E. J. MATTHEWS.

ROOT WASHER.

APPLICATION FILED FEB. 8, 1915.

1,166,849.

Patented Jan. 4, 1916.

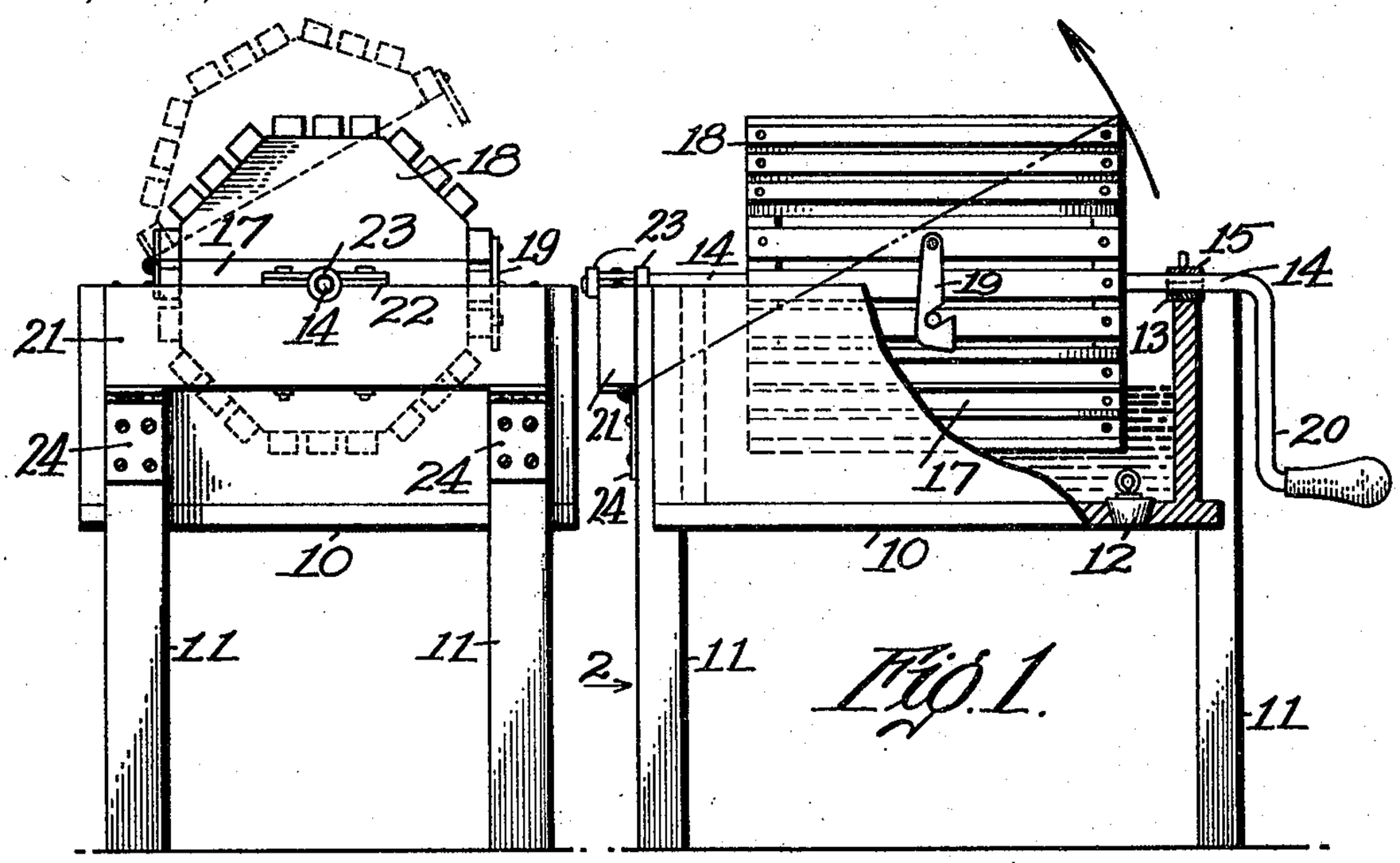


Fig. 1.

Fig. 2.

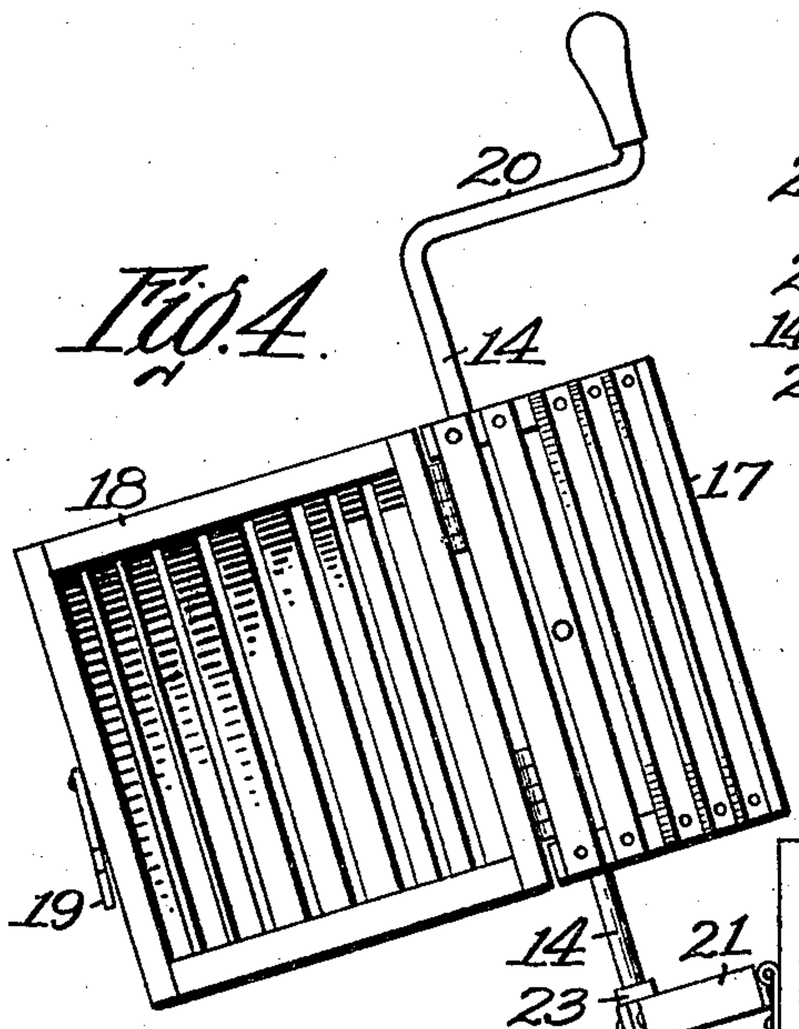


Fig. 3.

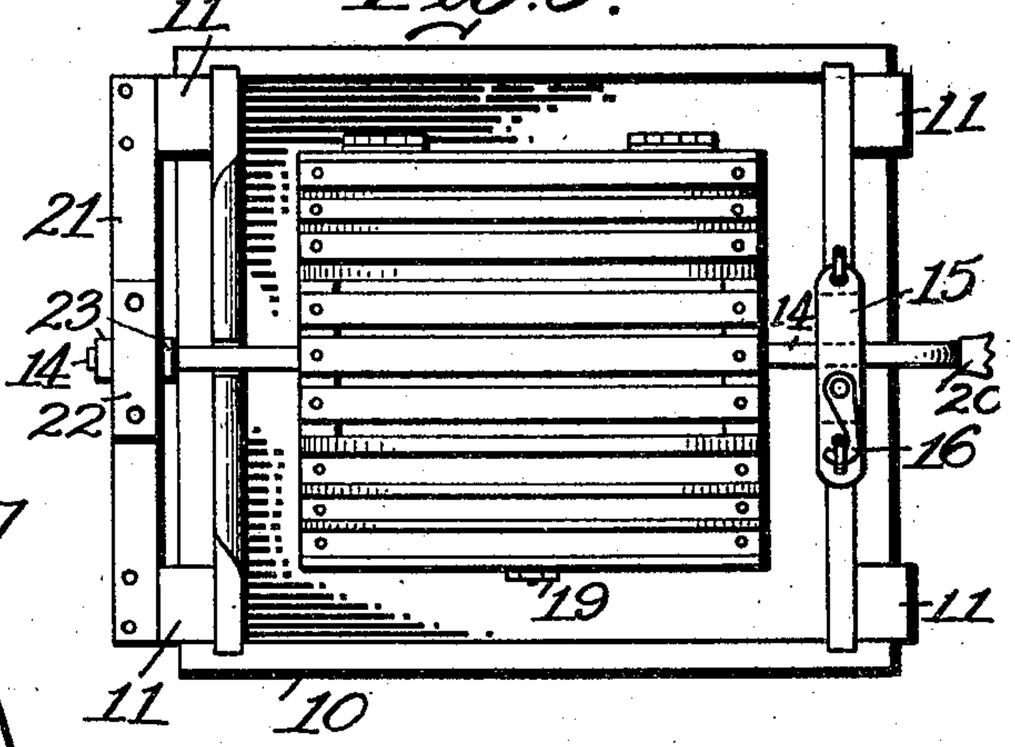
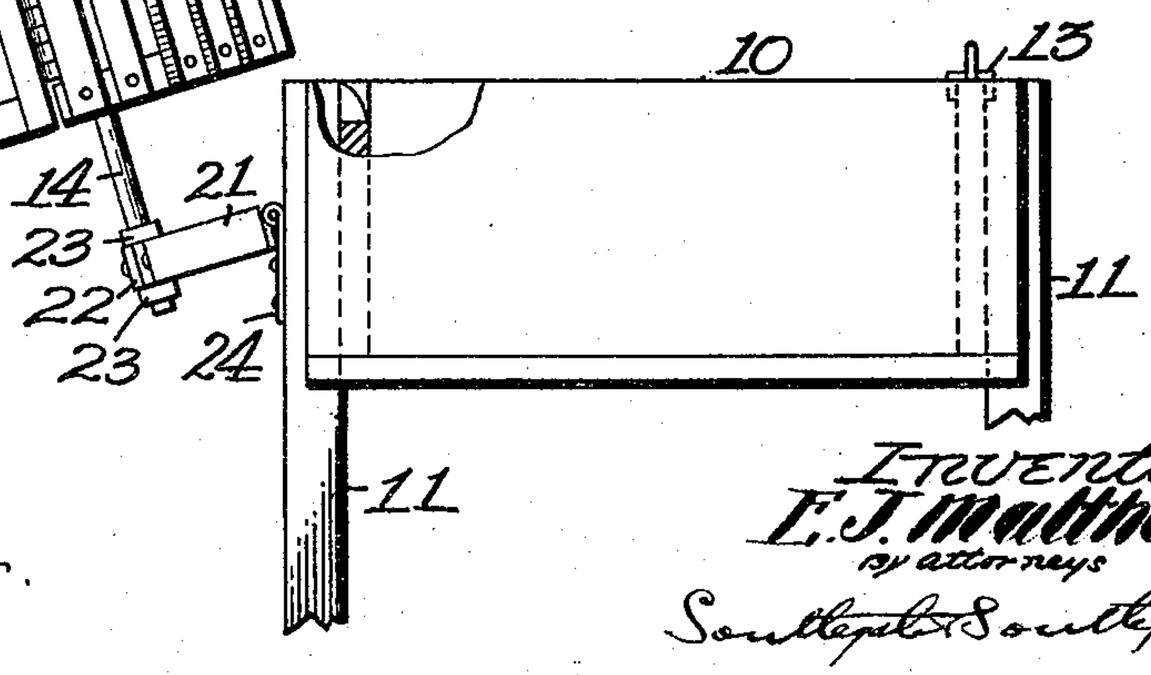


Fig. 4.



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UNITED STATES PATENT OFFICE.

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ROOT-WASHER.

1,166,849. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed February 8, 1915. Serial No. 6,713.

To all whom it may concern:

Be it known that I, EDGAR J. MATTHEWS, a citizen of the United States, residing at Paxton, in the county of Worcester and State of Massachusetts, have invented a new and useful Root-Washer, of which the following is a specification.

This invention relates to a device for washing potatoes, beets, turnips and other roots to get them into marketable condition. Although some devices have been invented for similar purposes, as far as I am aware, they are not practical, and it is the universal custom at the present time to place such roots in tanks, agitate them by means of a hoe or similar instrument, and then shovel them out into the containers, or else wash them entirely by handling them by hand while in the tank.

In the first case the roots are very likely to be injured by the instruments employed, and in the second case the operator has to get his hands into the water and have them immersed for long periods of time. This is extremely disagreeable and disadvantageous for the reason that this work is generally done in cold weather. Furthermore, in both cases the operation is very slow and consequently expensive.

The principal objects of this invention are to provide a simple and extremely inexpensive washer which can be made to hold a comparatively large quantity of roots and in which there is no danger of injuring the roots and no necessity for the operator to put his hands into the water; and furthermore to provide a practicable and efficient means for dumping the contents of the washer into a receptacle conveniently placed.

Reference is to be had to the accompanying drawings in which,

Figure 1 is a side elevation of a preferred embodiment of this invention with parts appearing in section; Fig. 2 is an end elevation of the same; Fig. 3 is a plan thereof; and Fig. 4 is a view similar to Fig. 1 showing the dumping of the contents of the washer.

The device is shown as comprising a simple tank 10 supported at a convenient height on legs 11. This tank is designed for holding the water and is provided with any desired kind of a valve or plug 12 for allowing it to be discharged when desired. On one end the tank is provided with an open-top bearing 13 for a shaft 14. This shaft is designed to lie in this bearing and is adapted to be held therein by a plate 15 and catch 16. This shaft is provided with a washing cylinder or drum consisting of a lower part 17 fixed to the shaft and a cover 18 hinged to the lower part. The cover is also connected with the lower part by a latch 19, or in any other desired way. The bottom and cover of this so-called cylinder are shown as making, when secured together, an octagonal washing drum which is formed of slats on its sides separated from each other so as to allow free play of water therethrough. The shaft is provided with a crank arm or handle 20 and this is arranged to extend from the shaft in the same direction as the bottom of the cylinder. At the other end of the tank the shaft is not provided with any bearing on the tank itself, but there is a pivoted member or plate 21 connected with the end of the structure and preferably with the legs. This is hinged or pivoted to the legs and is adapted to swing on a horizontal axis transverse to the direction of the shaft from a vertical to a horizontal position. This member is provided with a closed top bearing 22 which holds the other end of the shaft 14. The shaft is shown as provided with fixed collars 23 thereon to keep it from longitudinal motion in this bearing.

In the use of the device, the parts are assembled, as shown in Figs. 1, 2 and 3, the crank-handle 20 being located at the bottom. The top or cover is of course unlatched and moved up to vertical position at this time. The bottom can be held in this position very conveniently by the operator. If it is being filled and operated by one person, he can, if necessary, put his foot on the handle and hold it down and thus keep the bottom of the drum from swinging as he introduces the first of the charge. Then he can have full use of both hands for dumping or shoveling potatoes or other roots into the drum. When this is done, he closes the cover and latches it and then turns the crank until the roots are thoroughly washed. This is a very short operation and even when a large quantity of roots are placed in the drum, they are found to be thoroughly cleaned after a few turns only.

When it is desired to dump the contents, the latch 19 is again loosened, but at this time the cover may be left closed if desired. Then the latch 16 is disconnected and the plate 15 thrown over to one side and a re-

ceptacle placed out at the end of the tank. Then the operator, keeping the handle at the bottom, raises it about the hinges 24 as a center, and the weight of the vegetables may be thrust against the cover as soon as that goes over slightly beyond vertical position, and will force the cover open enough to allow the contents to be discharged. Or if desired, of course the cover can be raised before the dumping operation and then the contents will also be discharged, but in this case they will begin to fall out a little earlier and consequently I prefer to dump it in the other way. By having the pivots of the plate 21 located considerably below the top of the tank the drum is left in a comparatively low position when dumped over so that the roots have only a short distance to fall and are not likely to be injured.

It will be seen that this is an exceedingly simple and inexpensive machine to construct, that it can be operated by one man or boy, that it requires no skill and no special care in its operation, and that the saving of time over the ordinary methods employed is material and important.

It is important that the dumping shall take place at the end of the machine, the axis of tilting being transverse to the drum shaft, and it is also important that the swinging or cover section of the drum shall be hinged to the main section along the meeting edges of the two sections, that is, on a line parallel with the axis of the drum, so that in dumping the cover or swinging section will swing laterally by gravity entirely out of the way, whereby the washed mass of articles will roll or slide off the edge of the downwardly inclined end wall of the main section of the drum. With this construction, it will be seen that the operation of dumping can be quickly accomplished by a single operator, and it will also be seen that the articles may be dumped into any ordinary small receptacle, such as a bucket or basket, thereby avoiding the necessity of having a large, special receptacle. It will be seen that if the dumping took place at the side of the machine, off one of the longitudinal edges of the main section of the drum, it would be necessary to have a short drum or provide a receptacle of considerable dimensions for receiving the washed articles; and it will be seen also that in this side-dumping construction it would be necessary to provide an attendant or special devices for holding up the cover or swinging section during the act of inverting or tilting the main section.

Although I have illustrated and described only a single form of the invention, I am aware of the fact that modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claim. Therefore I do not wish to be limited to all the details of construction herein shown and described, but

What I do claim is:—

In a machine of the class described, a tank, a plate hinged at its lower edge at one end of the tank and having its upper edge provided with a bearing, another bearing at the opposite end of the tank, a shaft journaled in said two bearings and carrying an open drum which dips into the tank, said drum consisting of a main section affixed to the shaft and a swinging section pivoted to the main section along one longitudinal edge thereof and on an axis parallel to the shaft, said main section having an end wall adjacent to said plate, whereby the drum may be bodily tilted endwisely out of and away from the tank and whereby when so tilted the swinging section will gravitate laterally to open position and said end wall will incline downwardly away from the tank to thereby insure the washed articles being discharged off the edge of said end wall at a point distant from the tank.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

EDGAR J. MATTHEWS.

Witnesses:
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