

No. 889,161.

PATENTED MAY 26, 1908

W. L. WEBER.
DECORTICATOR.
APPLICATION FILED MAY 16, 1907.

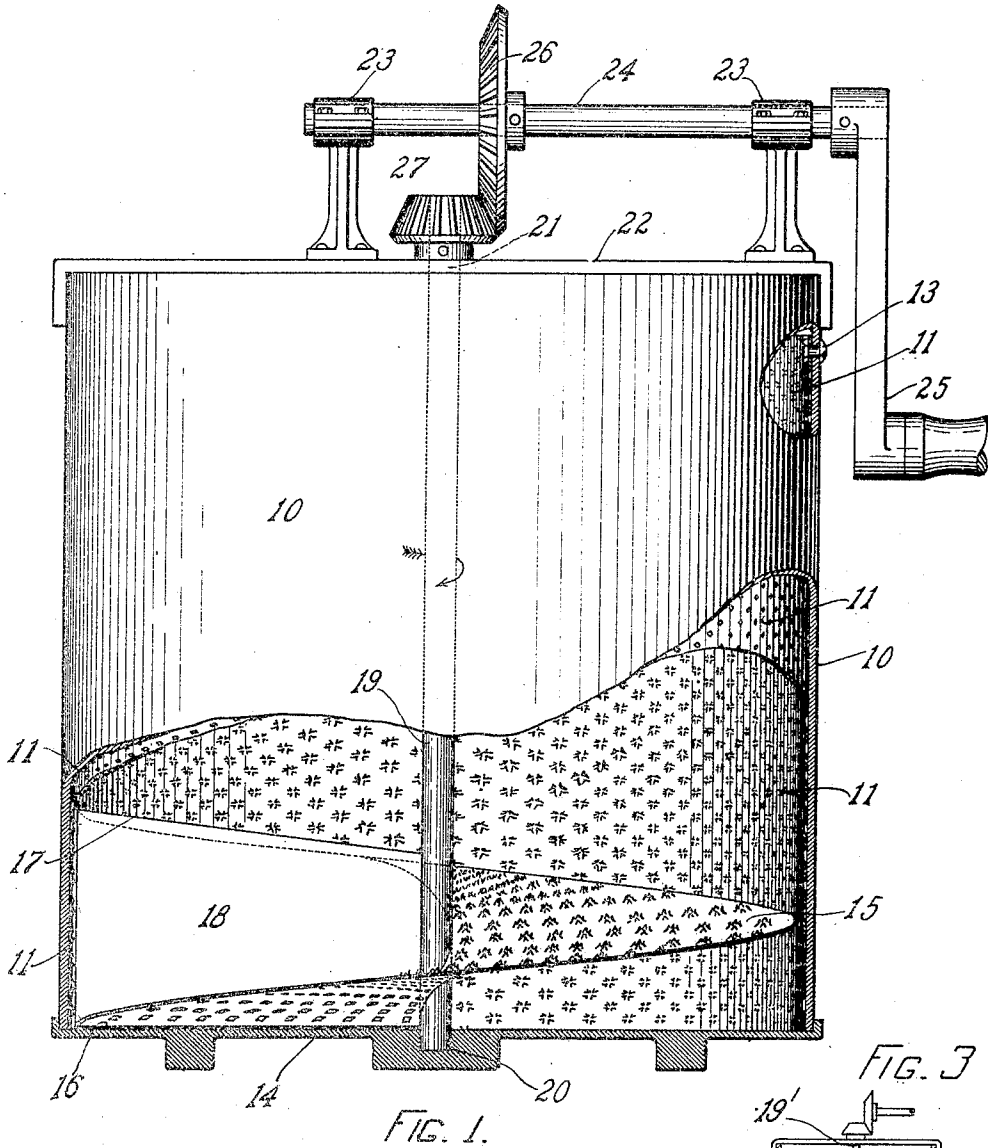


FIG. 1.



FIG. 2.

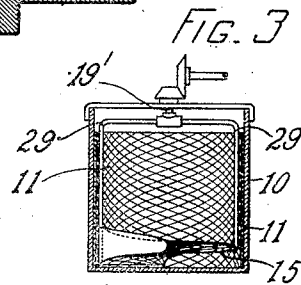


FIG. 3.

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WILLIAM L. WEBER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO BELDING & FRANKLIN MACHINE CO., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

DECORTICATOR.

No. 889,161.

Specification of Letters Patent.

Patented May 26, 1908.

Application filed May 16, 1907. Serial No. 373,986.

To all whom it may concern:

Be it known that I, WILLIAM L. WEBER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Decorticators, of which the following is a specification.

This invention relates to decorticators.

More particularly, it relates to apparatus for removing the skin from potatoes and other vegetables.

It is related in subject matter to my co-pending application, Serial Number 373,987.

The particular purpose of the invention is to provide apparatus suitable for household use; and to this end the object is to make apparatus of inexpensive construction and of simplicity and speed in operation. I believe that in all of these respects the apparatus herein described is an improvement over other apparatus which has been previously used; and this is accomplished by providing a receptacle, preferably cylindrical in form with its axis upright, having walls of "stabbed" material, or other suitable decorticator, and having a rotating helical bottom of like material.

One embodiment of the invention, to which, however, the invention is not limited, is shown in the accompanying drawing, in which

Figure 1 represents the apparatus in side elevation, the receptacle being partly broken away or sectioned upon the medial vertical plane, exposing the helical bottom which is shown complete, not sectioned. Fig. 2 represents a portion of the stabbed material which forms the decorticating surface, in section. Fig. 3 represents diagrammatically another embodiment of the invention.

In the drawings: 10 represents a cylindrical receptacle, in which a cylindrical lining 11 is set. This lining is preferably formed of stabbed material, as represented in Fig. 2, where is seen a sheet of metal which has been stabbed or punched by an instrument which pierces it from one side, bending up sharp corners 12 at each hole where the instrument has pierced it. This interior cylindrical casing 11 is preferably removable for purposes of cleaning and drying after use, as is indicated by the screw 13 passing through the receptacle wall near the top for fastening the casing in place.

Above the bottom 14 of the receptacle is a false bottom 15, also preferably formed of

stabbed material, and arranged in the form of a helix. As represented in Figs. 1 and 3 of the drawing, this starts at the line 16 next the bottom of the receptacle and winds about the axis through one complete convolution to the line 17, rising in so doing through a height which may be filled by a blank wall 18, thus supporting the two ends 16 and 17 rigidly in their proper relations, maintaining the helix in its desired form.

At the axis of the helix is a shaft 19 to which the helix is attached and by which it is rotatable, the shaft being journaled in the receptacle bottom at 20 and also journaled at 21 in a strap 22 or other cover crossing the top of the receptacle. This strap carries journals 23 for a driving shaft 24, on which is a crank 25 or other suitable means to revolve the shaft 24, and a beveled gear 26 adapted to engage a gear 27 on shaft 19. Rotation of the crank causes the shaft 19 and helix 15 to rotate with respect to the receptacle 10 and its decorticating casing 11.

In operation, a small amount of water is placed in the receptacle, and a quantity of potatoes or other vegetables. Crank 25 is then rotated in such manner as to cause rotation of the helical bottom 15, with the upper surface of the helix in advance of the under surface. When a proper speed of rotation has been reached, an interaction of the various parts and of the contents results, by which the water and potatoes are piled up in a form which may be roughly described as constituting a hollow cylindrical mass rubbing close against the cylindrical decorticating surface. Individual potatoes successively rise in this mass to the top, scraping along the decorticating surface in so doing, and fall over into the hollow interior of this moving mass, where they encounter the moving decorticating surface of the helix. The pitch of this surface, aided probably by the elasticity of the potato and its rebound from the surface following its fall, and the sharp points of the surface upon which it impinges on its fall, and a tangential or centrifugal motion which is imparted to the potato upon its contact with this helical decorticating surface, cause the potato to return toward the cylindrical wall where it enters the under portion of the above described mass and gradually rises through it to the top, being forced up by addition of other water and potatoes beneath it, until it rolls over in-

wardly again to repeat the course. In going through this process the individual potato is constantly rotated in varying directions, and is pushed and scraped gently along the decorticating surfaces. Particular attention is called to the fact that the potatoes do not rest upon the bottom, but that after brief contact therewith they begin upon a course which takes them in a rising path away therefrom. This prevents the bottom from grinding an undue amount of material from the potatoes which happen to lie lowest; and the rising and falling action also prevents the potatoes from being ground too steadily against the inclosing cylindrical surface. The result is a speedy and uniform decorticating action upon each individual potato or other vegetable in the apparatus. After the potatoes are removed the apparatus may be thoroughly cleaned by rotating the helical bottom, with water, which causes the water to rise high in rapid motion along the cylindrical walls; and the apparatus may then be dried conveniently by removing the top strap 22, and its attached axle, handle and helix, and by removing the cylindrical decorticating lining 11.

Another form which has some advantages is represented in Fig. 3, in which the axial shaft is marked 19' and is very short, terminating in a fork which has supporting rods 29 at diametrically opposite points of the helix. This gives a free and clear working space above the helix, and eliminates the axial shaft from the vicinity where the potatoes are placed. It is of advantage in the smaller size of the apparatus, because it reduces the danger of any combination of potatoes be-

coming accidentally or temporarily wedged between the central shaft and between the cylindrical wall.

It is obvious that other variations also may be made from the precise embodiment of the invention here shown, without departing from the scope of the invention.

I claim:

1. A receptacle, having an interior surface of decorticating material, in combination with a rotatable helical bottom in the receptacle.

2. A receptacle, having sides with substantially vertical interior surface of decorticating material, in combination with a bottom having an upper surface of decorticating material and formed helically about a vertical axis and rotatable thereon.

3. A receptacle, having an interior surface of decorticating material, in combination with a rotatable helical bottom in the receptacle, a shaft extending upward in the axial line, there being on the upper part of the receptacle means to support the moving parts, and means to rotate them.

4. A receptacle, having an interior surface of decorticating material, in combination with a rotatable helical bottom in the receptacle, a shaft in the axial line above the bottom, a fork connecting the shaft with the edges of the helix, and means to support the shaft at the top of the receptacle.

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

WILLIAM L. WEBER.

Witnesses:

ELLIOTT B. CHURCH,
EVERETT E. KENT.