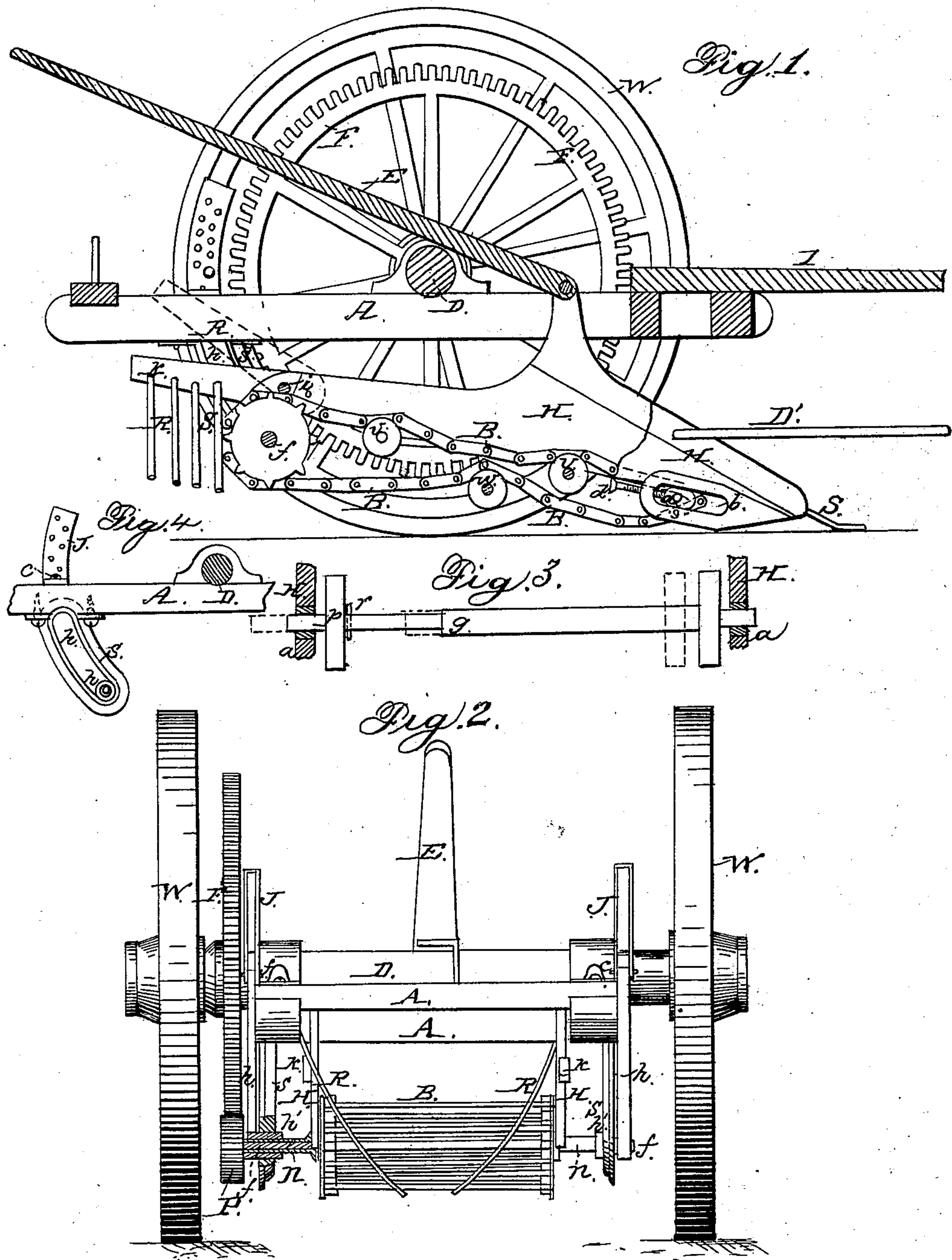


JONES & PURCELL.

Potato-Digger.

No. 42,088.

Patented Mar. 29, 1864.



WITNESSES:

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INVENTORS:

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UNITED STATES PATENT OFFICE.

R. D. JONES AND THOS. PURCELL, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN POTATO-DIGGERS.

Specification forming part of Letters Patent No. 42,088, dated March 29, 1864; antedated March 21, 1864.

To all whom it may concern:

Be it known that we, R. D. JONES and THOMAS PURCELL, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Potato-Diggers; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical longitudinal section of our invention, showing the slot *s'* in the obverse side *H*, the lower end of which is shown in elevation. Fig. 2 is an elevation of the rear end of the machine, a portion of the stirrup *s* on one side being broken away, and showing the shaft *f*, pipe-box *n*, and the hub of the hanger *h* in vertical section. Fig. 3 is a detached view of the lower shaft, *g*, of the revolving belt *B*, showing the manner of adjusting one of the pulleys, *p*, in order to remove the belt from the machine. Fig. 4 is a detached view of a section of the left side of the frame *A*, showing the standard *J*, stirrup *s*, hanger *h*, and its hub *h'*.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to that class of potato-diggers having a revolving endless belt; and its nature consists in providing a simple and efficient means for adjusting the elevation of the rear end; also, in the application of two side racks or gatherers arranged at the rear end of the belt, which cause the potatoes to be delivered in a narrow row centrally.

It also consists in making the front shaft to slide through one of the pulleys by removing a pin, and making removable boxes for the rear shaft of the belt, whereby the belt may be taken out of the machine without taking apart or disarranging the frame.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A in the drawings represents the frame of the machine; *I*, a section of the tongue; *D*, the axle upon which the driving-wheels *W* are hung and to which they are coupled by ordinary spring-clutches; *E*, the lever for raising the shovel *S*; *D'*, the draft-bail, and *J* the dou-

ble-leaf standard, to which the hanger *h* is secured by the key or pin *c*. The spur-wheel *F* is rigidly fixed to the shaft *D*. The stirrups *s* are bolted to the under side of the frame *A* and the standards *J* to the upper side.

The hangers *h* are provided with a hub, *h'*, fitted through the circular slots of the stirrups *s*. The circle of these slots is struck from the center of shaft *D*, so that pinion *P* remains in gear with spur-wheel *F*, whether the former is raised or lowered.

The pipe-boxes *n*, Fig. 2, are attached to the sides *H* by screws *i*, Fig. 1. These boxes are made to reach nearly or quite through the hub of the hangers *h*, and they constitute the bearings of the driving-shaft *f* of the belt *B*. The lower end of the belt is supported by the shaft *g*, which turns in the sliding boxes *a*. These boxes are fitted loosely in the slots *b*, and are prevented from displacement by a projecting flange on the inside.

The set-screws *d* are provided for forcing the boxes *a* down in the slot to tighten the belt when necessary. The "sag" of the upper half of the belt is supported by several pulleys, *v*, and the lower half by one or more sets, *w*. The several shafts upon which these pulleys are placed may be provided with one or more central pulleys, if desired.

The racks or gatherers *R* are composed, as seen in Fig. 1, of a projecting bar, *k*, pivoted to the sides *H*, from which depend several curved rods converging at the bottom, as seen in Fig. 2, thereby gathering the potatoes from the width of the rack or belt, and depositing them in a narrow row, which avoids the necessity, as with other machines of this class, of either skipping each alternate row or stopping to "pick up."

The gatherers may be raised, if desired, as shown by the dotted lines *R'*, Fig. 1.

It occasionally becomes necessary to remove the belt *B* from the machine for repairs, and by means of our improvements for that purpose it may be done by simply removing one of the pipe-boxes and stirrups *s*, the pin *r* from the shaft *g*, and sliding the latter through the pulley *p* and box *a*, which changes the relative position of the shaft longitudinally with the pulley, as shown by the dotted lines in Fig. 3, so

as to release the opposite end, and the intermediate pulleys and shafts being loose they are readily removed, when the belt is thereby entirely detached without parting it or taking the frame or sides H apart. It may be desirable to chamber out the pipe-box *n* in the center.

What we claim as our invention, and desire to secure by Letters Patent of the United States, is—

1. Adjusting the rear end of the revolving belt B by means of the standard J, hanger *h*, and stirrup *s*, substantially as described, so as to change the inclination of the belt B and at the same time secure a uniform depth of mesh

between the pinion P and the spur-wheel F at all points of the adjustment.

2. The tubular or pipe box *n*, in combination with the hub *h'*, hanger *h*, and shaft *f*, when all are arranged in the manner and for the purpose set forth.

3. The employment of the gatherers R, constructed and arranged in the manner and for the purpose set forth.

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Witnesses:

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