to it on each side, and which extend up and connect with a lever, K, which lever has its fulcrum in an upright, R, and is stationed at any desired point by having its rear end pass into notches cut in a standard, T, which is erected on the frame. By means of this lever the front end of the box is lowered or raised to suit attending circumstances. The box M is made square, and its front end is provided with a metallic knife or cutter, which runs into the ground as the point of a plow. Back of this cutter is a shield, O, which is for the purpose of protecting the belt N, and over which the earth and potatoes pass to the belt N.

N represents an endless belt, which is made perfectly plane and smooth. This belt passes around a roller, which is secured upon the shaft on which the box M is hinged at its rear, and also around a roller, S, immediately under the shield near the front of the box.

U is a roller secured in such a manner to the box as that it may be raised or lowered for the purpose of tightening or loosening the belt N. The box M, it will be seen, is so con-

structed as to protect the belt from dirt or straw or any obstruction by means of which it can be clogged up. The belt N being made smooth, it can fit snugly up against the shield O, and thus prevent any possibility of its proper action being retarded or destroyed.

F represents a cog-wheel on the driving-shaft B. This wheel gears into a cog-wheel, G, on one end of shaft W. On the other end of shaft W is a cog-wheel, D, which gears into a wheel, E, on shaft Z. On the other end of shaft Z is a wheel, H, which gears into and turns the shaft which supports the rear of the box, and around which the belt passes, J being a ratchet-wheel secured to the other end of said shaft.

I represents two bars, which are supported on arms *x x*, which extend out from the support P. These bars are provided with teeth *i i i*, and also with levers *a a*. The levers *a a* press against the ratchet-wheel J, and when it turns around the ends of the levers drop from one tooth to another, by means of which a quick up-and-down motion is communicated to the teeth *i i i* on the bars I I.

In operating this machine power is applied and the front of the box is lowered, so that the cutter will run into the ground and pass under the potato-hills. The potatoes and the earth around them are carried up into the box over the guard or shield O and onto the belt N. Said belt moving backward the mass is carried back, and when the belt turns down to return it is emptied upon the teeth *i* on bars I I; and, as these teeth move rapidly with a short stroke up and down, the earth is separated from the potatoes and falls through between said teeth, while the potatoes are thrown out behind the machine free from dirt, where they are allowed to remain upon the ground until they become sufficiently dry to be removed and put away for keeping.

It will be seen that the ends of the levers *a a* catch in the teeth upon the ratchet-wheel J and prevent the belt from turning backward when the machine is backed. There are also clutches on the main shaft B, as will be seen, which allow the said axle to turn, and thus turn the gearing when the machine is



going forward, but which stop the axle and the gearing when the machine is made to run backward.

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

The arrangement of the inclined smooth belt N, tightening-pulley *u*, shield *o*, ratchet-

wheel J, levers *a a*, and bars I I, provided with teeth *i i i*, the whole being constructed and operating substantially in the manner herein set forth.

PERRY MARCY.

Witnesses:

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