

J. Roberts,

Potato Digger.

No. 91,487.

Patented June 15. 1869.

Fig. 1.

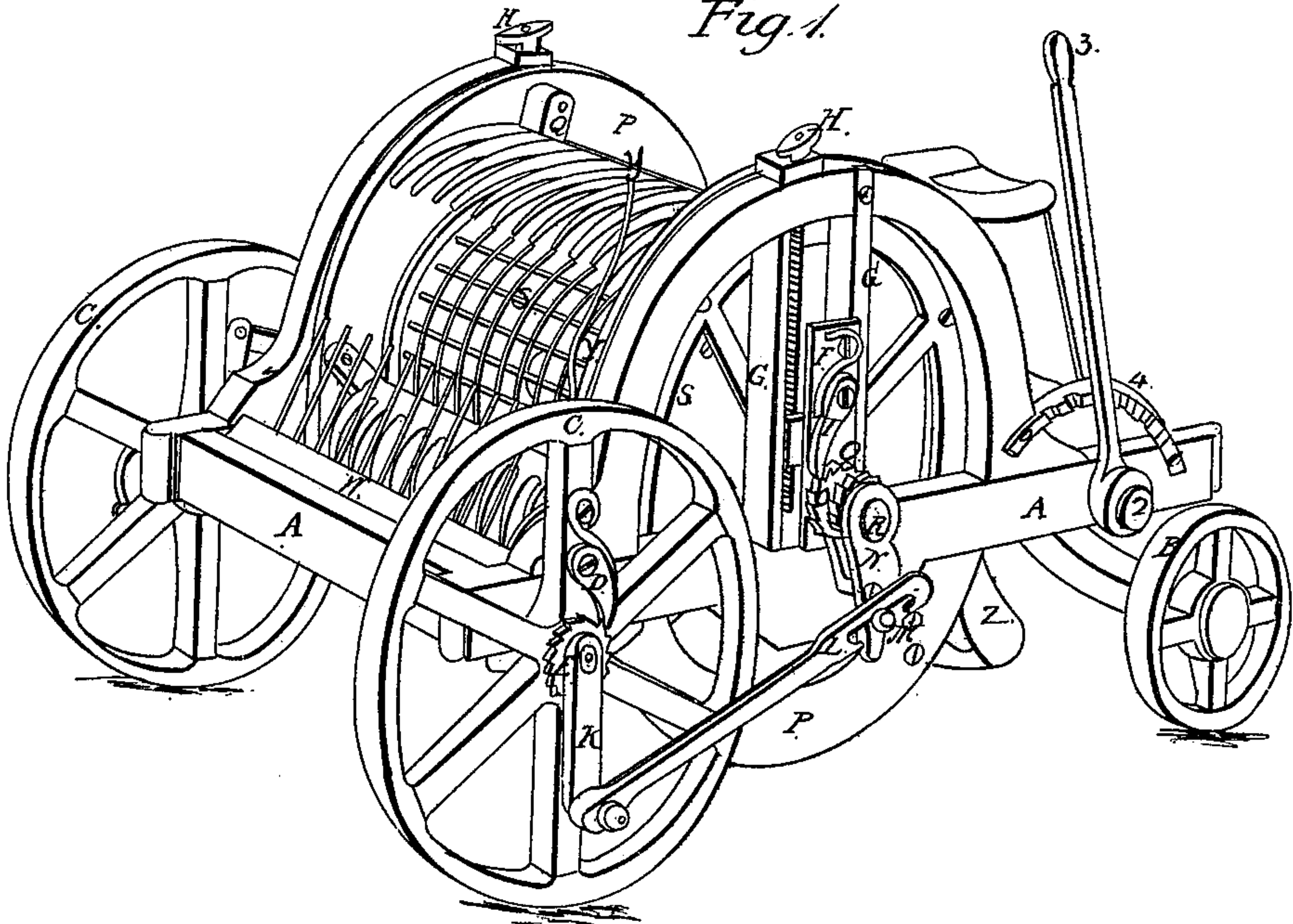


Fig. 2.

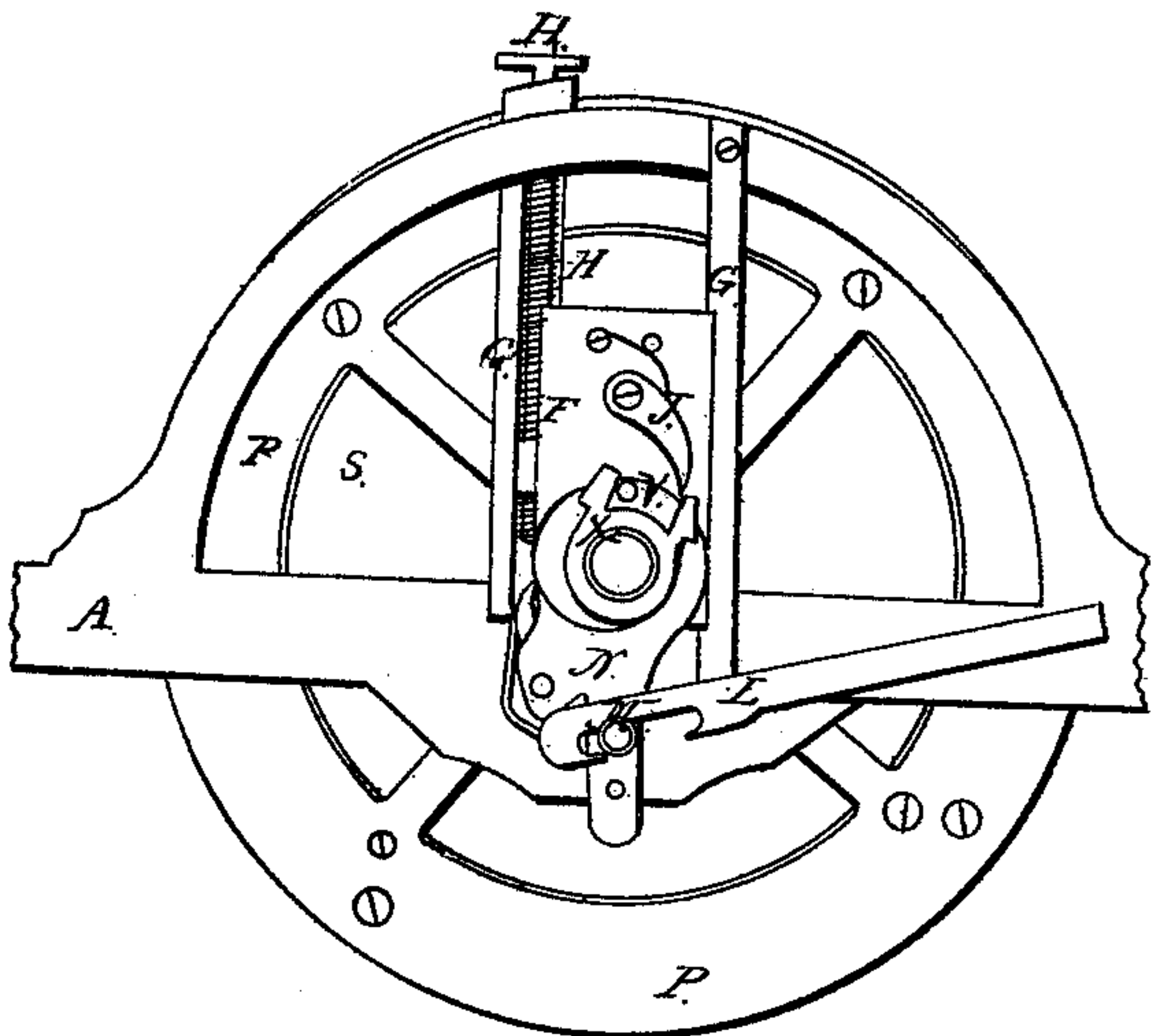


Fig. 3.

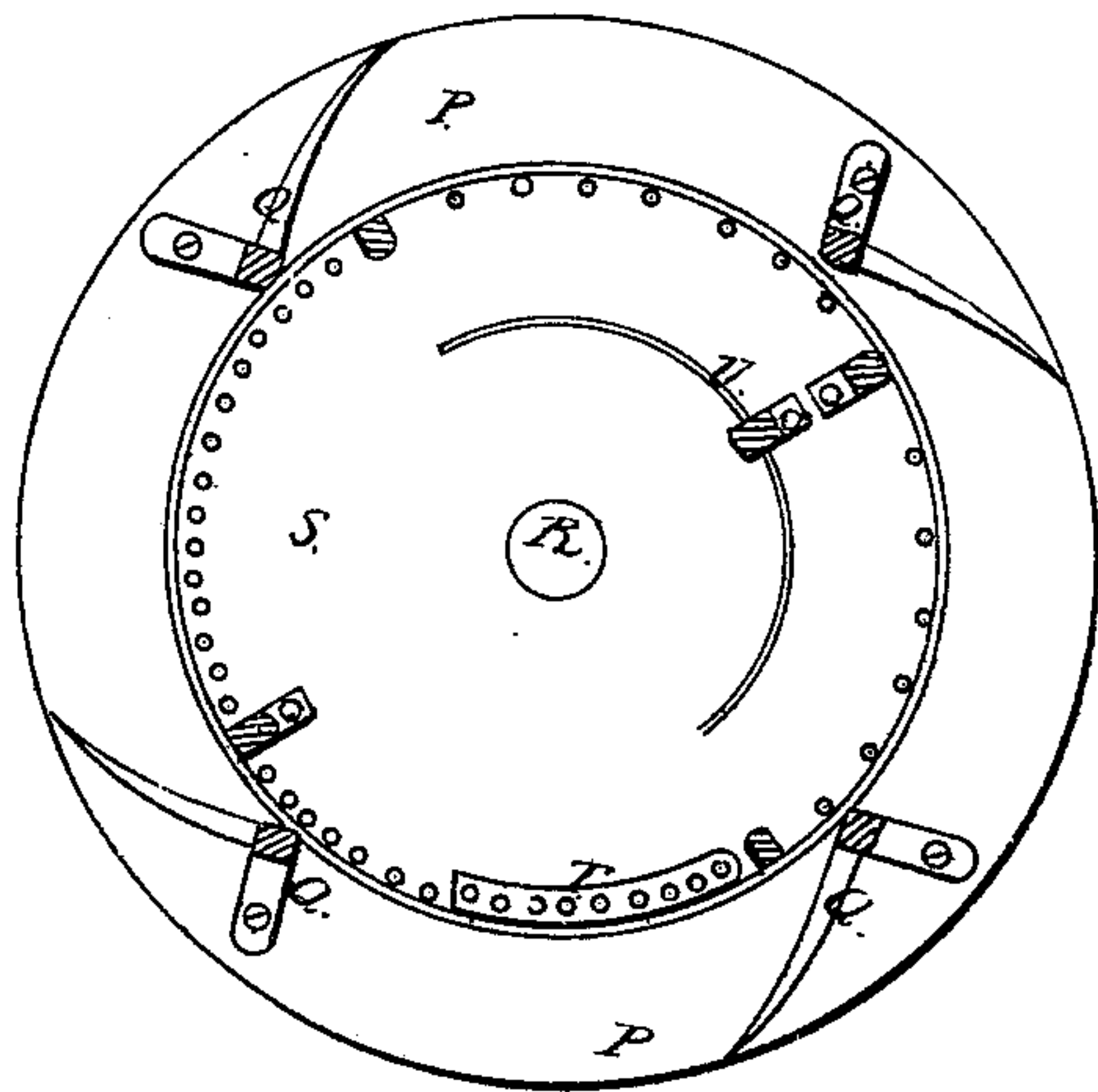
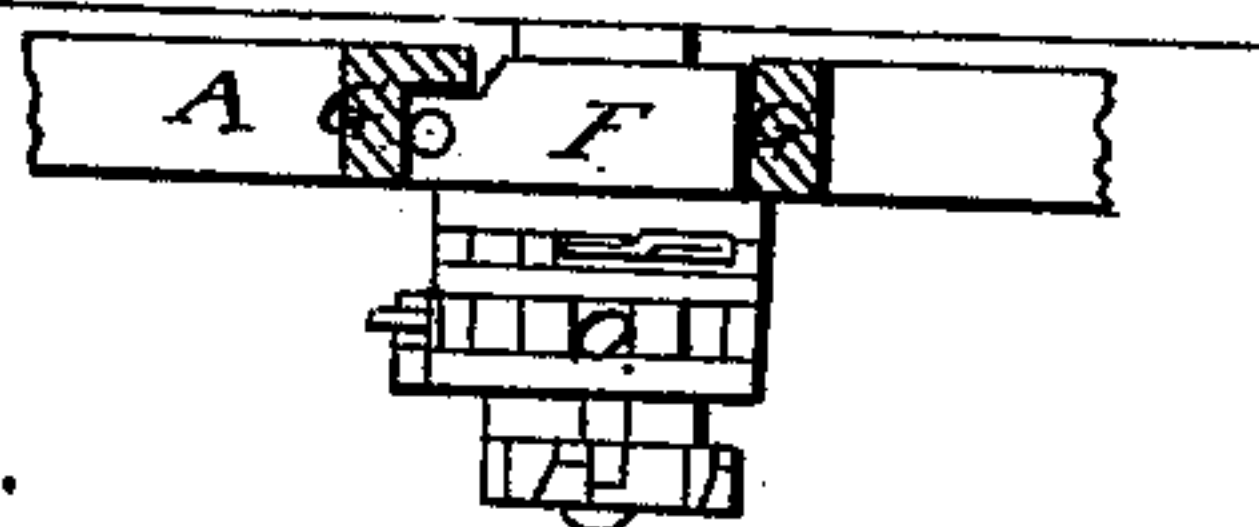


Fig. 4.



Witnesses:

George Runkland

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JAMES ROBERTS, OF WHITE PIGEON, MICHIGAN.

Letters Patent No. 91,487, dated June 15, 1869.

IMPROVEMENT IN POTATO-DIGGERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES ROBERTS, of White Pigeon, in the county of St. Joseph, and State of Michigan, have invented certain new and useful Improvements in Potato-Diggers; and I do declare the following to be a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and making part of this specification, in which—

Figure 1 is a perspective view of my invention from the rear and right side.

Figure 2 is a side elevation, partially in section, of the left side, showing the oscillating grated drum and revolving grated scoops, with their attachments.

Figure 3 is a vertical cross-section of the same.

Figure 4 is a top view of the ratchets on the right end of the drum-shaft.

Like letters indicate like parts in each figure.

The object of my invention is to construct an apparatus to be drawn by horses, that will dig potatoes in the hills, taking them up and depositing them in an oscillating grated drum, in and by which they may be thoroughly cleaned, and there retained until a sufficient quantity is accumulated, and then dumped through a proper door at the bottom of the drum, the vines being caught upon a vibrating grated apron, from which they fall to the ground at the rear of the apparatus.

To accomplish this purpose, I construct a proper frame, A, provided with the ordinary fore-wheels B.

C are the hind-wheels, turning loosely upon a shaft, revolving in proper boxes under the rear part of the frame, and provided with the pawls D, engaging with and actuating the ratchets E, in the forward motion of the apparatus.

F are the main journals, adjusted vertically between the standards G, by the screws H, and provided with the pawls I, fig. 1, and J, fig. 2.

K are cranks, secured to the shaft of the rear-wheels C, and, by means of the slotted connecting-rods L, pins M, rocker-arms N, and ratchets O, communicate an intermittent rotary motion to the rim-wheels P, on the main shaft, and which are provided with the grated scoops Q.

S is a grated cylinder, oscillating easily on the shaft R, and provided with a door, T, and internal grated apron U. Its left head being rigidly secured to a pipe sleeved on the shaft R, and extending beyond the same, has secured to it the pallet X, by means of which the grated cylinder receives an intermittent oscillating motion, through the pin V on the rocker-arm N, fig. 2.

W is a vibrating grated apron, at the rear end of the machine, actuated by the cam-lever Y, resting

upon and raised by the grated scoops Q, in their forward movement.

Z is an open excavator, firmly secured to the shaft 2, and is raised or depressed, to enter the hills at the proper depth, by the lever 3, held in position by notches in the quadrant 4.

The operation of the device is as follows:

The excavator Z, being adjusted to the desired depth, breaks the ground, and throws the potatoes and plant to the surface. They are picked up by the grated scoops Q, and carried over the cylinder S, the potatoes and ground dropping into the cylinder, while the vines are carried over by the scoops Q, being stripped of their prongs by the vibrating grate W, which throws them on the ground in the rear of the machine.

The potatoes drop on the screen U, which, by its vibrations, tends to clean them from the dirt adhering to them, which latter passes off through the narrow meshes of cylinder S, leaving the potatoes in the same.

When a quantity of potatoes have been gathered in cylinder S, the door T is lowered by means of a chain, which hangs within reach of the driver, and the potatoes are allowed to drop out.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The intermittent rotating rim-wheels P, provided with the grated scoops Q, main shaft R, ratchets O, rocker-arms N, and pin M, when arranged and operating substantially as described, for the purpose specified.

2. The oscillating grated drum S, provided with the internal grated drum U, door T, and pallet X, when arranged and operating substantially as described, and for the purposes herein set forth.

3. The standards G, main journals F, adjusting-screws H, and pawls I and J, as and for the purpose set forth.

4. The vibrating grated apron W and cam-lever Y, when arranged and operating substantially as described, and for the purpose specified.

5. The slotted connecting-rods L, cranks K, ratchets E, and pawls D, substantially as and for the purpose set forth.

6. The combination and arrangement of the above-named parts with the frame A, wheels C and B, excavator Z, shaft 2, lever 3, and quadrant 4, when operating and used substantially as herein described and for the purpose described.

JAMES ROBERTS.

Witnesses:

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