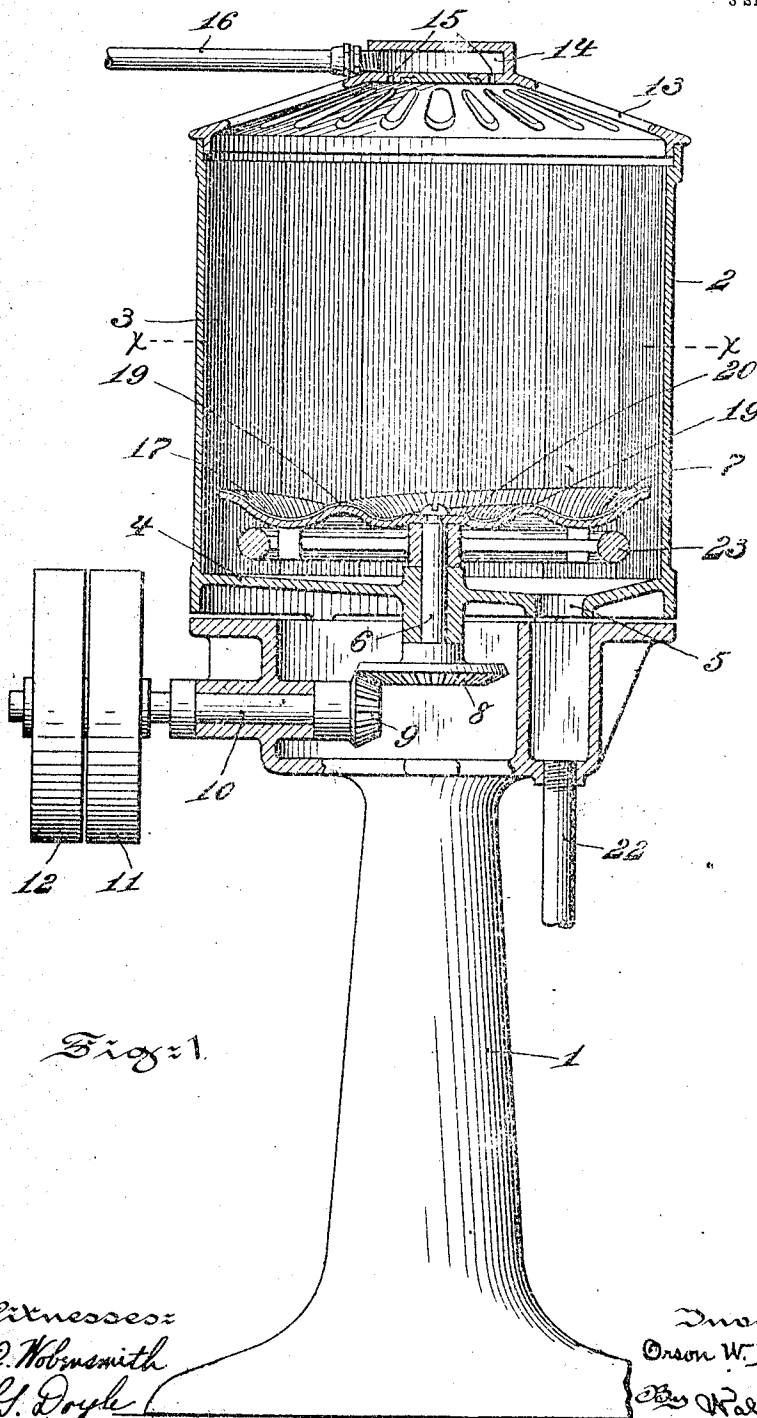


No. 860,349.

PATENTED JULY 16, 1907.

O. W. BRENIZER.
PARING MACHINE.
APPLICATION FILED APR. 5, 1906.

3 SHEETS—SHEET 1.



Witnesses:
Geo. C. Holmsmith
J. H. Doyle

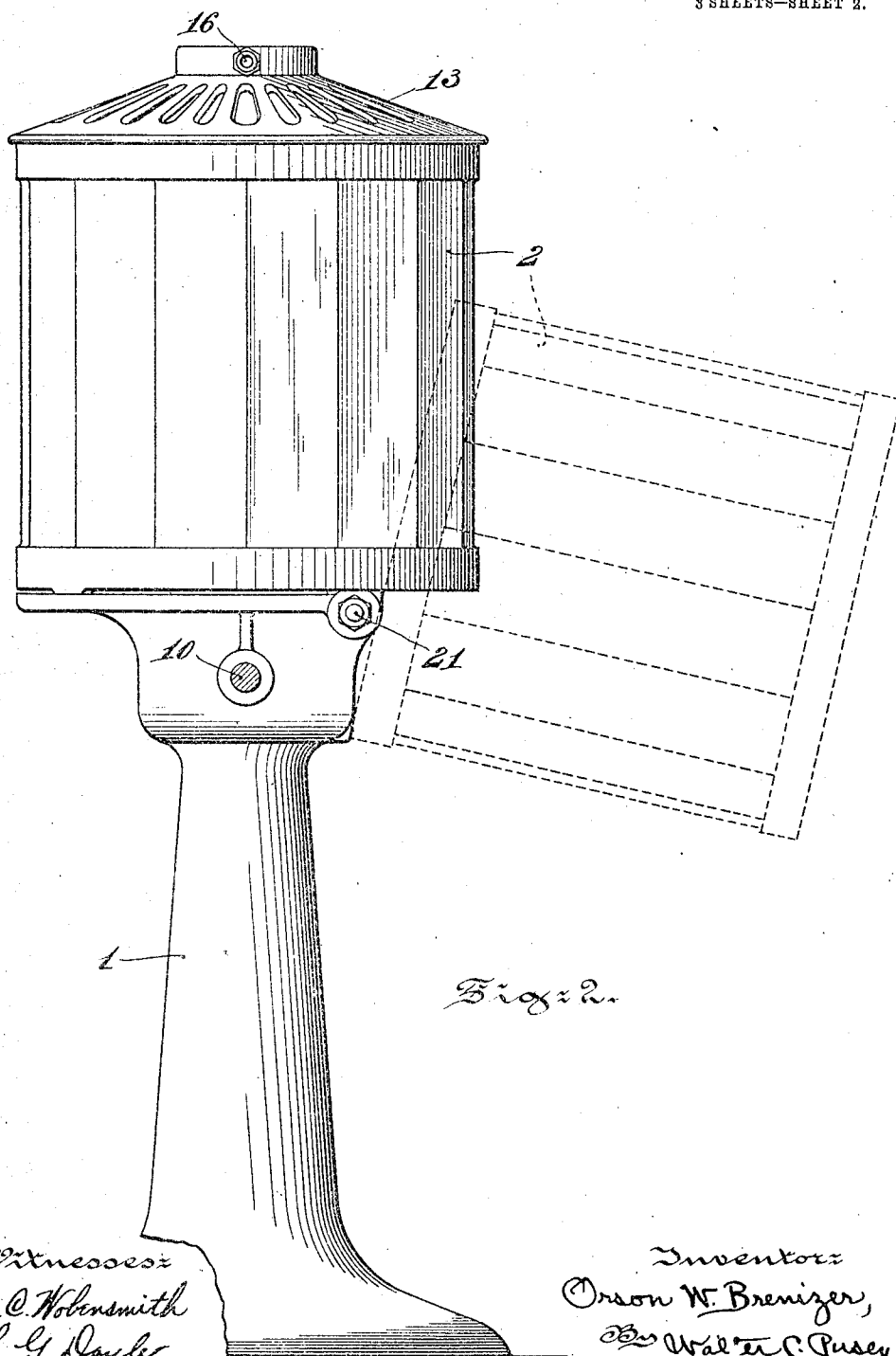
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig: 3.

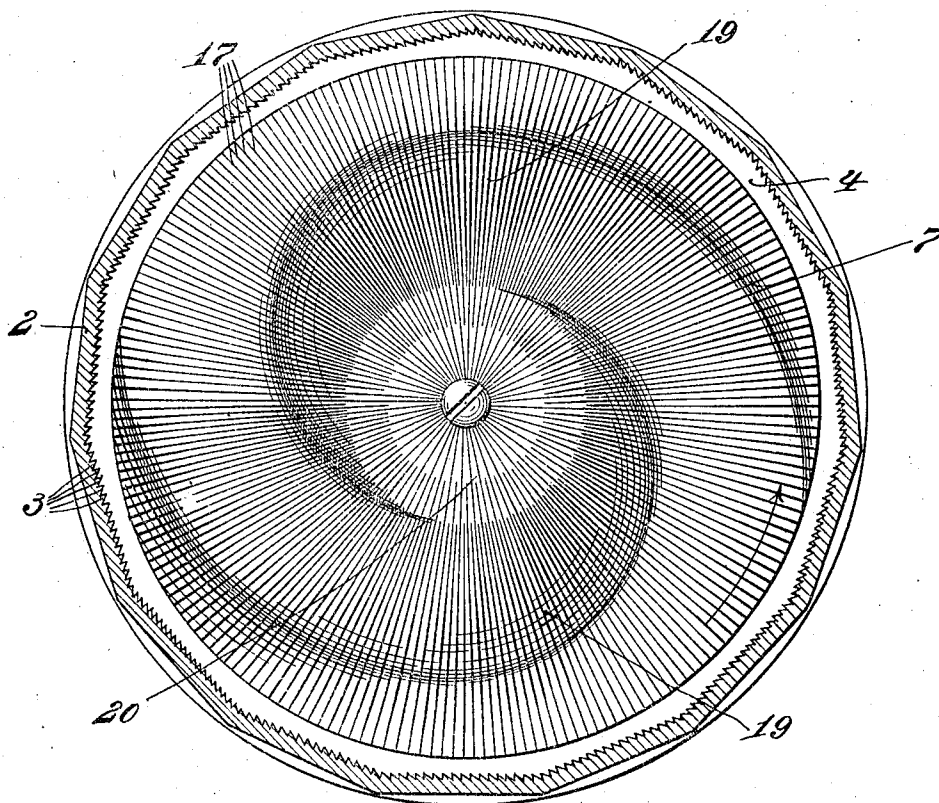
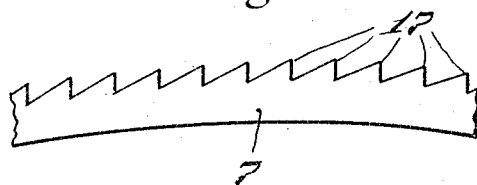


Fig: 4.



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UNITED STATES PATENT OFFICE.

ORSON W. BRENIER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE AMERICAN FRUIT MACHINERY COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF DELAWARE.

PARING-MACHINE.

No. 860,349.

Specification of Letters Patent.

Patented July 10, 1907.

Application filed April 5, 1906. Serial No. 300,087.

To all whom it may concern:

Be it known that ORSON W. BRENIER, a citizen of the United States, and residing at the city and county of Philadelphia, in the State of Pennsylvania, has invented certain new and useful Improvements in Paring-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a vertical, medial section. Fig. 2 is an elevation. Fig. 3 is an enlarged section on line *x-x*, of Fig. 1. Fig. 4 is an elevation of a portion of the revolvable disk.

This invention relates to improvements in machines for paring potatoes, apples and the like, and the object of the invention is to provide a simple and efficient machine for this purpose.

To this end, the invention consists in the combinations hereinafter set forth, and particularly pointed out in the claims.

1 is a standard or supporting frame upon which is mounted a receptacle, 2, polygonal in horizontal section, and whose inner surface is provided with vertical, extending corrugations, forming teeth, 3, which teeth, in this instance, are all directed in one circumferential direction, as seen most clearly in Fig. 3. The receptacle, 2, is provided with a bottom, 4, the surface of which is inclined toward an outlet opening, 5, as seen in Fig. 1, for a purpose hereinafter appearing. Secured to the upper end of a vertical shaft, 6, extending through and journaled in the bottom, 4, of the receptacle, 2, is a horizontally disposed disk or plate, 7, of a peculiar construction hereinafter described. On the lower end of said shaft, 6, is a beveled gear, 8, engaging a corresponding gear, 9, on a horizontal shaft, 10, journaled in the frame, 1; said shaft having tight and loose pulleys, 11 and 12. The top of the receptacle, 2, is normally closed by a cover or lid, 13, having in its upper portion a chamber, 14 provided with perforations, 15, extending therefrom into the upper part of the receptacle, 2, and which chamber, 14, communicates, by way of a pipe, 16, with a source of water-supply, all for a purpose hereinafter appearing. The disk, 7, is circular in plan, and its perimeter is adjacent the inner wall of the receptacle, 2. The surface of the disk is provided with radial corrugations, forming teeth, 17, which teeth, in this instance, all point in a direction opposite to that of the teeth, 3, of the receptacle, 2. The upper surface of the disk, 7, is throughout provided with a series of undulations, 19, rising from points adjacent the center of the disk, and describing spiral curves respectively, and terminating at the perimeter of the disk. The elevation of said undulations beginning at 20, at the center of the disk, and gradually and uniformly

rising to a considerable height at the perimeter, as seen in Fig. 1.

The receptacle, 2, instead of being mounted rigidly on the support, 1, is pivotally mounted on a horizontal shaft 21, as seen in Fig. 2, whereby, when the cover, 13, is removed, the receptacle, 2, may be turned over upon said pivot, 21, as indicated in dotted lines in Fig. 2, to remove the articles in the receptacle, as hereinafter explained.

The operation of the device is as follows:—The cover, 13, being removed, a quantity of potatoes, or other articles to be pared, is placed within the receptacle, 2, upon the disk, 7. The cover is then replaced and power applied to the shaft, 10, through tight pulley, 11, thus causing the vertical shaft, 6, and so the disk, 7, to be rotated. This horizontal rotation of the disk, 7, causes the teeth, 17, thereof, to engage the underlying potatoes, and chip the skins therefrom, while the mass of potatoes supported by the disk, by reason of the centrifugal force of the disk induced by its speedy rotation, and also by the character and shape of the undulations, 19, will tend to have a bodily movement outwardly from the center of the disk, 7, toward the wall of the receptacle, upwardly along said wall, engaging the teeth, 3, thereof, then, at the top of the mass, an inward movement toward the center, and then a downward movement. Of course, all the while, the mass of potatoes is also partaking, to a greater or less extent, of the rotary movement of the disk, 7. The movement outwardly, upwardly, inwardly, and then downwardly, of the body of the mass, is the resultant of the centrifugal motion tending to force the mass outwardly on the disk, and the tendency of the undulations 19, to gradually lift the mass from the center toward the perimeter of the disk. While this operation is going on, water is caused to flow through the pipe, 16, into the chamber, 14, and to descend through the perforations, 15, thereof, on to the mass of potatoes, thereby lubricating the mass, and also washing the parings therefrom, which pass downwardly between the disk and the inner wall of the receptacle, to the bottom, 4, of the receptacle, 2, whence they pass through the discharge opening, 5, into a drain-pipe, 22, of the support, 1. I would sometimes provide the shaft of the disk, 7, with a fly-wheel, 23, for the obvious purpose of preventing any jerkiness in the operation of the machine. When all of the potatoes within the receptacle, 2, have been pared, the operating belt is shifted from the tight pulley, 11, to the loose pulley, 12, the cover, 13, is removed, and the receptacle 2, is tilted upon its pivot shaft, 21, to the position shown in dotted lines in Fig. 2, (the teeth of the gears, 8 and 9, of course disengaging), and the pared potatoes removed.

Although it is not essential that the receptacle, 2, be polygonal in horizontal section, as it might be circular,

it is desirable, as the corners tend to assist in obstructing the rotation of the mass of potatoes.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent:—

- 5 1. In a machine of the class described, a receptacle the inner sides of the walls of which are provided with abrading surfaces, a disk rotatably mounted within said receptacle, the upper surface of said disk being abrasive, said disk being also provided with a spirally arranged undulation extending from adjacent the center of the disk to the perimeter of the latter for imparting to the articles within the receptacle propulsive agitation under the influence of the movement of the disk, and means for rotating the disk, substantially as set forth.
- 10 2. In a machine of the class described, a receptacle the inner sides of the walls of which are provided with abrading surfaces, a disk rotatably mounted within said receptacle, the upper surface of said disk being abrasive, said disk being also provided with a spirally arranged undulation extending from adjacent the center of the disk to the perimeter of the latter for imparting to the articles within the receptacle propulsive agitation under the influence of the movement of the disk, said undulation increasing gradually in height from adjacent the center of the disk to the perimeter thereof, and means for rotating the disk, substantially as set forth.
- 15 3. In a paring machine, the combination of a support, a receptacle thereon, whose inner walls are provided with longitudinally extending corrugations, the disk within the lower portion of said receptacle, means for rotating said disk in a horizontal plane, the upper surface of said disk being provided with a series of corrugations extending from adjacent the center thereof to the perimeter of said upper surface of the disk, and including a series of spirally disposed undulations rising from adjacent the center of said disk, and increasing in height to the perimeter thereof, substantially as set forth.
- 20 4. In a paring machine, the combination with a support, of a receptacle mounted thereon and having its lower end closed, the lower end of said receptacle having a discharge opening formed therein and inclined toward said discharge opening, the inner sides of said receptacle being also provided with abrading surfaces, a disk rotatably

mounted within said receptacle at a point above the lower end of the latter and having its upper surface abrasive, said disk being also provided with a spirally arranged undulation extending from adjacent the center of the disk to the perimeter of the latter for imparting to the articles within the receptacle a propulsive agitation under the influence of the movement of the disk, and means for spraying a liquid into the top of the receptacle.

5. In a paring machine, the combination with a support, of a vertically disposed receptacle pivotally mounted on said support, the axis of the pivot of said receptacle being substantially horizontal, abrading mechanism arranged within said receptacle, mechanism arranged upon said support for operating said abrading mechanism when said receptacle is in a vertical position, and separable connections between the mechanism of said support and the abrading mechanism of said receptacle for permitting disengagement of the latter from the mechanism of the support when said body is swung upon said horizontal axis, and whereby reengagement of the abrading mechanism with said operating mechanism is effected when said receptacle is caused to resume its vertical position, substantially as set forth.

6. In a paring machine, the combination with a support, of a vertically disposed receptacle pivotally mounted thereon, the axis of said pivot being substantially horizontal, abrading mechanism arranged within said receptacle, a vertical shaft journaled in the bottom of said receptacle and connected to said abrading mechanism for actuating the latter, a bevel gear carried by the lower end of said shaft at a point exterior to said receptacle, a horizontal shaft journaled in said support, a bevel gear carried by said horizontal shaft and engaging said first-mentioned bevel gear, whereby when said receptacle is rotated on its pivot said gears are caused to disengage, reengagement of the gears being effected when the receptacle is restored to vertical position, substantially as set forth.

In testimony whereof, I have hereunto affixed my signature.

ORSON W. BRENNER.

Witnesses:

WALTER C. POSEY,
J. HOWARD REBER.