

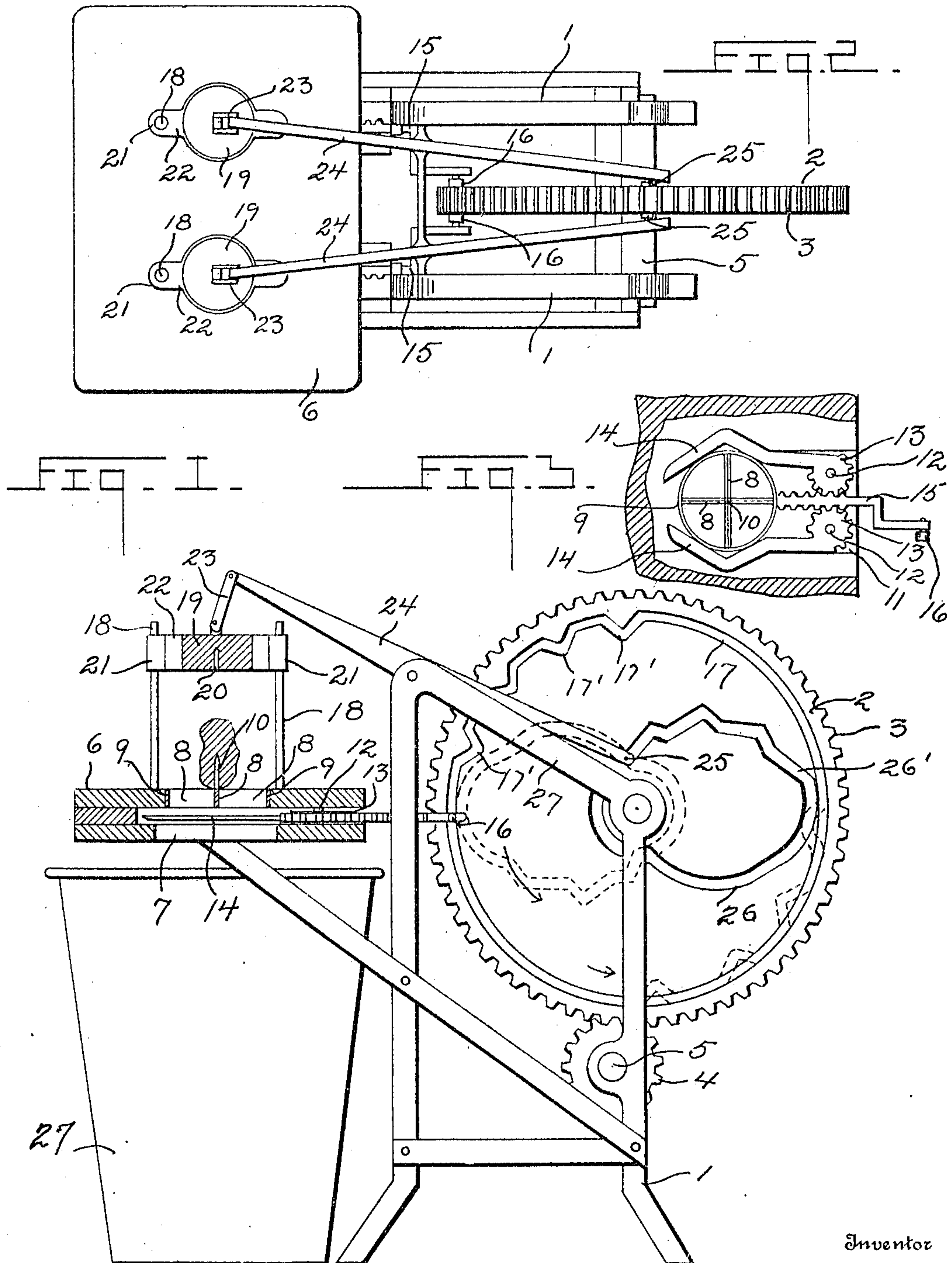
H. E. WELLS.

POTATO CUTTER.

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947,362.

Patented Jan. 25, 1910.



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HARRY E. WELLS, OF GORDON, NEBRASKA.

POTATO-CUTTER.

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Specification of Letters Patent.

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Application filed April 27, 1909. Serial No. 492,435.

To all whom it may concern:

Be it known that I, HARRY E. WELLS, a citizen of the United States, residing at Gordon, in the county of Sheridan and State of Nebraska, have invented certain new and useful Improvements in Potato-Cutters, of which the following is a specification.

This invention relates to potato cutting machines, and has for its primary object to provide a machine of this class by means of which seed potatoes may be very quickly cut for planting purposes.

Another object is to provide a machine in which both the vertical pressure blocks and horizontal knives are automatically operated, thus relieving the operator of any labor whatever beyond placing the potatoes in position to be cut.

A further object is to provide new and novel means for operating the horizontal or quartering knives.

A still further object is to provide an extremely simple and inexpensive construction whereby two potatoes may be rapidly cut at each revolution of the operating wheel.

Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation of my improved machine, Fig. 2 is a plan view thereof, Fig. 3 is an enlarged plan view of the horizontal oscillating cutting knives.

Referring to the drawings, 1 indicates supports of any suitable construction, between which is revolubly mounted the wheel 2, the periphery of which is provided with gear teeth 3 in mesh with a pinion 4 also mounted in the supports 1 upon the power shaft 5.

A table 6 is supported at a convenient height above the floor and is provided with openings 7, in which are held the vertical cutting blades 8, the ends of which are secured to the metallic rings 9 in any approved manner. The upper edges of the blades 8 are sharpened and are disposed at right angles to each other. A pin 10 pro-

jects from the center or meeting point of the blades and is adapted to receive and support a potato, as will be later described. Transverse openings 11 extend inwardly toward the wheel 2, and arranged therein upon the short shafts 12 are the cogs 13, equally spaced upon either side of the pin 10. These cogs are each provided with one member of a pair of horizontal oscillating blades 14 the outer ends of which are substantially V-shaped in plan. A reciprocating bar 15 is provided with racks on its edges which extend between the cogs 13 and engage therewith. The inner ends of the bars 15 have rotatably mounted thereon the rollers 16 which engage in the cam groove 17 formed in each face of the wheel 2 adjacent to the periphery thereof. Vertical posts 18 are secured in the table upon opposite sides of the openings 7, and support between them the pressure blocks 19 which are provided with the central recesses 20. Short sleeves 21 surround the posts or standards 18 and are connected to the blocks 19 by the plates 22. A link 23 is pivoted to the upper end of the blocks and has its end pivoted in one end of a lever 24, the other end of which is provided with the roller 25 which engages in a second cam groove 26 in the face of the wheel 2. The lever 24 is pivoted intermediate of its length upon an arm 27 secured to one of the supports 1. There are two of the cam grooves 26, one in either face of the wheel, as will be seen from Fig. 1 and oppositely disposed upon either side of the center thereof. It will be noted that there are four concentric arc portions 17' of the groove 17 which are so located that the rollers 16 will enter the same just before the roller 25 enters the angular portion 26' of the cam groove 26. After this occurs the knife blades 14 will be oscillated, and the block 19 will again descend and firmly press the potatoes or other fruit or vegetable upon the sharpened blades 8, thus first cutting it into quarters, and by means of the blades 14 into more minute particles. The disposition of the cam grooves is such that when the potato is being cut upon one side of the cam wheel, the lever 24 and the bar 15 upon the opposite side thereof are at rest, so that another potato may be placed upon the pin 10, thus avoiding all danger to the operator. Suitable receptacles 27 are placed beneath the openings in the table to receive the cut vegetable.

The angular portions 26' of the cam

groove 26 extend through substantially one quarter of the area of the wheel, the comparatively regular portion through another quarter thereof, and the remaining portion
 5 is disposed in concentric relation to the wheel, and is approximately semi-circular in form. Thus it will be seen from reference to Fig. 1 that when the roller upon the end of the lever 24 on one side of the wheel is
 10 about to leave the angular portion of the cam groove, that the lever upon the opposite side thereof, will be on the point of entering the angular portion of the groove by means of which it is operated. When the roller
 15 upon the end of the lever 24 is disposed in one of the concentric portions of the groove 26, the knives 14 will be oscillated by the cam portion 17' of the groove 17, which are inoperative when the roller 16 upon the end
 20 of the rack bar is engaged in the concentric portion of the groove 17.

Any suitable means may be employed for operating the machine, but a motor is preferably provided.

25 As the pressure block 19 descends and forces the potato downward the pin 10 will enter the recesses 20 formed in the bottom thereof. By this means the pressure block may be kept in contact with the potato until
 30 it has been entirely forced through the blades 8.

From the foregoing the operation and many advantages of my improved machine will be apparent. Potatoes may be very rapidly cut for seed purposes, as the machine requires no attention whatever beyond feeding.

My invention is moreover very simply constructed and consequently inexpensive to manufacture and highly efficient and durable
 40 in operation.

Having thus described my said invention, what I claim as new and desire to secure by United States Letters Patent is:

1. In a machine of the class described, the
 45 combination with a wheel revolubly mounted and provided in each face with a cam groove, of a table arranged adjacent to said wheel, openings in said table, cutting members in said openings, pressure blocks vertically
 50 movable over said openings, levers connected to said blocks, one end of said levers being engaged with the cam groove in said wheel, oscillating cutting members arranged below the openings in said table, means for simultaneously operating said pressure blocks and
 55 cutting members upon the rotation of said wheel, and means for rotating said wheel.

2. In a machine of the class described, the combination with a revolubly mounted wheel,
 60 gear teeth formed on the periphery of said wheel, a cam groove in each face of said wheel adjacent to the periphery thereof, cam grooves arranged upon either side of the center of said wheel, a table arranged at one
 65 side of said wheel having openings therein,

cutting members in said openings, pressure blocks positioned above said openings, levers connected to said blocks, one end of said levers being engaged within said last mentioned cam grooves, oscillating cutting mem-
 70 bers arranged in said table below said openings, and means connecting said cutting members with said wheel, said cutting members and pressure blocks being simultaneously operated by the rotation of said wheel. 75

3. In a machine of the class described, the combination with a revolubly mounted wheel, gear teeth formed in the periphery of said wheel, a cam groove in each face of said wheel adjacent to the periphery thereof, cam
 80 grooves arranged upon either side of the center of said wheel in opposite relation to each other, a table arranged upon one side of said wheel, openings in said table, cutting members in said openings, pressure blocks slid-
 85 ably mounted above said openings, levers pivoted between their ends, one end of said levers being connected with said pressure blocks, the other end thereof being engaged in said first mentioned cam grooves, hori-
 90 zontally oscillating cutting blades located beneath said openings, and means operated by said wheel for oscillating said cutting blades.

4. In a machine of the class described, the combination with a wheel revolubly mounted
 95 and provided upon each face thereof with cam grooves, a table arranged upon one side of said wheel, openings in said table, cutting members in said openings, pinions mounted in said table carrying cutting blades
 100 disposed beneath said openings, a rack bar engaging with said pinions and provided with a roller upon its end adapted to engage with one of said cam grooves, means for supporting a vegetable over said cutting
 105 members, and additional means operated by said wheel for forcing said vegetable through said cutting members.

5. In a machine of the class described, the combination with a wheel revolubly mounted
 110 and provided upon each face thereof with cam grooves, gear teeth formed in the periphery of said wheel, a pinion adapted to mesh with said teeth, a table arranged upon one side of said wheel, openings in said table
 115 cutting members in said openings, vertical posts disposed upon either side of said openings, pressure blocks vertically movable between said posts, levers pivoted between their ends, said levers being provided at one end
 120 thereof with rollers adapted to engage in said cam grooves, the other end of said levers being connected by a link with said pressure blocks, a pin disposed over the center of said opening and adapted to support a vegetable
 125 thereon, and horizontally oscillating cutting blades arranged beneath said opening adapted to operate in unison with said pressure blocks.

6. In a machine of the class described, the 130

combination with a wheel revolubly mounted
and provided upon each face thereof with
a plurality of cam grooves, said wheel being
formed with teeth on the periphery thereof,
5 a pinion adapted to mesh with said teeth,
a table arranged at one side of said wheel,
an opening extending through said table,
cutting blades extending at right angles to
each other disposed within said openings, a
10 vertical pin formed at the center of said
blade and adapted to support a vegetable
thereon, vertical posts disposed upon either
side of said opening, pressure blocks slidably
mounted between their ends, levers pivoted
15 between their ends, one end of said levers be-
ing engaged with one of said cam grooves, in

each face of said wheel, the other ends there-
of being connected by a link with said pres-
sure blocks, pinions mounted in said table,
horizontally oscillating cutting blades con- 20
nected to said pinions and disposed beneath
said openings, rack bars adapted to engage
with said pinions, and a roller upon the in-
ner end of said bars engaged in the other of
said cam grooves. 25

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

HARRY E. WELLS.

Witnesses:

MYRON H. MILLER,
FAY C. HILL.