V. & J. V. ALBERT.

VEGETABLE GRINDING MACHINE.

APPLICATION FILED MAR. 26, 1912.

1,042,184. Patented Oct. 22, 1912.

Fig. 1.

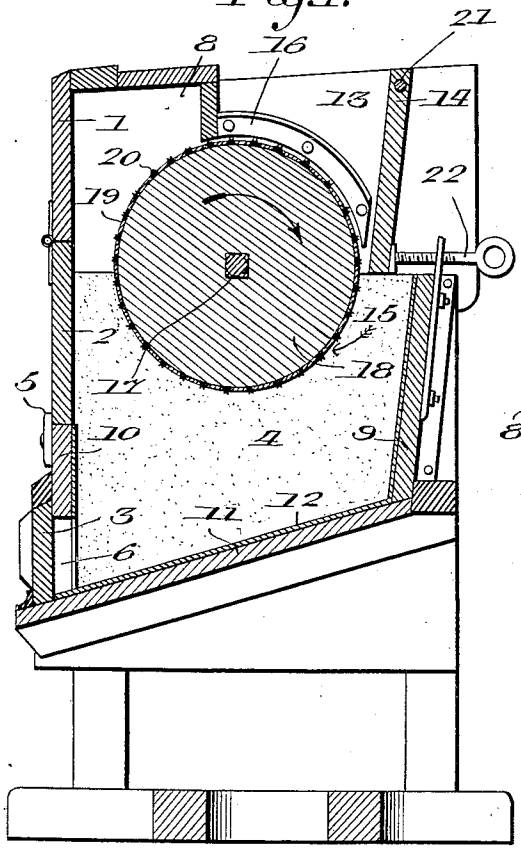

Fig. 2.

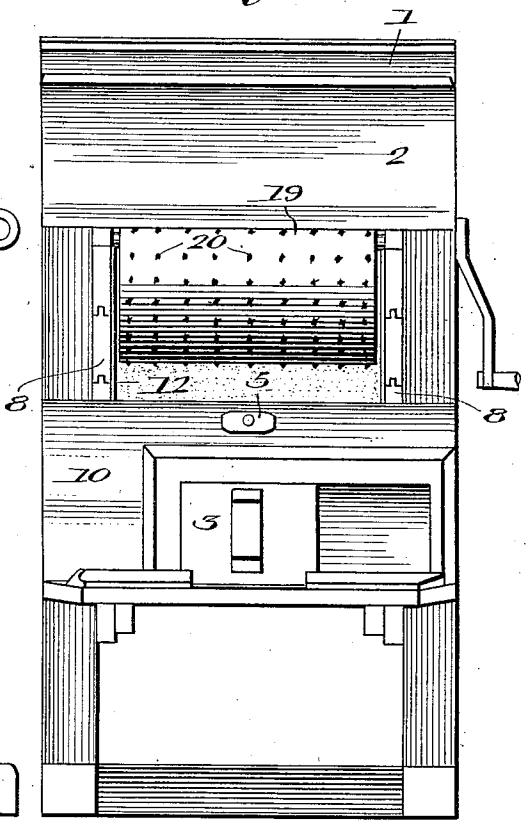

Fig. 3.

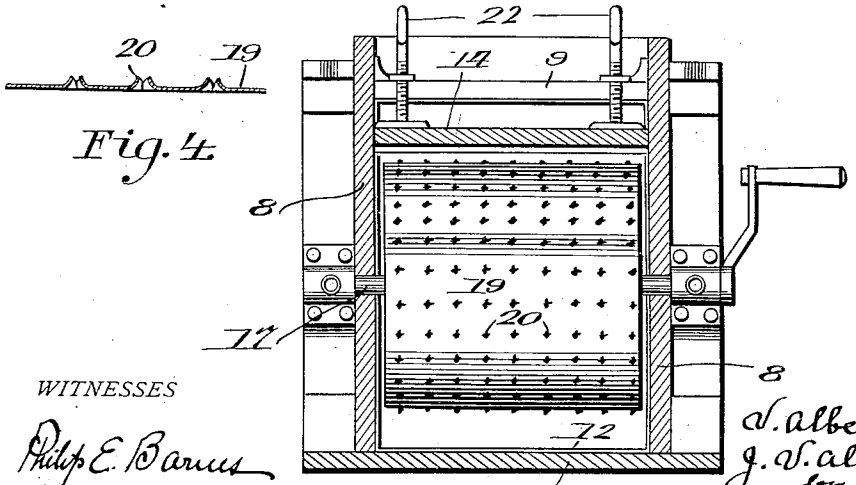

Fig. 4.

WITNESSES

Philip E. Barnes

Edna J. Sheeley.

INVENTORS.

V. Albert and

J. V. Albert

by James J. Sheely & Co.

Attorneys.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

VÉTAL ALBERT AND JOSEPH V. ALBERT, OF CARIBOU, MAINE.

VEGETABLE-GRINDING MACHINE.

1,042,184. Specification of Letters Patent. Patented Oct. 22, 1912.

Application filed March 26, 1912. Serial No. 686,331.

To all whom it may concern:

Be it known that we, VÉTAL ALBERT and JOSEPH V. ALBERT, citizens of the Dominion of Canada, residing at Caribou, in the county of Aroostook and State of Maine, have invented new and useful Improvements in Vegetable-Grinding Machines, of which the following is a specification.

Our present invention pertains to vegetable grinding machines; and has for its object to provide a simple and inexpensive machine designed more especially for grinding potatoes, and constructed in such manner that it is possessed of high capacity and is adapted to be expeditiously and thoroughly cleaned when occasion demands.

While designed particularly for grinding potatoes, the machine may be used to advantage in grinding turnips, carrots and other vegetables, as will be fully understood from the following description when the same is considered in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a vertical section taken through the center of our novel machine from the front to the rear thereof. Fig. 2 is a front elevation of the machine. Fig. 3 is a horizontal section of the machine taken in the plane of the center of movement of the grinding drum, looking downward. Fig. 4 is a section of a portion of the toothed cylinder comprised in the grinding drum.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

In the preferred embodiment of our invention, the casing 1 of our novel machine is provided in its front wall with a vertically swinging door 2, and a horizontally sliding door 3. The door 2 is designed to afford access to the receiving chamber 4 of the machine, and is held closed during the operation of the machine by a turn-button 5 or any other suitable means. The door 3 also affords access to the receiving chamber 4 and controls the discharge outlet 6 of the said chamber. In other words, when the door 3 is closed, the ground potatoes are prevented from passing through the discharge opening, while when said door 3 is open the ground potatoes can freely pass from the chamber 4 through the opening 6 and into a receptacle placed to receive the same.

As will be readily understood by reference to Figs. 1 and 3, the chamber 4 comprises vertical side walls 8, an upright back wall 9, an upright front wall 10, and a bottom wall 11. We would also have it here understood that the said chamber 4 is lined with waterproof material indicated by 12; the said waterproof material covering the side walls, back wall, front wall and bottom wall of the chamber for a purpose hereinafter set forth. It will also be observed by reference to Fig. 1 that the bottom wall of the chamber 4 is inclined sharply downward and forward; the inclination being continued through and beyond the discharge opening 6 to facilitate the passage of the ground potatoes through the said opening and to a receptacle placed to receive the ground potatoes.

In the upper portion of the casing is provided a hopper 13, and the back wall 14 of the hopper is inclined downward and slightly forward and has its lower edge disposed in about the same horizontal plane as the center of movement of the grinding drum 15. It will also be observed that curvilinear guards 16 are provided in the hopper and above the spaces between the ends of the grinding drum and the ends of the hopper, with a view to preventing the passage of potatoes through the said spaces. From this it follows that the potatoes when ground can only move downward between the periphery of the grinding drum and the lower portion of the wall 14.

The grinding drum 15 is imperforate and is preferably made up of a shaft 17 journaled in suitable bearings in the casing, body 18 fixed on said shaft, and a sheet-metal cylinder 19 surrounding and supported by the solid body 18 and having teeth 20 formed by punching it outward at closely arranged points throughout its area. Obviously the shaft of the drum may be turned by hand through the medium of a crank, or may be turned by engine power, as may be found most expedient.

In the practical use of our novel machine, both of the doors hereinbefore referred to are closed, and the potatoes to be ground are delivered to the hopper; the drum 15 being turned in the direction indicated by arrow in Fig. 1. Incidental to said operation it will be manifest that the potatoes will be ground or reduced to small pieces between the drum and the lower portion of the wall 14; and it will also be manifest that

the ground potatoes will gravitate to and collect in the chamber 4. Then when the desired quantity of potatoes is ground, a receptacle is placed below the opening 6 and the door 3 is slid open, whereupon the ground potatoes will pass down the inclined bottom of the chamber 4 and into the receptacle. When necessary, the door 2 may be readily opened, and then an attendant of the machine can reach in through the opening controlled by said door and move the potatoes toward the opening 6.

By reason of the grinding of the potatoes being accomplished as described between the periphery of the drum 15 and the lower portion of the wall 14, it will be manifest that all that is necessary to clean the machine is to pour water down between the periphery of the drum and the lower portion of the wall 14, since when this is done the water will flush the said passage and will also flush and pass freely from the chamber. It will also be manifest that the solid body 18 which is preferably of wood and fully occupies the cylinder 19, precludes particles of potatoes or other vegetables getting inside the cylinder. From this it follows that the machine is adapted to be expeditiously and thoroughly cleaned; also, that there is no place in the machine in which vegetable particles can lodge and decompose.

The wall 14 is preferably hinged at 21, and is backed by screws 22, and hence said wall can be adjusted to assure the production of potato particles of different sizes.

Having described our invention, what we claim and desire to secure by Letters-Patent, is:

The herein described vegetable grinding machine, comprising an imperforate drum having peripheral teeth, a casing, a chamber in the casing and having a flat smooth and imperforate bottom wall inclined downward and forward and an unobstructed space intermediate the drum and said bottom wall and also having an opening in its front wall extending down to said bottom wall at an intermediate point adjacent the forward edge thereof, a door for normally closing said opening, a hopper formed in the casing and disposed above said drum and chamber and having a back wall; the bottom of the hopper being formed by the said drum, and the perimeter of the drum being spaced from the said back wall, and a door controlling an opening in the front wall of the casing and disposed opposite the side and lower portion of the drum.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

VÉTAL ALBERT.
JOSEPH V. ALBERT.

Witnesses:
HENRY H. JEWELL,
GRACE H. JEWELL.