2 Sheets—Sheet 1.

N. RUGG.

POTATO-DIGGER.

No. 170,452. Patented Nov. 30, 1875.

Fig 1.

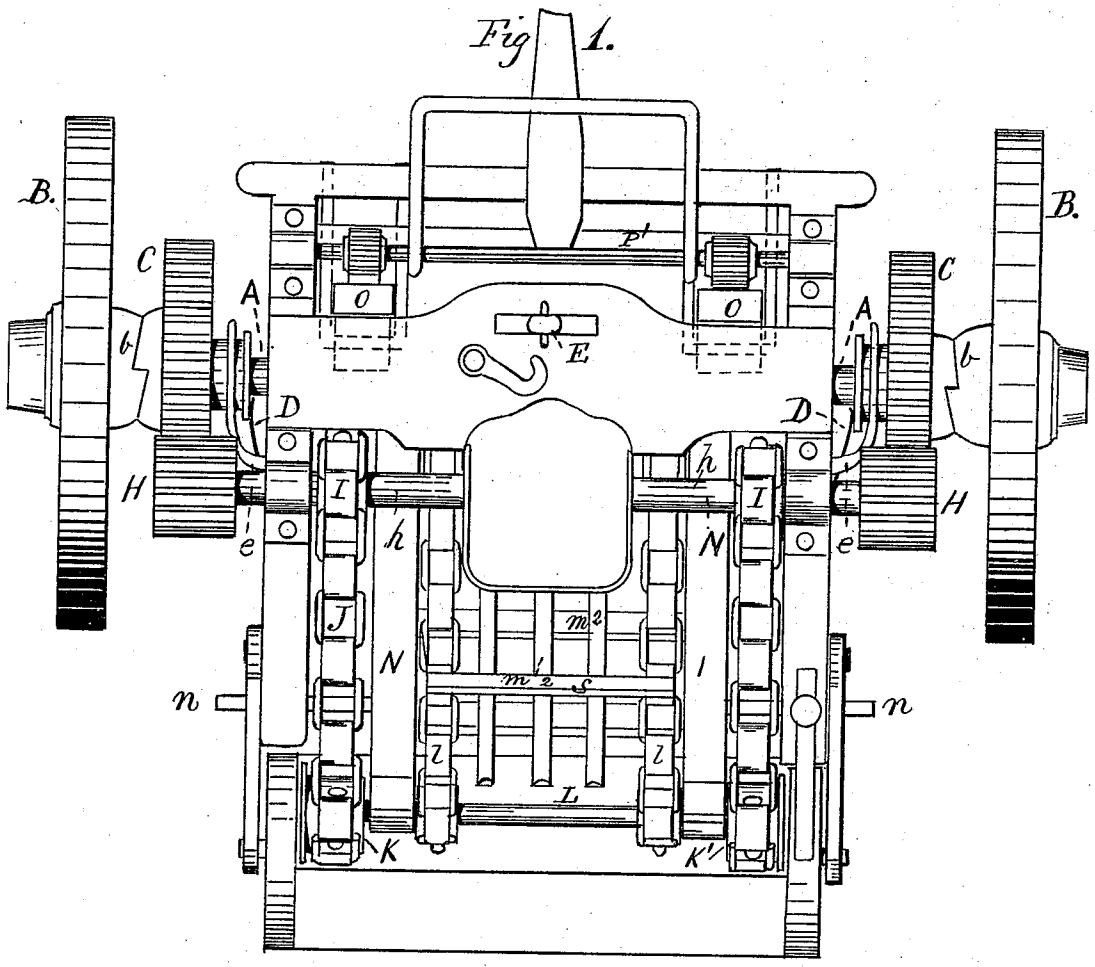

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Fig 2

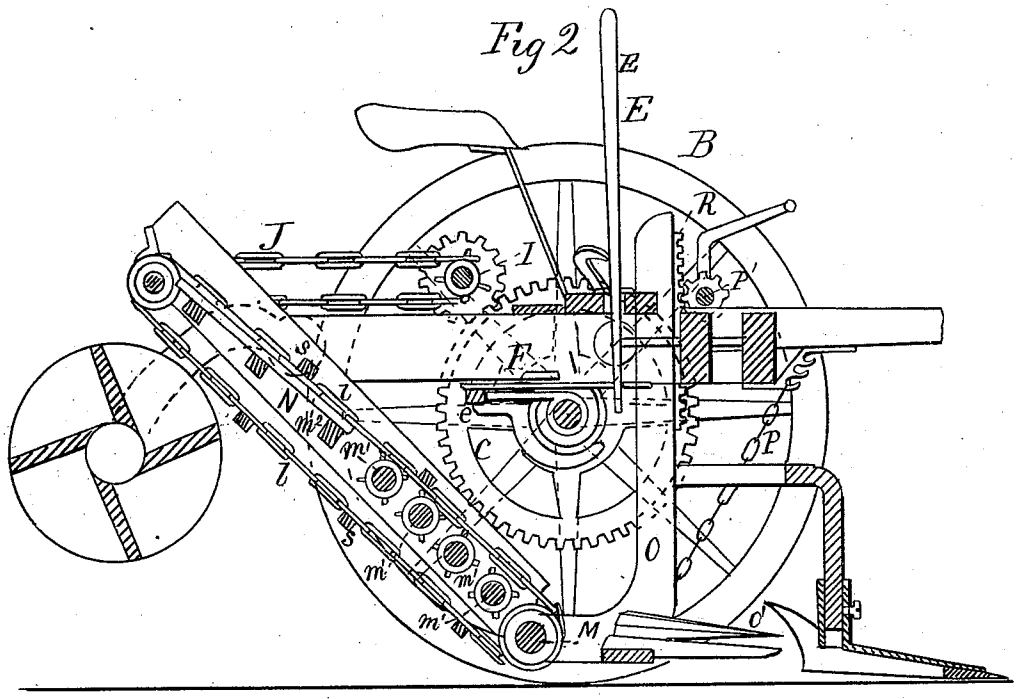
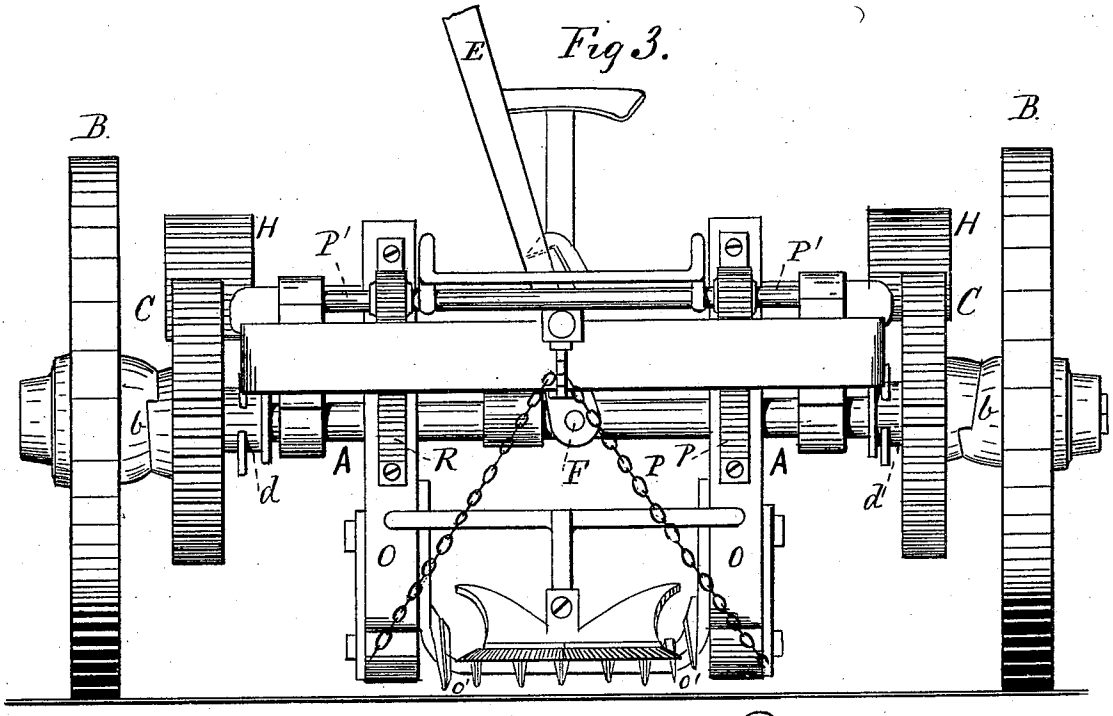


Fig 3.



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UNITED STATES PATENT OFFICE.

NATHANIEL RUGG, OF RICHMOND, MICHIGAN.

IMPROVEMENT IN POTATO-DIGGERS.

Specification forming part of Letters Patent No. **170,452**, dated November 30, 1875; application filed August 4, 1875.

To all whom it may concern:

Be it known that I, NATHANIEL RUGG, of Richmond, county of Macomb and State of Michigan, have invented an Improved Potato-Digger.

The following description, taken in connection with the accompanying plate of drawings, hereinafter referred to, forms a full and exact specification, wherein are set forth the nature and principles of the invention, by which the same may be distinguished from others of a similar class, together with such parts thereof as are claimed as new, and are desired to be secured by Letters Patent of the United States.

My invention relates to that class of agricultural implements which are made use of for digging potatoes; and the nature thereof consists in certain improvements in the details of the construction of the same, and novel combinations of parts hereinafter described.

In the accompanying plate of drawings, in which corresponding parts are designated by similar letters, Figure 1 is a plan view. Fig. 2 is a longitudinal vertical section. Fig. 3 is a front elevation.

The main driving-wheels B rotate upon the shaft A, which is rigidly attached to the frame of the machine, and engage with the gears C by means of the clutch-couplings *b*. The half-clutch boxes upon the gears C are made to engage with the half-clutch boxes on the wheels B by the spring D, which forces the said gears outward, and are disengaged by means of the lever E, pivoted to the frame, which operates the arms F, pivoted to the horizontal lever *e*, and provided with forked ends, which rest in the grooves *d*, cut upon the hubs of said gears. The gears C engage with the pinions H upon the transverse shaft *h*, upon which are the sprocket or rag wheels I, which, through the medium of the chain-bands J and rag-wheels K and K′ upon the shaft L, impart motion to the endless chain-bands *l*. The said bands *l* are rove over pulleys upon the shaft M, and engage with a series of sprocket-wheels, *m*, upon a series of shafts, m^1. The said shafts L, M, and m^1 have their bearings in the lower frame N, which is pivoted to the upper frame by means of transverse bars *n*, in such a manner as to allow free play to the bands J. O designates the digger-frame, which is pivoted to the lower frame N by the shaft M, and is provided with a series of teeth, *o*′, and a chain, P, by means of which it may be suspended from a hook in the forward part of the frame. The said digger-frame may be raised with facility by rotating the shaft P′, upon which are pinions *p*, which engage with racks R, attached to the front side of said digger-frame.

The potatoes are forced over the rollers m^1 and stationary transverse rods m^2 by the transverse bars *s*, attached to the chain-bands *l*.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a potato-digger, the combination of the driving-wheels B, provided with half-clutch boxes, the gears C, provided with half-clutch boxes, the spring D, the lever E, the arms F, the horizontal lever *e*, and the pinions H upon the transverse shaft *h*, all operating together as and for the purposes described.

2. The combination of the transverse shaft *h*, upon which are the pinions H and rag-wheels I, the chain-bands J, the shaft L, provided with rag-wheels K K′, chain-bands *l*, provided with transverse bars *s*, shaft M, provided with pulleys, shafts m^1, provided with sprocket-wheels *m*, and transverse rods m^2, as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of March, 1875.

NATHANIEL RUGG.

Witnesses:
O. S. BURGESS,
JAMES M. HICKS.