

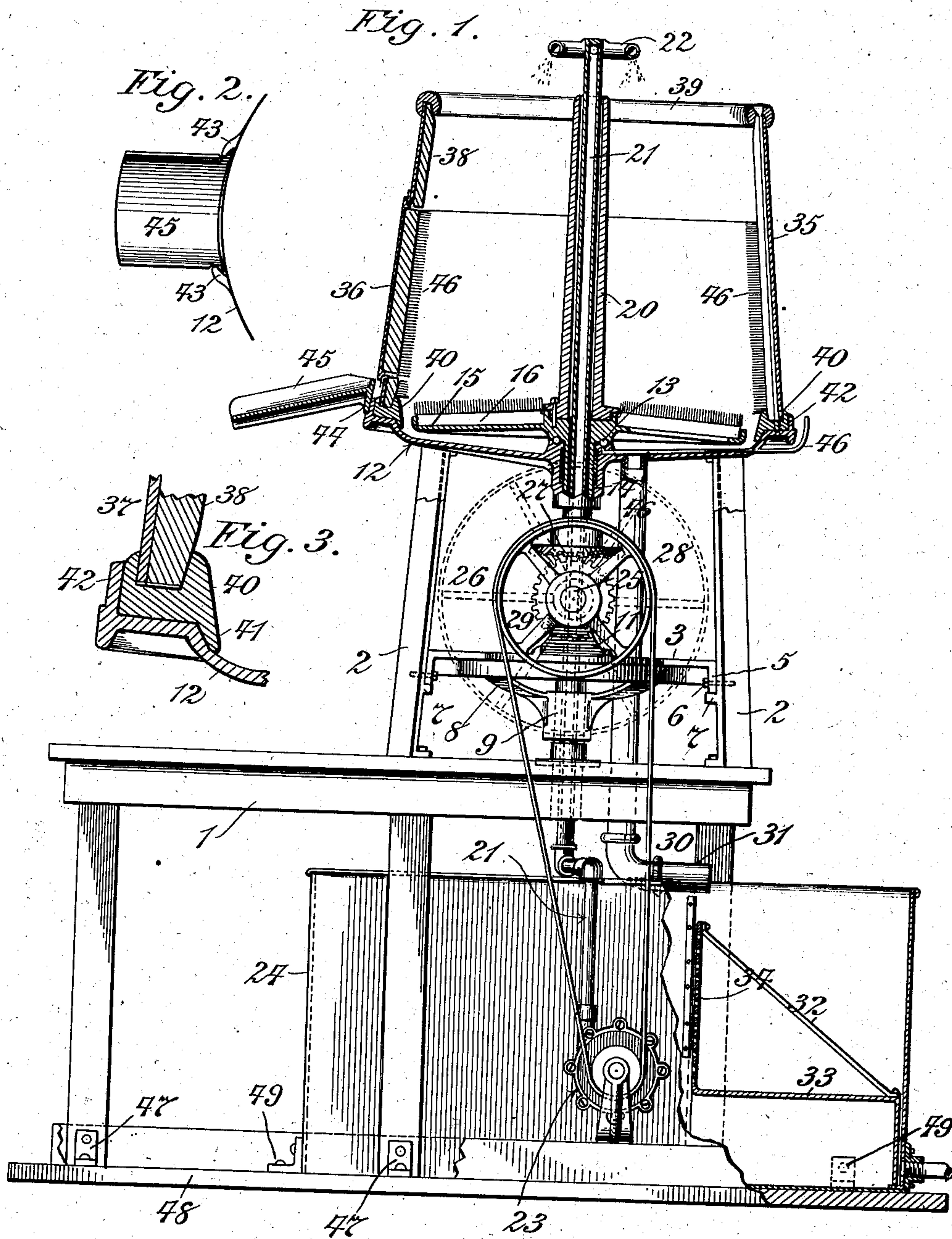
No. 859,842.

PATENTED JULY 9, 1907.

H. ROBINSON.  
MACHINE FOR PEELING VEGETABLES.

APPLICATION FILED JUNE 21, 1904.

2 SHEETS—SHEET 1.



Witnesses  
Edward Rowland  
Florence Pick

Henry Robinson  
Inventor  
By his Attorney H. M. Mackay

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Fig. 7.

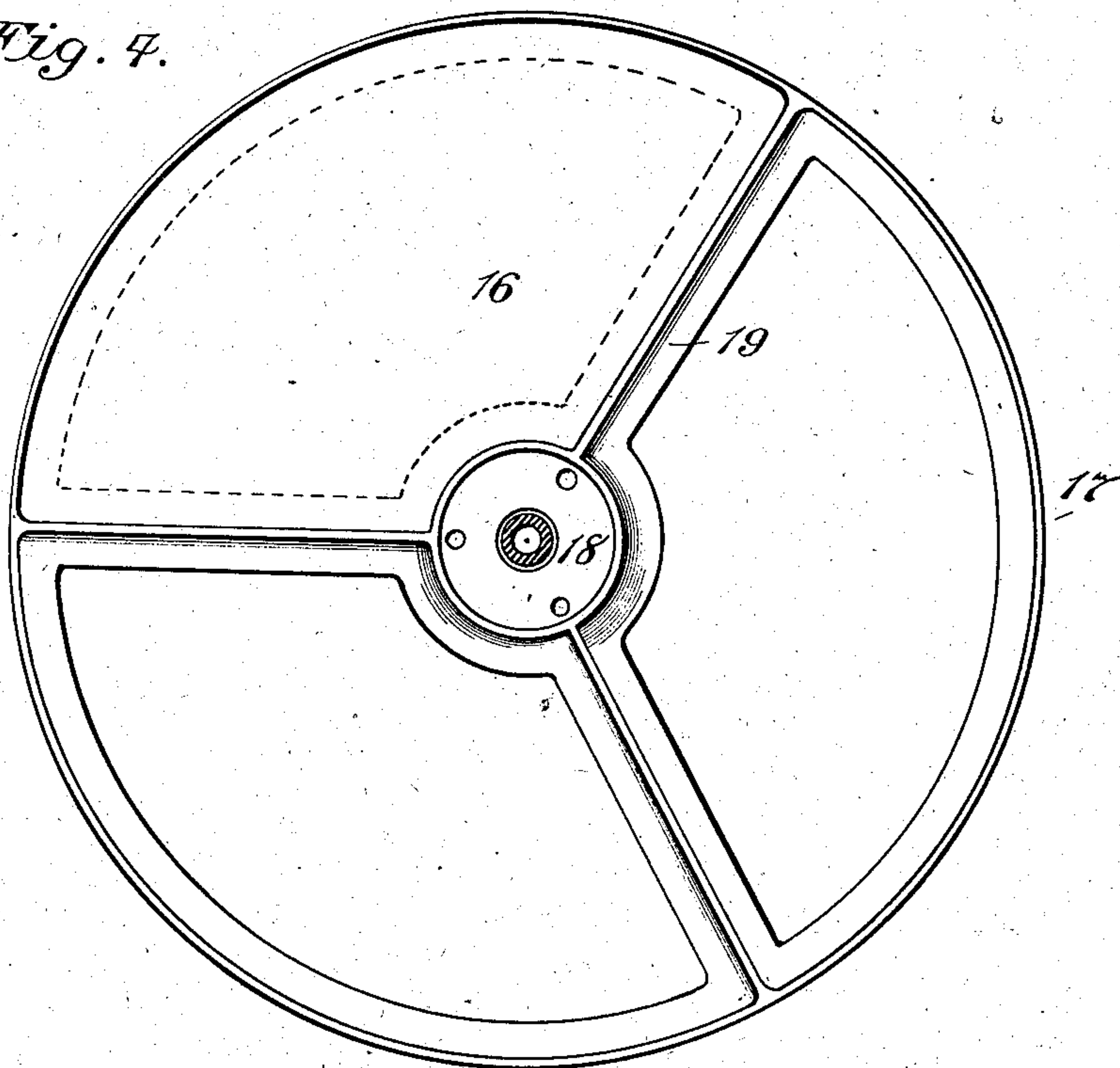


Fig. 5.

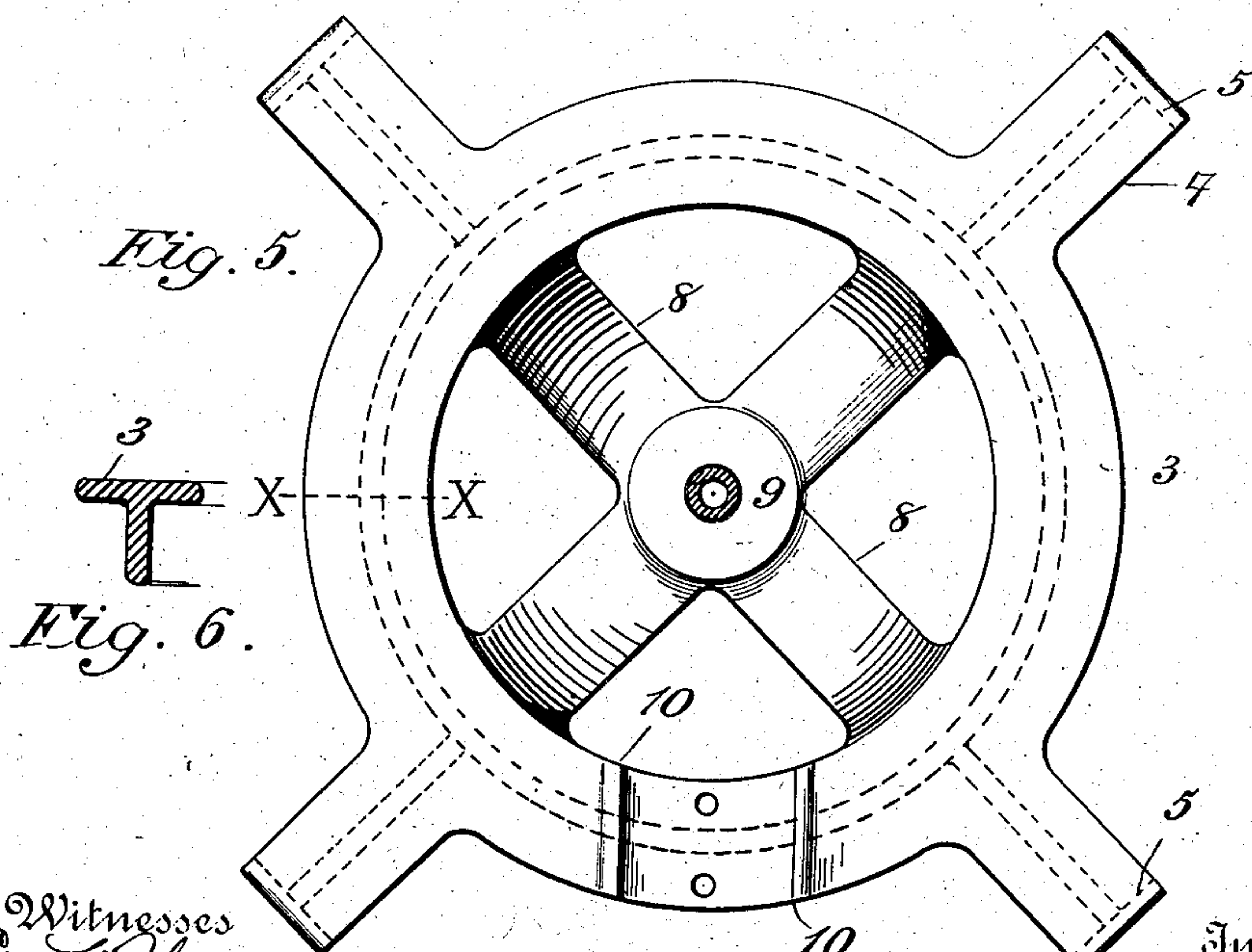


Fig. 6.

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# UNITED STATES PATENT OFFICE.

HENRY ROBINSON, OF NEWARK, NEW JERSEY, ASSIGNOR TO ROBINSON MACHINE COMPANY,  
A CORPORATION OF NEW JERSEY.

## MACHINE FOR PEELING VEGETABLES.

No. 859,842.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed June 21, 1904. Serial No. 213,522.

*To all whom it may concern:*

Be it known that I, HENRY ROBINSON, a resident of Newark, county of Essex, State of New Jersey, have invented a certain new and useful Improvement in Machines for Peeling Vegetables, of which the following is a specification.

This invention has relation to improved machines for peeling vegetables and particularly potatoes and apples and the principal objects of the improvements herein set forth are the provision of means whereby vegetables can be cleaned in bulk and the waste material washed away while using the same water again and again for the washing process whereby waste of water is avoided; the production of means for the above purpose adapted to be driven by power and possessing elements of strength combined with lightness and of small expense in manufacture; improvements in machines of the general type to which this improvement belongs whereby the escape of water during operation is prevented, provision of special means for oiling the parts of a machine of this type so as to avoid all danger of getting oil upon the material to be peeled; the provision of brushes of such a nature that they will peel smooth, hard skinned fruit, like apples, as well as other vegetable products heretofore capable of treatment in machines of the type to which this belongs; and in general the provision of certain minor improvements in detail hereinafter set forth and claimed.

This invention is illustrated in a preferred form in the accompanying drawings wherein

Figure 1 is a side elevation of a power machine shown partly in section, Fig. 2 is a plan view of the removable chute, Fig. 3 is an enlarged sectional view of the construction at the point where the pot is set down upon its support, Fig. 4 is a plan view of the horizontal spider used to support the rotating brushes, Fig. 5 is a plan view of that portion of the framework which provides the lower bearing for the rotating parts of the device, and Fig. 6 is a cross section of the horizontal ring shown in Fig. 5.

In the form shown the machine is mounted on a table or stand 1, to which the legs 2 of the machine are bolted. These legs 2 are united strongly near the lower ends by the framework shown in Fig. 5 which consists of a horizontal flat ring 3 having four extensions 4 turned down as at 5 to accommodate bolts 6 whereby the ring is securely fastened to the legs 2. For greater strength I prefer to provide lugs 7 on the legs 2 upon which the down turned ends 5 rest.

The ring 3 has in cross section the shape shown in Fig. 6, being provided with a vertical circular flange shown in dotted lines in Fig. 5 and in section in Fig. 6,

and this vertical rib is also carried out under the extensions 4. Cast in one piece with the ring 3, are four arched braces 8 curving downward to a common central hub 9 which contains the lower main bearing of the machine. As will be seen, the upper ring 3 with its extensions 4 act together with the braces 8 to firmly secure the bearing 9 at the central point between legs 2. The upper surface of the ring 3 is provided with two upwardly extending guide ridges 10 thus forming a seat between said ridges whereon is bolted the bearing block 11 for the driving shaft of the machine.

The upper ends of the legs 2 carry the shallow bowl 12 which has a central hub carrying a circular ball bearing shown at 13. This hub extends downward under the bowl 12 and carries the upper bearing for the central vertical spindle 14. This central spindle is hollow and carries at its upper extremity the cast iron spider 15 on which the brushes 16 are carried. The preferred form of this spider is shown in Fig. 4 where it is illustrated as consisting of the ribbed circular portion 17 joined to a central hub 18 by three ribbed arms 19. The various parts of the spider are all formed respectively of angle and T iron having vertical and horizontal ribs and the horizontal ribs of the angle iron are so disposed as to provide a seat or support for each of the brushes 16. There are three of these brushes each having the shape of the angular space between the vertical ribs on the arms 19 and within the outer circle (see Fig. 4). In this last named figure one of these spaces is filled with the solid back on which the bristles of the brush 16 are carried, but which bristles are omitted for clearness in the figure. The edges of the horizontal supporting ledge or rib are shown in dotted lines to indicate that they lie behind the brush.

The advantage of this construction is that it greatly facilitates the removal of brushes, lessens the cost of construction and the weight of the machine, and prevents accumulation of water behind the backs of the brushes which would cause rotting.

On the hub 18 of the spider 15 there is preferably mounted a hollow column 20 extending to a point near the top of the machine. The main spindle 14 which extends from the center of the spider 15 down through the various bearings of the machine, is hollow and the water supply pipe 21 passes up through the center of said main shaft and through the center of the hollow spindle 20. Any convenient water distributing or sprinkling means 22 is applied to the top of the pipe 21. This pipe is employed to supply water from any desired source but in the drawings are shown the preferred form of my device wherein the water is supplied by any convenient form of centrifugal pump 23



fastened to the side of a supply tank 24 which is filled with water before beginning to use the machine.

In the preferred power machine shown in the drawing, the spindle 14 and the spider 15 and brushes 16 carried thereby are driven by a driving shaft 25 which turns in the bearing block 11 held between the ridges 10 on the ring 3. The bevel gear 26 on this shaft drives a second bevel gear 27 attached to the main spindle 14, and the shaft is itself driven by a driving pulley 28 shown in dotted lines and supposed to be removed. Or other driving means may be used. On the same shaft 25 is fastened a pulley 29 which acts through a belt 30 to drive the centrifugal pump 23.

The water driven by the pump 23 passes upward through the pipe 21 and is distributed through the sprinkler 22 into the machine. It falls ultimately into the bowl 12 whence it is discharged through the pipe 31 into one end of the tank 24. I prefer to cause the water discharged through the pipe 31 to fall into a special strainer as shown in Fig. 1. The refuse discharged through the pipe 31 falls past the handle 32 and sinks to the horizontal plate 33, while the water is strained through the perforated upright portion of the strainer, shown at 34. This entire device may be made from one piece of sheet iron, being bent downward at the front and sides as shown so as to leave a space under the horizontal plate 33.

When it is desired to clean out the tank, the refuse is lifted out on the strainer which can be raised by means of the handle 32, and access can then be had to every part of the tank.

If the apertures in the vertical screen 34 should prove at any time insufficient for discharge of the water, an overflow will take place over the top of said riser which is made lower than the top of the main tank to prevent loss of water therefrom.

The vegetables to be treated are contained in a pot 35 preferably shaped as shown in Fig. 1. This pot is provided with a door 36 which can be opened to permit exit of the vegetables. The pot consists of an outer metal wall 37 against which the brush backs 38 are secured preferably by means of upper and lower rings 39 and 40 as shown in Figs. 1 and 3.

As shown in Fig. 3, the lower ring 40 has a downwardly extending flange 41 fitting closely to the bottom of the bowl 12 all around the edge of the bowl. The outer edge of the bowl 12 is extended upward in a circular ring 42 which extends all around the ring 40 and fits closely against it. By use of the flange 41 and ring 42 I prevent the water which enters the bowl 12 from escaping from the vessel under the influence of the centrifugal force to which it is subjected during operation of the machine. The ring 40 is secured to the bowl 12 in any well known manner.

Outside of the bowl 12 just under the door 36 I prefer to supply sockets 43 into which the down turned base 44 of the chute 45 is made to fit. The chute can thus be drawn out of the sockets and removed at pleasure. This is an important feature where machines of this kind are to be shipped, as the projecting chute would be very apt to be damaged or broken off during transportation if left in place.

The bristles of the brushes which line the pot 35 are indicated at 46 in the same manner as the bristles are indicated on the revolving brushes 16. The brush sur-

face is left blank in Fig. 1 except at the plane of section in order to better illustrate the other features of the machine and prevent obscurity.

I have found that by using brushes made of wire drawn from metal of a springy nature and with the lengths of wire extending about an inch above the surface of the brush backs, the machine herein described will serve to peel smooth skinned fruits such as apples as easily as it will peel rough skinned vegetables like potatoes. This result cannot be obtained by the use of bristles, grass brushes, whalebone brushes or the like, all of which are more or less adapted to use for peeling potatoes. I have found that German silver and certain springy alloys of aluminium are suitable for this purpose. These metals do not rust and will not color the vegetables.

The operation of this machine is the same as that of other machines of the same general type except that it automatically produces its own water circulation system in the manner heretofore described.

The provision of means for easily oiling machines of this character without danger of getting the oil on the material treated is an important feature of my device. I provide means whereby oil is conveyed directly to the bearings, whatever their nature and whereby the oil is kept always below the material being treated.

In Fig. 1 is shown the oiling tube 46 which extends through the edge of the bowl 12, along the bottom thereof and into a cavity within the hub of the bowl. This last named cavity extends first inward toward the center and then upward to the ball bearing 13, where it opens to permit the oil to flow on the balls. The outer opening of the tube 46 is brought up, as shown, to a point higher than the ball bearing, and consequently the oil is caused to flow in this bearing and thence down around the hollow spindle 14 where it passes through its upper bearing.

The tank 24 is very useful when attached to the stand 1, in providing a weight which steadies the whole machine and makes it unnecessary to bolt the stand to a floor or foundation. In the form shown in Fig. 1 this is accomplished by fastening the legs of the stand by means of brackets 47 to a bottom board 48 and securing the tank 24 to the same board by means of brackets 49. Any other mode of connection between the tank and stand would be within the scope of my invention, however.

While I have shown this device in a form adapted to power operation it is to be understood that this invention applies to the construction shown and described as adapted to operation in any well known manner.

Many changes can be made in the various parts of this device without departing from the scope of this invention and I am not to be understood as limiting myself to the details herein shown and described.

What I claim is—

1. In a device of the class described, a stationary bowl, a removable pot fitting on the edge of said bowl, a downwardly turned flange on the bottom of the pot fitting the inner edge of said bowl and an upwardly turned ring on said bowl fitting outside the lower edge of said pot, substantially as described.

2. In a device of the class described, a containing vessel, a rotary disk within the same, sprinkling means above said disk, a tank below said vessel, driving gear for said disk, a pump connected to said driving gear for conveying water from said tank to said sprinkler, a discharge opening



from the bottom of said vessel to said tank and means for separating the refuse from the water as it comes through said discharge opening, substantially as described.

5 3. In a device of the class described, a peeling machine, a water tank beneath it, a removable perforated strainer in said tank, means for carrying water from one side of said strainer to said peeling machine and means for discharging water from said machine to the other side of said strainer, substantially as described.

10 4. In a device of the class described, a peeling machine, a water tank beneath it, a removable strainer in one end

of said tank comprising a horizontal part and a perforated vertical part, means for carrying water from said tank to said peeling machine and means for discharging water from said machine behind the vertical part and over the horizontal part of said removable strainer, substantially as described. 15

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