

No. 721,354.

PATENTED FEB. 24, 1903.

P. BROWN.
POTATO DIGGER.

APPLICATION FILED FEB. 21, 1900.

NO MODEL.

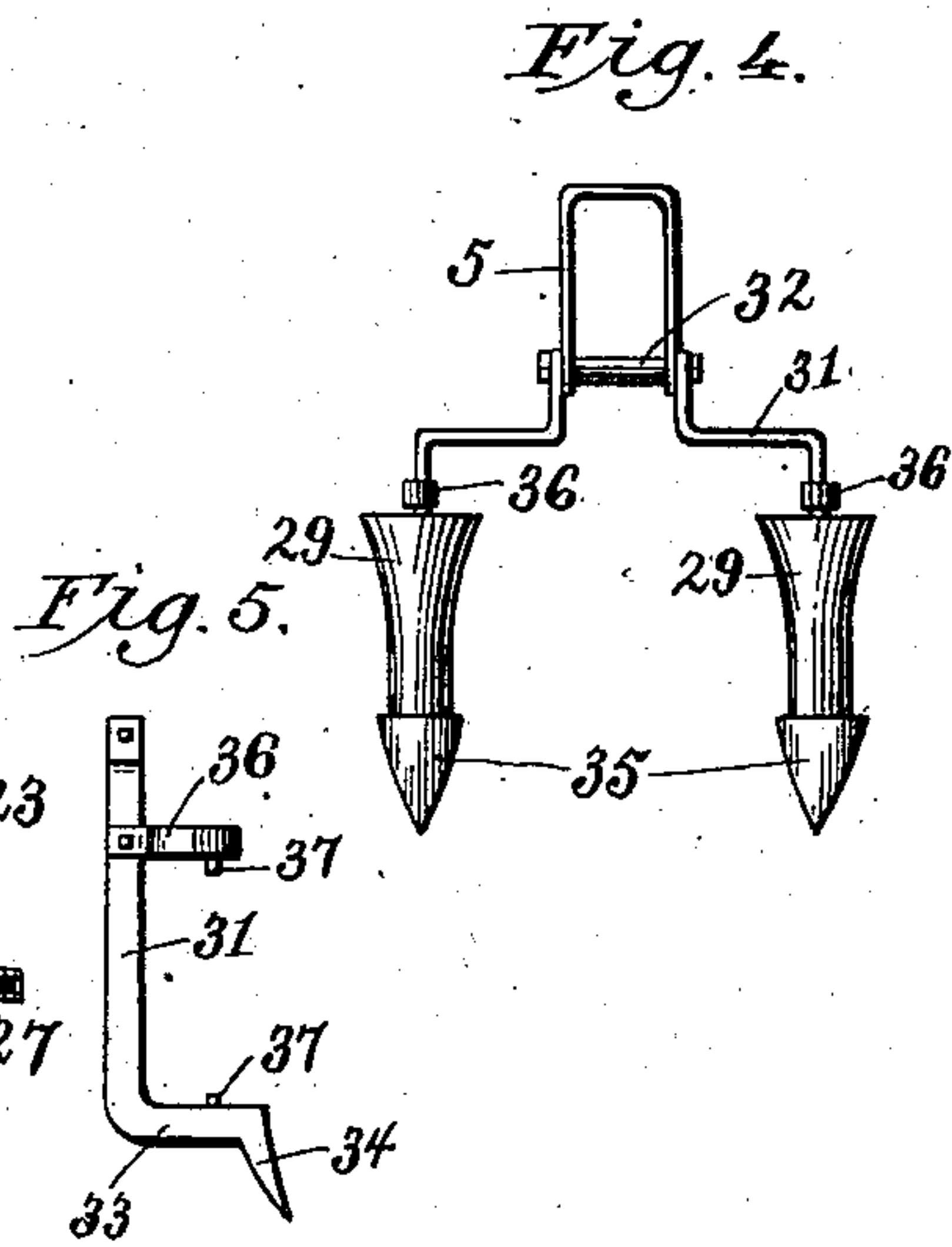
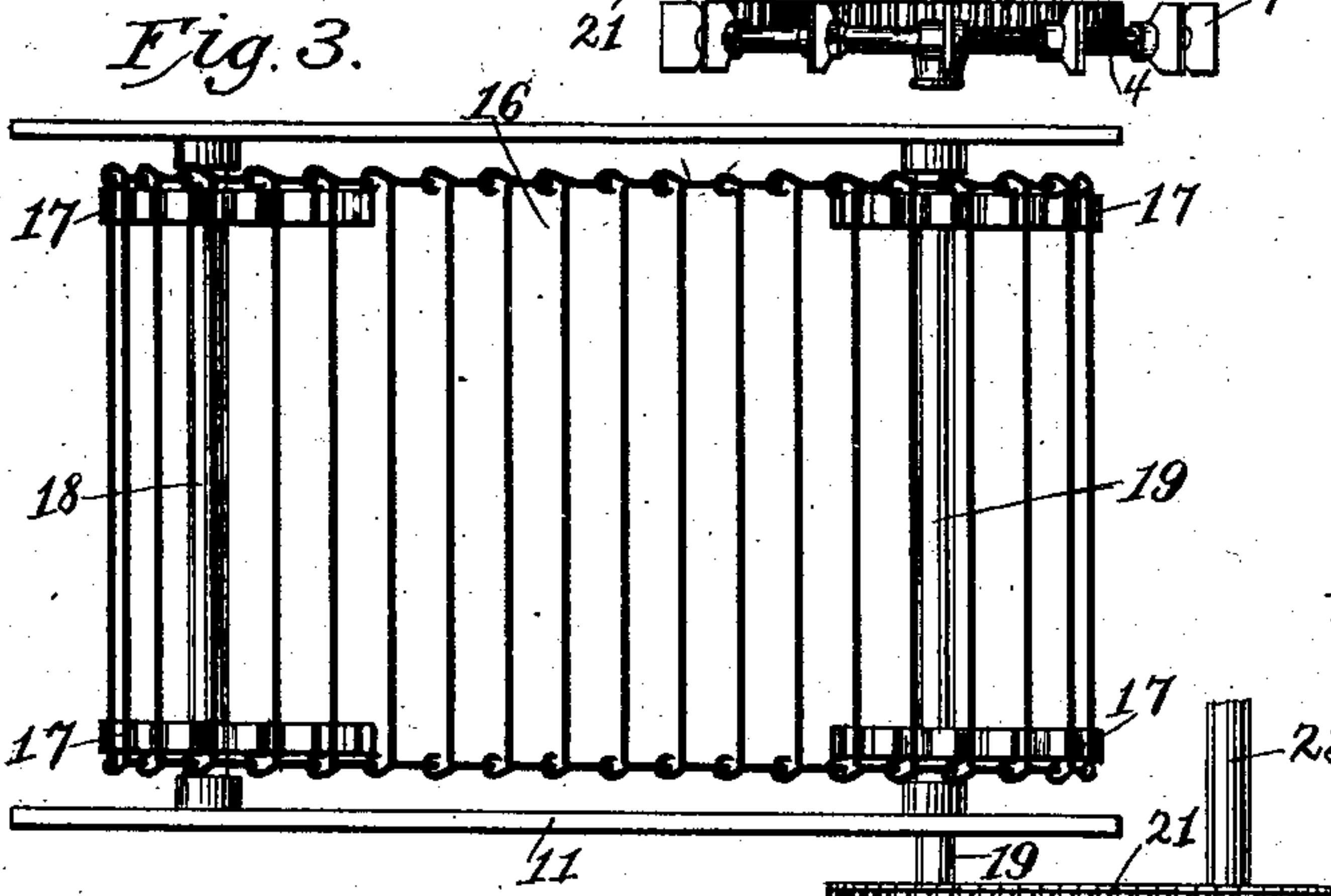
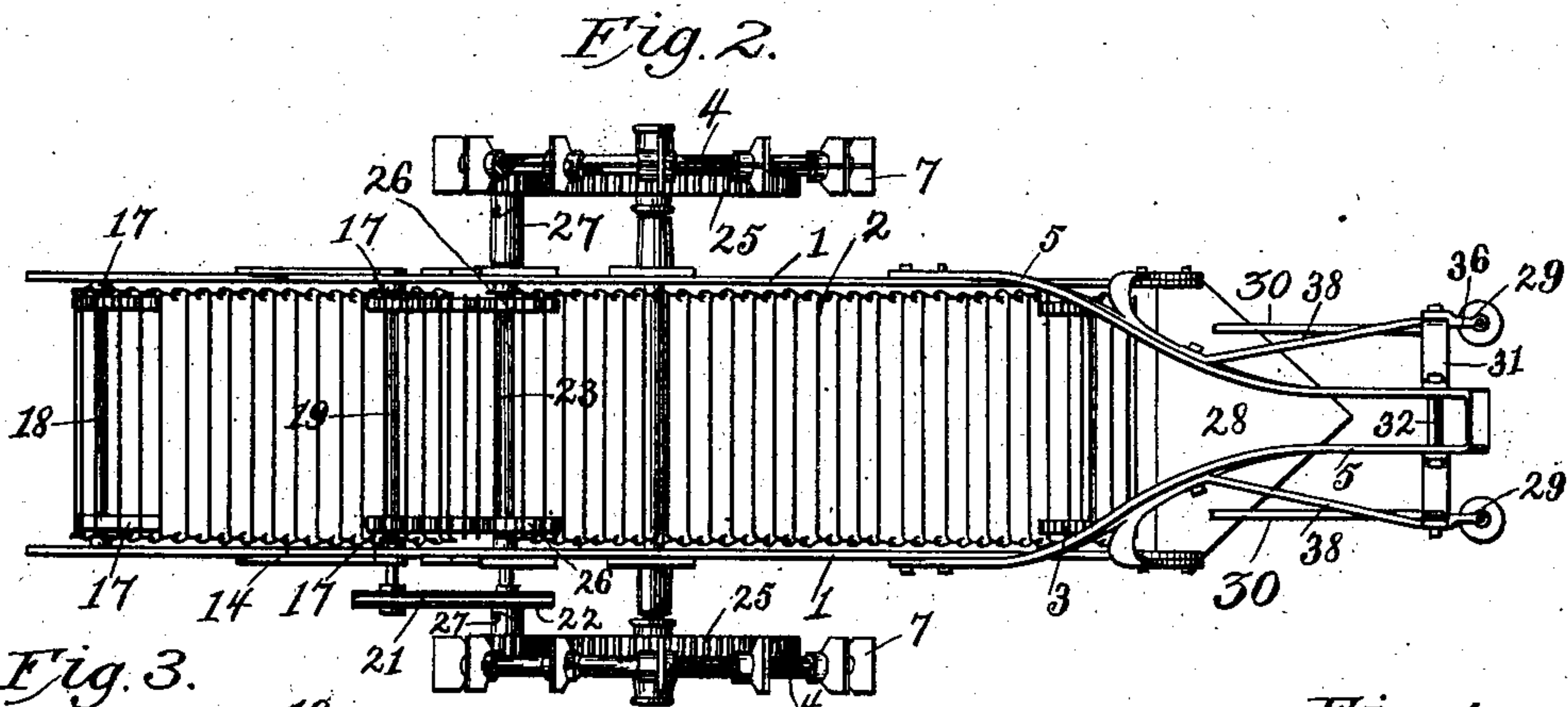
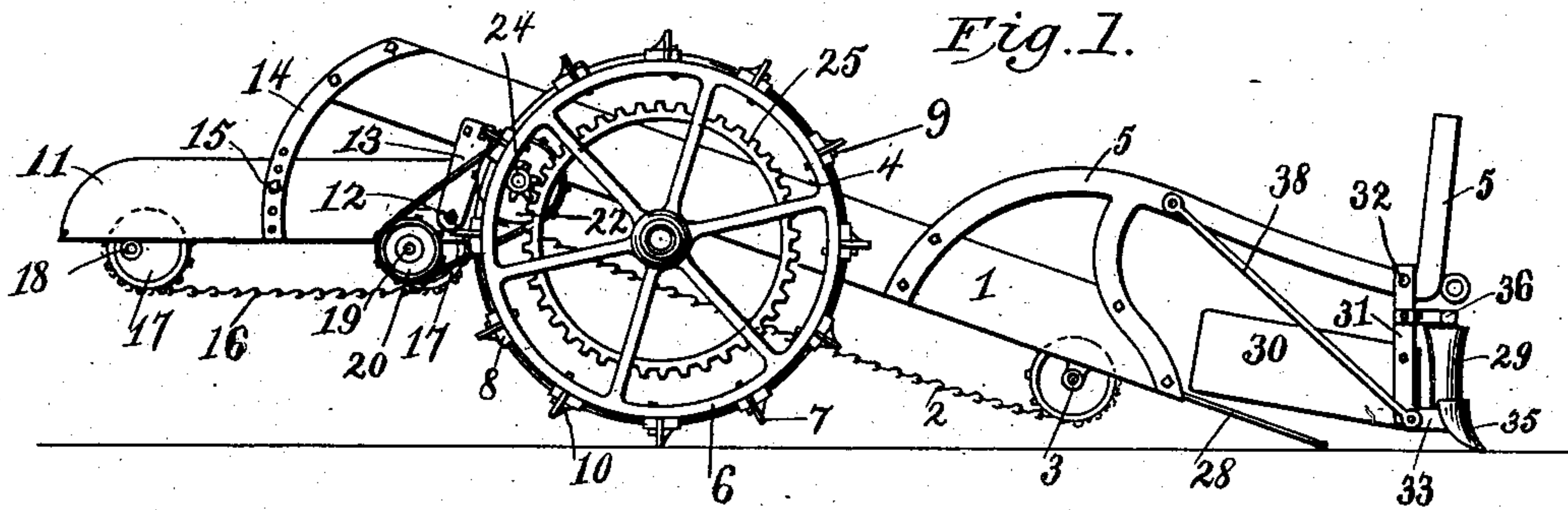


Fig. 6

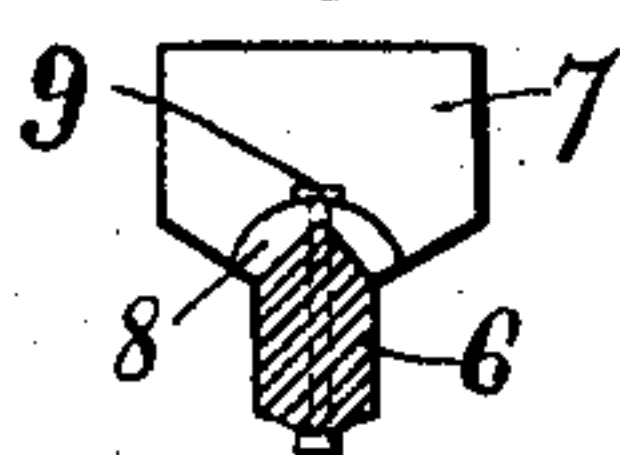
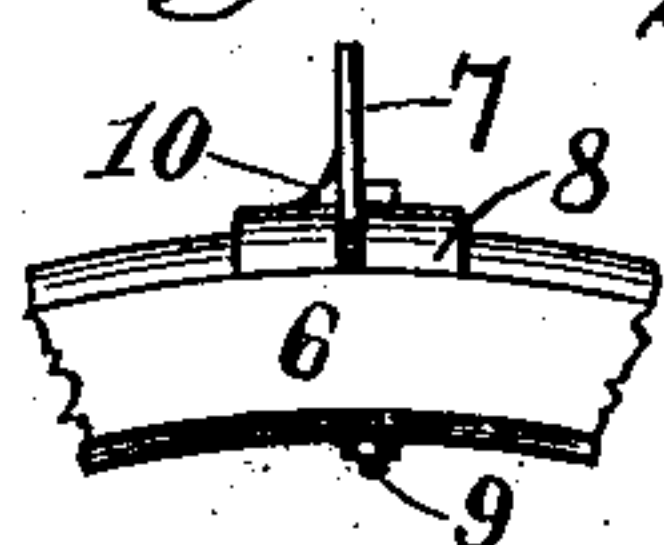


Fig. 7



Witnesses:

Charles A. Baker.
J. Kling.

Inventor;
Peter Brown,
by *[Signature]*
Att.

UNITED STATES PATENT OFFICE.

PETER BROWN, OF GREELEY, COLORADO.

POTATO-DIGGER.

SPECIFICATION forming part of Letters Patent No. 721,354, dated February 24, 1903.

Application filed February 21, 1900. Serial No. 6,034. (No model.)

To all whom it may concern:

Be it known that I, PETER BROWN, a citizen of the United States, residing at Greeley, in the county of Weld and State of Colorado, have invented certain new and useful Improvements in Potato-Diggers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in potato-diggers; and it consists in certain improvements made upon the potato-diggers for which I obtained United States Letters Patent No. 575,691, granted January 26, 1897, and No. 628,444, granted July 11, 1899; and it has for its object to provide a vine-separator having improved features located at the front of the machine in advance of the plow, so as to disengage the vines from the vines of the adjoining rows and deliver the same to the main separator in such manner that said separator will be enabled to operate more efficiently.

To the accomplishment of the foregoing and such other objects as may hereinafter appear the invention consists in the construction and also in the combination of parts hereinafter particularly described and then sought to be clearly defined by the claims, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a side elevation of the machine with my improvements applied. Fig. 2 is a plan view of the machine. Fig. 3 is a plan view of the auxiliary separator. Fig. 4 is a front elevation of the vine-separator. Fig. 5 is a side view of one of the standards carrying the revolving vine-separators. Fig. 6 is a cross-section through the rim of one of the drive-wheels, and Fig. 7 is a side view of a portion of the rim of one of the drive-wheels.

In the drawings the numeral 1 designates the frame of the main separator, having the endless carrier 2 mounted therein on sprocket-wheels 3, said frame being supported upon the drive-wheels 4 and the frame provided with the draw-bar 5, all of which parts may be constructed and arranged as set forth in

said Letters Patent before mentioned, the drive-wheel, however, having the improved features which I shall describe. I make the rim of the drive-wheel comparatively thin and deep in cross-section and form the outer periphery thereof wedge-shaped, as illustrated clearly in Fig. 6 of the drawings, said rim being designated by the numeral 6. By making the periphery of the rim wedge shape an angular instead of a flat surface is presented to the clay, and hence there is less liability of the clay adhering thereto and clogging between the antislipping clutches 7, secured to the rim, and the wedge-shape periphery of the rim will tend to cut and spread apart the clay, so that it will fall from the rim in the movement of the drive-wheel. The antislipping clutches 7 are formed with bosses 8 on opposite sides, the under face of which bosses is formed with wedge-shape cavities designed to receive the wedge-shape periphery of the rim, whereby the clutches are prevented from slipping or being forced sideways, the clutches being secured to the rim by bolts 9 passed therethrough, and webs 10 may be formed in the angle at the junction between the clutches and their bosses, so as to strengthen the clutches and also assist in cutting the clay which may come in contact with the rim.

The auxiliary separator is designated by the numeral 11, which at one end extends under the upper end of the main separator and is hinged thereto by means of a bolt or bolts 12 passing through the sides of the separator and the brackets 13, which will be secured to the sides of the main separator, said brackets also serving as braces. Quadrants 14 are connected to the main separator and at the lower ends have an adjustable connection with the sides of the auxiliary separator by means of bolts 15, which may pass through any one of the series of holes illustrated as formed in the quadrants, so that the auxiliary separator may be inclined or adjusted to the angle desired. The auxiliary separator is provided with an endless carrier 16, which may be formed in the same manner as the carrier to the main separator, said carrier passing around sprocket-wheels 17, eccentrically mounted upon the shafts 18 and 19, so as to impart an up-and-down move-

ment to the carrier as it travels from end to end of the separator. The shaft 19 is also provided with a sprocket-wheel 20, to which motion is transmitted by a sprocket-chain 21, which passes also around a sprocket-wheel 22, which is secured to the shaft 23 of the main separator, which shaft has pinions 24, which derive motion from the gears 25, secured to the drive-wheels, said shaft also supporting sprocket-wheels 26 of the main separator and clutches 27, which clutches will permit a backward movement of the separators without transmitting motion to their endless carriers. It will thus be observed that motion is transmitted to the endless carrier of the auxiliary separator from the same shaft which transmits motion to the endless carrier of the main separator and that the auxiliary separator is so located as to receive the potatoes from the main separator and subject them to a further separation, so that all dirt and foreign matter will be taken therefrom before their delivery from the auxiliary separator, the arrangement of parts for such purpose being simple and efficient and so arranged as to economize space and make their action positive, the auxiliary separator at the same time admitting of adjustment to various inclinations which will best serve the purpose of separation.

In advance of the plow 28 to the main separator and to opposite sides thereof there are mounted two rollers 29, so located that they will separate the vines of the row traversed by the machine from the vines of the adjoining rows, so that when the vines are dug up by the plow 28 such vines and their potatoes will be directed to the endless carrier of the main separator without being held back by entanglement with the vines of the adjoining rows, guide-boards 30 being extended from said rolls to a point over the plow 28, so as to properly direct or guide the vines over said plow as they are moved to the carrier. These rollers are supported upon standards 31, which at their upper ends are secured by a bolt 32 to the yoke portion of the draw-bar 5, as illustrated clearly in Fig. 4 of the drawings, said standards being bent outwardly from said yoke and then downwardly and having at their base a forwardly-extending portion 33, having a downwardly-extending point 34, to which are bolted or otherwise secured the shovels 35. The standards are also provided at their upper portion

with brackets 36 bolted thereto, upon which brackets and to the lower extension 33 the rollers 29 are journaled by pins 37 or otherwise, the brackets being braced by means of rods 38, secured thereto at their lower ends and secured at their upper ends to the draw-bar 5. By locating these two rollers, as described, in advance of the plow 28 and locating the guides 30 between said rollers and the endless carrier of the main separator the vines of the row being plowed are not only separated from the vines of the adjoining row, but such vines are directed inward from both sides of the machine by the rollers in the direction of the endless carrier of the main separator, the guide-boards 30 assisting in directing the vines to the endless carrier, thus providing a constant and regular feed of the vines to the carrier, so that the latter can efficiently perform its work without clogging of the vines and without the endless carrier working with no vines supplied by reason of their clogging on the sides of the carrier-frame.

I have illustrated and described with particularity the preferred details of construction and arrangement of the several parts; but it is obvious that changes can be made and essential features of my invention still be retained.

Having described my invention and set forth its merits, what I claim is—

1. In a potato-digger, the combination of the main separator having an endless carrier, a plow at the forward end of the carrier and in line therewith, and means for separating the vines of the row being plowed from the vines of the rows on both sides thereof, said means consisting of two upright revoluble rollers spaced apart so as to lie one to each side of the plow and located in advance of the plow, substantially as described.

2. In a potato-digger, the combination with the main separator having an endless carrier and a plow, of the vertically-mounted rotatable rollers supported in front of the plow at opposite sides thereof, and guides extending to the rear of said rollers toward the plow, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

PETER BROWN.

Witnesses:

FRED WILLIAMS,
A. J. ELLIOTT.