

(No Model.)

3 Sheets—Sheet 1.

E. GREENBERG.
POTATO DIGGER.

No. 587,305.

Patented Aug. 3, 1897.

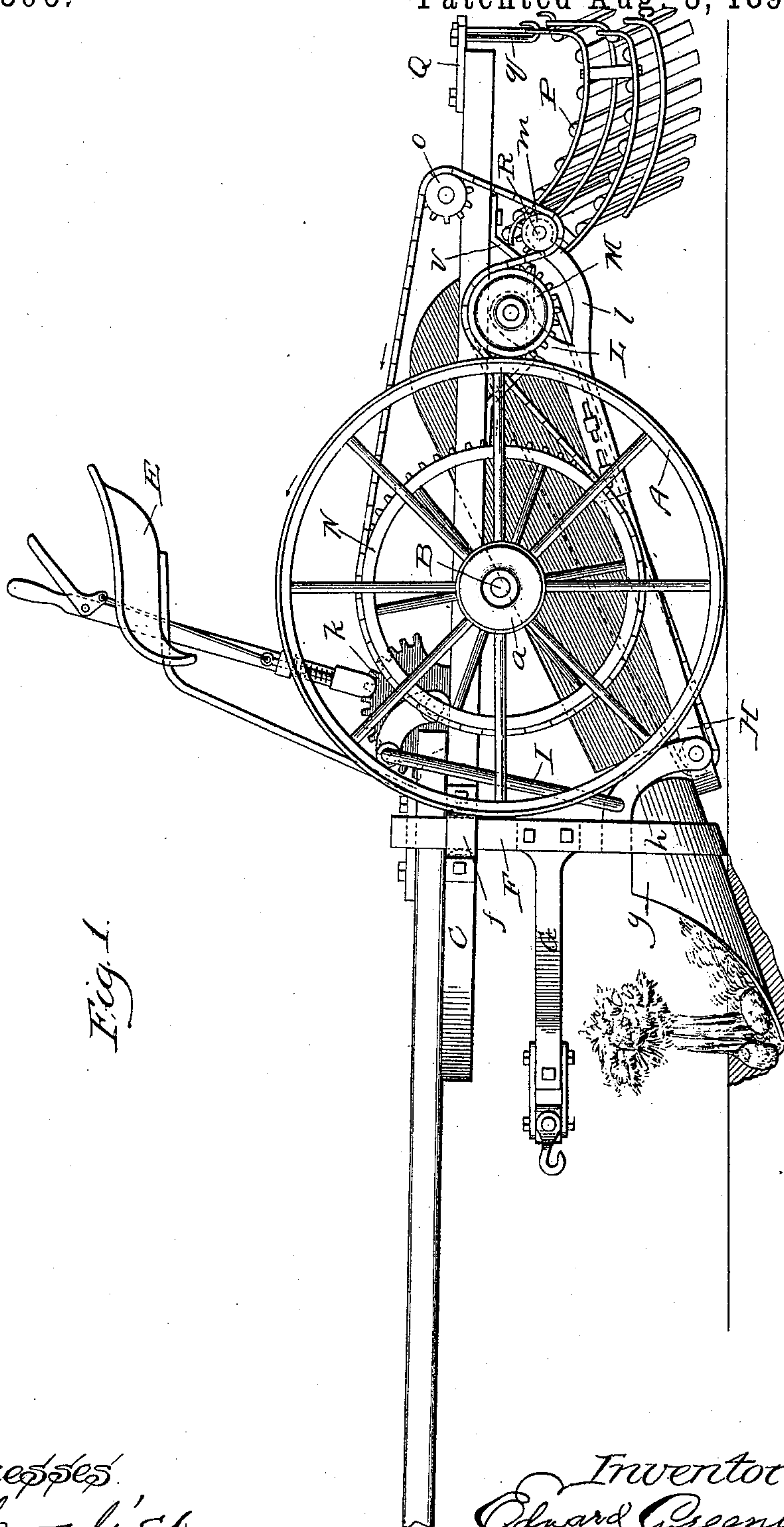


Fig. 1.

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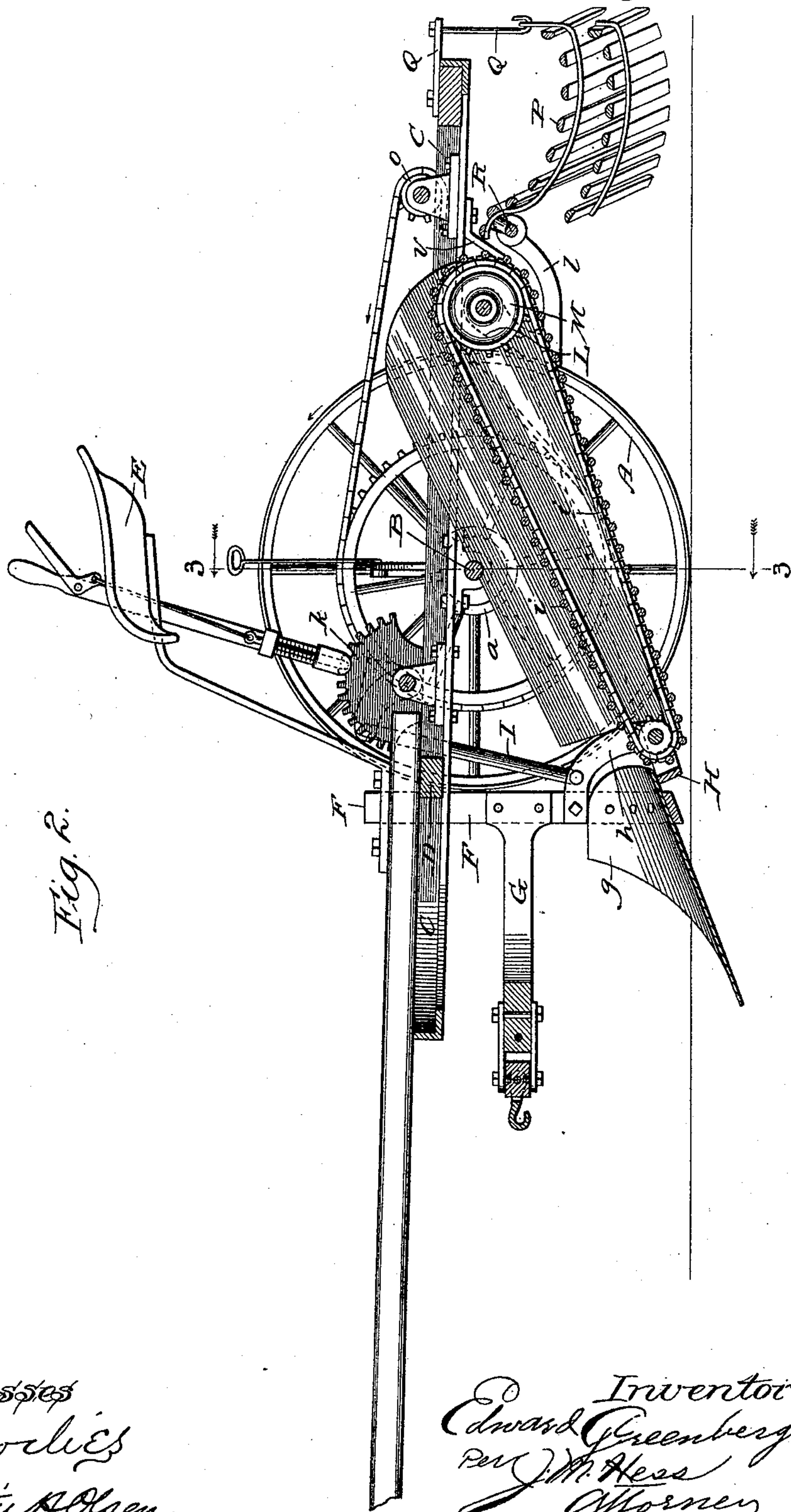
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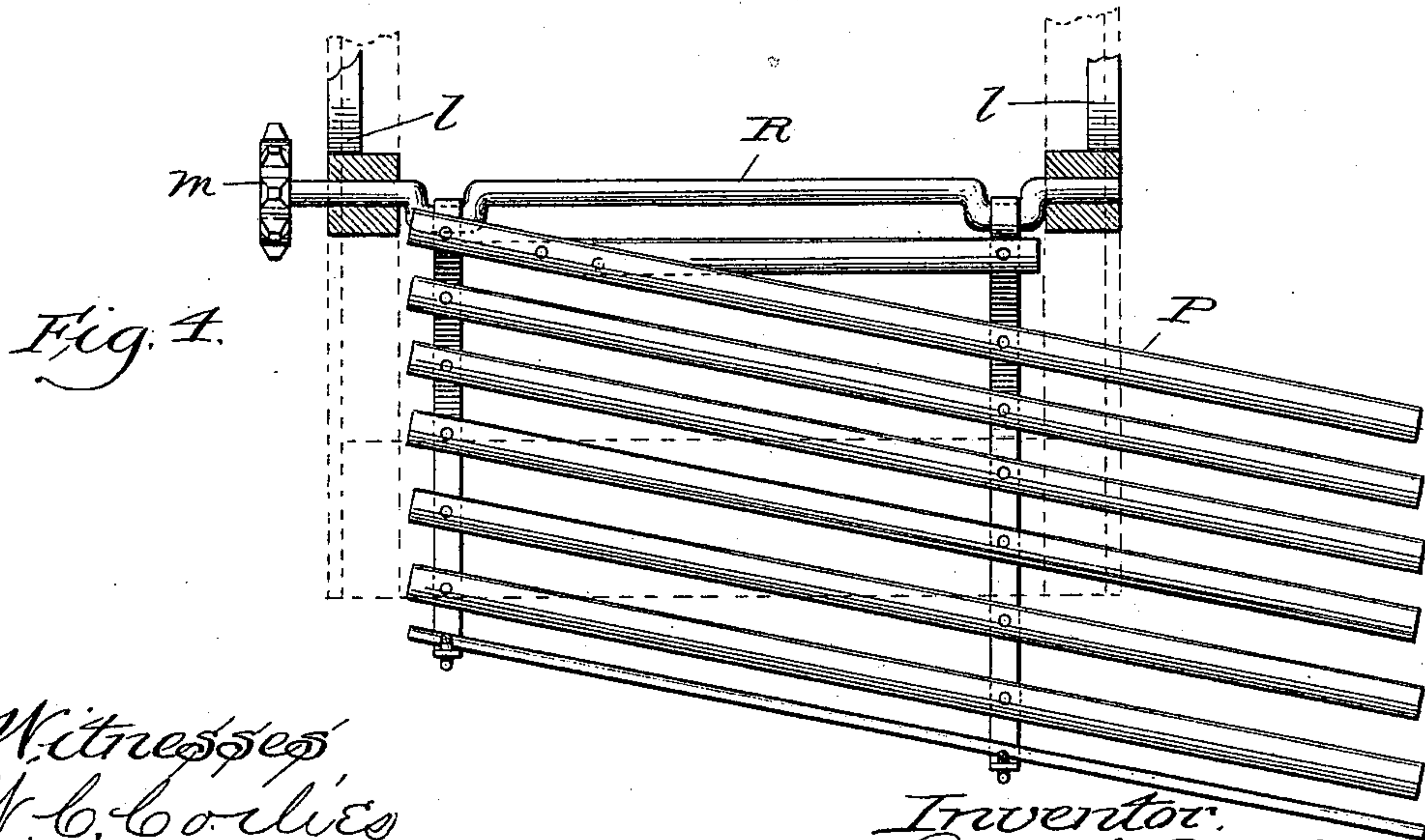
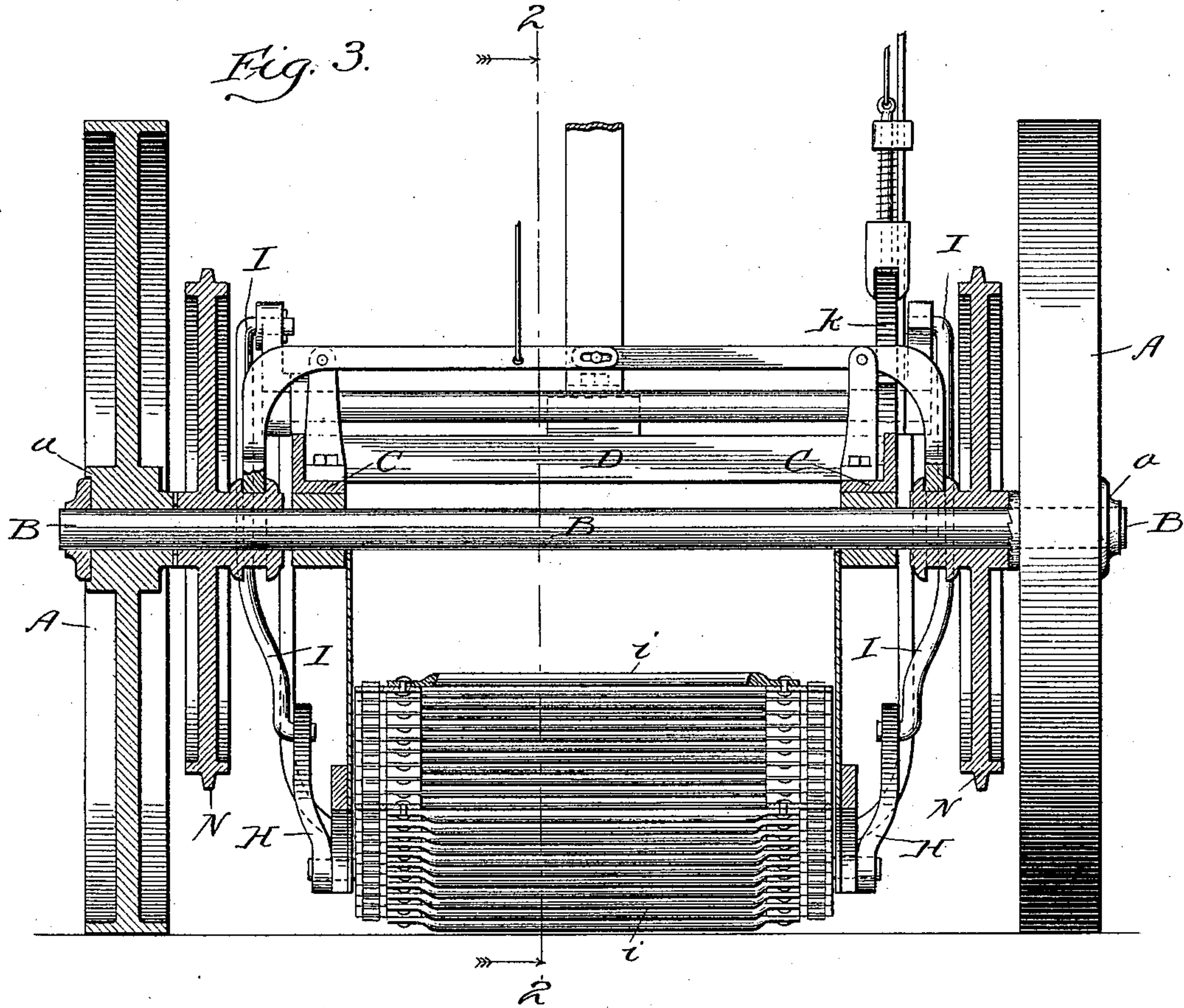
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UNITED STATES PATENT OFFICE.

EDWARD GREENBERG, OF ARLINGTON HEIGHTS, ILLINOIS.

POTATO-DIGGER.

SPECIFICATION forming part of Letters Patent No. 587,305, dated August 3, 1897.

Application filed August 24, 1896. Serial No. 603,739. (No model.)

To all whom it may concern:

Be it known that I, EDWARD GREENBERG, a citizen of the United States, residing at Arlington Heights, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Potato-Diggers, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The nature of my invention relates to the construction and arrangement of the several parts of a potato-digger, as will hereinafter be described and specially claimed.

15 In the accompanying drawings, Figure 1 represents a side elevation of a potato-digger embodying my invention. Fig. 2 represents a vertical longitudinal sectional view taken on the line 2 2' of Fig. 3, looking in the direction of the arrow. Fig. 3 is a vertical cross-section of the same, taken on the line 3 3' of Fig. 2, looking in the direction of the arrow. Fig. 4 is a detailed plan view of the potato-delivery end.

25 Corresponding letters of reference designate like parts in all figures.

30 The journals *a* of the traction-wheels A are secured on the straight horizontal iron axle B, and these journals connect by clutches (and may be thrown "in gear" or "out of gear" by the ordinary construction—foot-lever and spring) to the journals of the large sprocket-wheels N, working upon the same axle, and are secured to steel frame C by journal-boxes, as shown in drawings. This frame C is a continuous hollow half-rectangular piece of steel, (known as "angle-iron,")

35 circular before and open in the rear, which, together with the axle, forms the support of the various parts of the machine. 40 In front of the axle B and resting in the rectangular groove of the frame C at the beginning of the circular portion of said frame is a cross-bar D, bolted to the frame C, and to this cross-bar is bolted and rigidly fastened the pole, on either side of which horses are attached for guiding and drawing the machine. Upon the rear of the pole is rigidly bolted a piece of spring-steel, supporting the seat E. Midway between the pole and the plowshare to the U-shaped bar F is bolted on either side two bars G, which pass forward and inward, unite, and form the at-

tachment of the doubletrees, or point of traction, to which horses are hitched.

To the frame C on the outside at the ends 55 of the cross-bar D are bolted two straps *f*, which secure the ends of the U-shaped bar F, which is adjustable and bent to this form, with the opening upward. In the bend of this bar F rests the curved metallic plowshare, which is riveted to it and to a short bar welded at right angles to the U-shaped bar at its lowest point and which extends under the share, performing the office of a shoe. To these upright parts of the U-shaped bar 65 just above the plowshare *g* on either side is bolted the elbow-bar *h*, which bends downward and backward, and each is bolted to the end of the bars H, thus supporting bars H, which form the frame for the endless elevator-apron *i*, which is protected on either side by the side-boards, of sheet-iron, riveted to said bars H. 70

At the downward bend of the elbow-bar *h* is attached the small link-bar I, which passes 75 upward and fastens by a movable joint or link to sector K, which is provided with a spring, pawl, and lever, within easy reach of the seat, for elevating or lowering the plowshare. 80

The side bars H are spliced at the upper and rear ends by a clutch-and-bolt arrangement and is adjustable as to length. The spliced portion of said side bar is cast and divides into two prongs *l* and *L*, the upper of which, 85 *L*, fastens to and is movable upon the axle of the sprocket-wheels M, which turn the elevator-apron *i*, and the lower prong *l* supports the axle or crank-shaft of the sprocket-wheel *m*, and to this shaft is attached the grate P, 90 which receives the potatoes from the apron *i*.

On either side, fastened to the traction-wheels A by means of a clutch on the journals, are the large sprocket-wheels N, over which an endless chain passes and which 95 passes backward and over the small sprocket-wheel M, which revolves upon an axis securely fastened by means of long stirrup-straps *v*, bolted under the frame C, permitting a backward-and-forward movement to the journal 100 and axis of sprocket-wheel when the plow is elevated or lowered, sets in motion the sprocket M, and imparts motion to the endless apron *i*, passes backward, downward, and

under the sprocket-wheel *m*, attached to crank-shaft R, that imparts a shaking motion to the grate P, which is composed of slightly-rounded bars suspended at one end from the crank-shaft R and at the other by link-hooks (the left of which is shorter, giving slant of grate to the right) to the ends of small straps of metal *g*, bolted to the cross-bar Q, which connects the rear ends of the frame-bar C.

The endless apron *i* is composed of gas-pipe extending crosswise and riveted at either end to an endless chain which passes over sprocket-wheels which are fastened to the axle of the small sprocket-wheels M, from which the apron receives its motion. The chains of the apron pass also over a small sprocket-wheel on either side, journaled to the bars H, with the axis one (1) inch from center, thus imparting a shaking motion to the apron *i*.

The grate P is composed of a double layer of bars, the second layer being hung by link-bars underneath the first layer and suspended from the link-bars of the first layer. The first layer is composed of cross-bars extending obliquely to the rear and has larger interstices or spaces between the bars than those of the second layer, thus forming an assorter

of the potatoes, as the bars of the lower layer are shorter and do not throw the potatoes that fall upon it so far to the rear and right, thus forming two rows, one of large and one of small potatoes.

Modus operandi: The plowshare or shovel *g*, adjusted to pass under the potatoes, will remove them to the apron *i*, which elevates them, with the vegetation, to the shaker or grate P, the motion of which deposits the smaller potatoes on the slat-grate below, which in turn delivers them to the rear and right, while the vegetation, together with the larger potatoes, is delivered from the shaker or grate P in a windrow to themselves.

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

The combination of the spliced side bar H (with the prongs *l* and *L*) with the journal of the sprocket-wheel M and its support, the stirrup-strap *v*, permitting of a backward-and-forward movement upon the elevation, depression, or adjustment of the plowshare *g*, all substantially as set forth.

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Witnesses:

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