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C. A. SCHETTLER

VEGETABLE WASHING MACHINE

Filed April 10, 1923

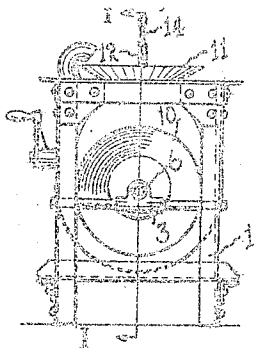


FIG. II

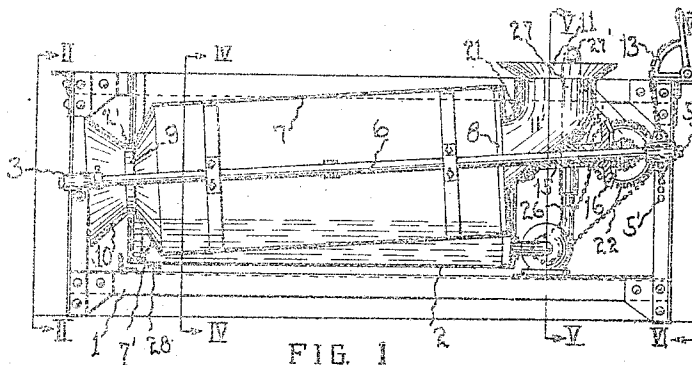


FIG. I

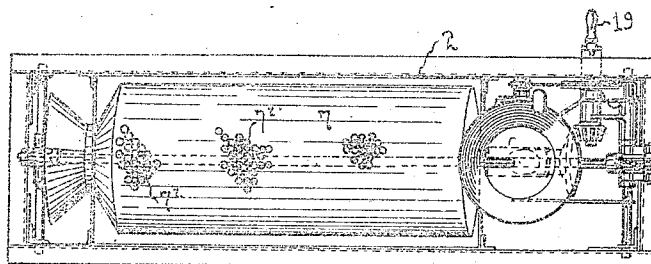


FIG. III

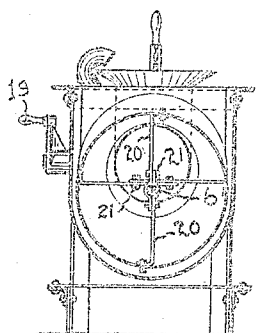


FIG. IV

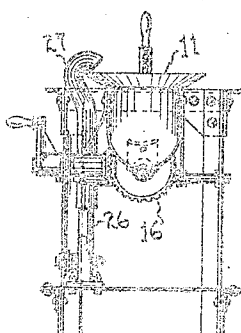


FIG. V

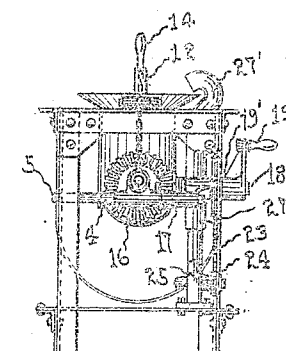


FIG. VI

WITNESS:

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## UNITED STATES PATENT OFFICE.

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## VEGETABLE-WASHING MACHINE.

Application filed April 10, 1923. Serial No. 631,094.

*To all whom it may concern:*

Be it known that I, CHARLES A. SCHETTLER, a citizen of the United States, resident of Mansfield, county of Richland, and State of Ohio, have invented new and useful Improvements in Vegetable-Washing Machines, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to machines for washing vegetables, particularly roots and tubers such as potatoes, beets, carrots, etc. The invention particularly relates to apparatus for washing these vegetables in large quantities, the object being to design apparatus of this character which is easily operated and performs the service at an extremely reasonable cost. This invention is designed to be an improvement upon a machine for this purpose shown, described and claimed in U. S. Letters Patent No. 1210853 issued to me upon January 2, 1917.

The annexed drawing and the following description set forth in detail certain means embodying my invention, such means constituting, however, but one of the various forms in which the principle of the invention may be applied.

In said annexed drawing:

Figure 1 represents a longitudinal, vertical section of my improved machine, taken in the plane indicated by the line I—I, Figure 2;

Figure 2 is an end elevation taken from the plane indicated by the line II—II, Figure 1;

Figure 3 is a plan view of the machine;

Figures 4 and 5 represent transverse vertical sections, taken in the planes represented by the lines IV—IV and V—V, respectively, Figure 1; and

Figure 6 is an end elevation taken from the plane indicated by the line VI—VI, Figure 6.

Referring to the annexed drawing in which the same elements are indicated by the same respective ordinals in the several views, I indicate by the ordinal 1 a suitable frame within which are supported the elements of my improved machine. A water reservoir is indicated by the ordinal 2. End bearings 3 and 4 for a shaft 6 are provided, the support for the bearing 3 being

plainly indicated in Figure 2 and the support for the bearing 4 being plainly shown in Figure 6. This last-named bearing 4 is vertically adjustable by any approved means, the adjustment herein shown being, by means of a chain 12 cooperating with a segment 13 pivotally-mounted upon the frame 1, as plainly shown in Figure 1, and adapted to be actuated by a hand-operated member 14. As shown, the chain 12 is secured to the bearing 4 and serves to hold said bearing, as well as the shaft 6 and rotatable vegetable cradle 7 hereinafter more fully mentioned, while a pin 5 which supports the bearing 4 in the frame 1 is removed from said bearing 4 and from one of a series of vertically-aligned holes 5' formed in each side of the frame 1 and within which the said pin 5 is positioned, so that said pin 5 can be placed in any one of the other holes 5' and again passed through the bearing 4 thus to position the bearing 4 and consequently the shaft 6 and cradle 7 at any height desired, within the range of adjustment furnished by said series of holes 5'. Thus the cradle 7 can be adjusted to the desired practicable inclination or can be operated in a substantially horizontal position. The shaft 6 axially intersects a perforated vegetable container 7 having end openings 8 and 9, the latter being a vegetable discharge opening and communicating with a flared conical discharge spout 10 adapted to discharge into any desired receiver (not shown) for the washed vegetables. The end opening 8 of the vegetable cradle 7 communicates with a vertically-aligned hopper 11, the cradle 7 being adapted to be rotatable upon the discharge spout 11' of this hopper. The reservoir 2 is provided with end openings 2' through which the discharge spout 11' and the discharge spout 10 respectively extend, the last-named discharge spout also being rotatable within the left-hand opening 2', Figure 1. As shown in Figure 1, the spout 10 is integral with a converging conical neck portion 7' of the cradle 7 and the latter rotates in the opening 2' at the plane of junction of said neck portion 7' and spout 10.

Secured to the hopper casing 11 is a sleeve 15 intersected by the shaft 6 and abutting said sleeve 15 is a hub member 15' of a bevel gear 16, said hub member 15' being secured to the shaft 6. This bevel gear meshes with a bevel pinion 17 actuated by a shaft 18

mounted in the frame 1 and secured to an operating handle 19. Instead of the handle 19, suitable means, as desired, for power operation, may be provided. Inasmuch as the shaft 6, Figure 4, is secured to the walls of the vegetable cradle 7 by means of brackets 20 having inner clamping plate portions 21 rigidly secured together about the shaft 6, as plainly shown in said Figure 4, it is evident that the actuation of the handle 19 will result in the rotation of the cradle 7 by means of which the vegetables contained in said cradle will be agitated through the cradle and thoroughly washed by the water which enters the cradle through the perforations 7<sup>2</sup>, the vegetables being continuously discharged into the cradle 7 from the hopper 11 and continuously discharged from the cradle 7 through the spout 10, the dirt also being continuously discharged from the cradle 7 through the perforations 7<sup>2</sup>. The converging neck portion 7' of the cradle 7 which is continuous with the flared discharge spout 10 retards the vegetable discharge until the vegetables are satisfactorily washed, also prevents the dirt and other refuse from discharging through the spout 10, and yet provides sufficient vegetables discharge for practical operation.

The vegetables entering through the hopper 11 receive preliminary washing and the water is circulated through the reservoir 2 by means of a pump 25 communicating with the bottom of the reservoir 2 and to whose shaft is secured a pinion 24 connected to a gear 22 secured to the hub 19' of the handle 19, by means of a chain 23. It is evident then that the operation of the handle 19 will effect the rotation of the cradle 7 and the circulation of the water through the reservoir 2, the vegetables receiving the preliminary washing by means of water lifted from the pump 25 through pipes 26 and 27, the latter having a discharge spout 27' emptying into the hopper 11. The vegetables receive also a second and thorough washing in the cradle 7 due to the agitation of the vegetables in the water in said cradle during the rotation of the latter. The pipe 27 telescopes over the pipe 26 so that the hopper 11 and pipe 27 are vertically adjustable with the shaft 6 and cradle 7. As desired the dirt can be removed with part or all of the water from the reservoir 2 through the medium of the drain 28 so that fresh water can be supplied from any suitable source through the medium of the pump 25 or emptied directly into the reservoir 2 through the open top of the latter.

What I claim is:

1. In a vegetable washing machine, the combination of a frame; a water reservoir supported therein; a perforated cradle rotatably mounted in said reservoir; means for rotating said cradle; a water-circulating pump communicating with said reservoir;

and power-transmitting means connecting said rotating means to said pump.

2. In a vegetable washing machine, the combination of a frame; a water reservoir supported therein; a perforated cradle rotatably mounted in said reservoir; a manually-operable crank-arm having a shaft for rotating said cradle; a water-circulating pump communicating with said reservoir; and a drive-chain connecting said crank-arm shaft and said pump.

3. In a vegetable washing machine, the combination of a frame; a water reservoir supported therein; a perforated cradle rotatably mounted in said reservoir; means for rotating said cradle; and means for vertically adjusting one end of said cradle, including a removable end-bearing support and means for positioning said support at different heights.

4. In a vegetable washing machine, the combination of a frame; a water reservoir supported therein; a perforated cradle rotatably mounted in said reservoir; means for rotating said cradle; and means for vertically adjusting one end of said cradle, including a removable end-bearing support, a double series of vertically-aligned mountings formed on said frame for said support, and cradle-lifting means.

5. In a vegetable washing machine, the combination of a frame; a water reservoir supported therein; a perforated cradle rotatably mounted in said reservoir; means for rotating said cradle; and means for vertically adjusting one end of said cradle, including a removable end-bearing support, a double series of vertically-aligned holes formed in said frame for said support, and cradle-lifting means secured to said bearing.

6. In a vegetable washing machine, the combination of a frame; a water reservoir supported therein; a perforated cradle rotatably mounted in said reservoir; means for rotating said cradle; a hopper adapted to discharge into said cradle adjacent one end thereof, said cradle being formed at the other end with an open converging neck portion providing continuous but retarded vegetable discharge, and means for vertically adjusting said hopper and said rotating means.

7. In a vegetable washing machine, the combination of a frame; a water reservoir supported therein; a perforated cradle rotatably mounted in said reservoir; means for rotating said cradle; a hopper adapted to discharge into said cradle adjacent one end thereof, said cradle being formed at the other end with a converging neck portion providing continuous but retarded vegetable discharge; and a flared discharge spout secured to the outer end of said neck portion, and means for vertically adjusting said hopper and said rotating means.

8. In a vegetable washing machine, the

combination of a frame; a water reservoir supported therein; a perforated cradle rotatably mounted in said reservoir; means for rotating said cradle; a hopper adapted to discharge into said cradle adjacent one end thereof, said cradle being formed at the other end with a converging neck portion providing continuous but retarded vegetable discharge; and a flared discharge spout integral with said neck portion, a water circulating pump connected with said reservoir and hopper, and means connecting said rotating means with the pump.

9. In a vegetable washing machine, the combination of a frame; a water reservoir supported therein; a perforated cradle rotatably mounted in said reservoir; means for rotating said cradle; a hopper adapted to discharge into said cradle adjacent one end thereof, said cradle being rotatable about the discharge end of said hopper; and means mounted on the frame for vertically adjusting the hopper and said end of said cradle.

10. In a vegetable washing machine, the combination of a frame; a water reservoir supported therein; a perforated cradle rotatably mounted in said reservoir; means for rotating said cradle, the latter being formed with end openings; and a hopper adapted to

feed one of said openings and having a discharge spout about which said cradle is rotatable, said reservoir being formed with end openings, through one of which said hopper spout extends, the cradle at the other end being formed with an open converging neck portion forming at its outer end the second cradle opening and being formed continuous with a flaring discharge spout, said cradle neck portion intersecting the second reservoir opening.

11. In a vegetable washing machine, the combination of a frame; a water reservoir supported therein; a perforated cradle rotatably mounted in said reservoir; means for rotating said cradle; a water-circulating pump communicating with said reservoir; a hopper communicating at one end with said cradle; means establishing communication between said pump and the other end of said hopper; means allowing relative vertical adjustment of said pump and hopper; means for vertically adjusting said hopper and one end of said cradle; and power-transmitting means connecting said rotating means to said pump.

Signed by me this 10<sup>th</sup> day of March, 1923.

CHARLES A. SCHETTLER.