Feb. 5, 1929. 1,701,435

G. P. ANSTISS

PEELING MACHINE

Filed March 3, 1926 2 Sheets-Sheet 1

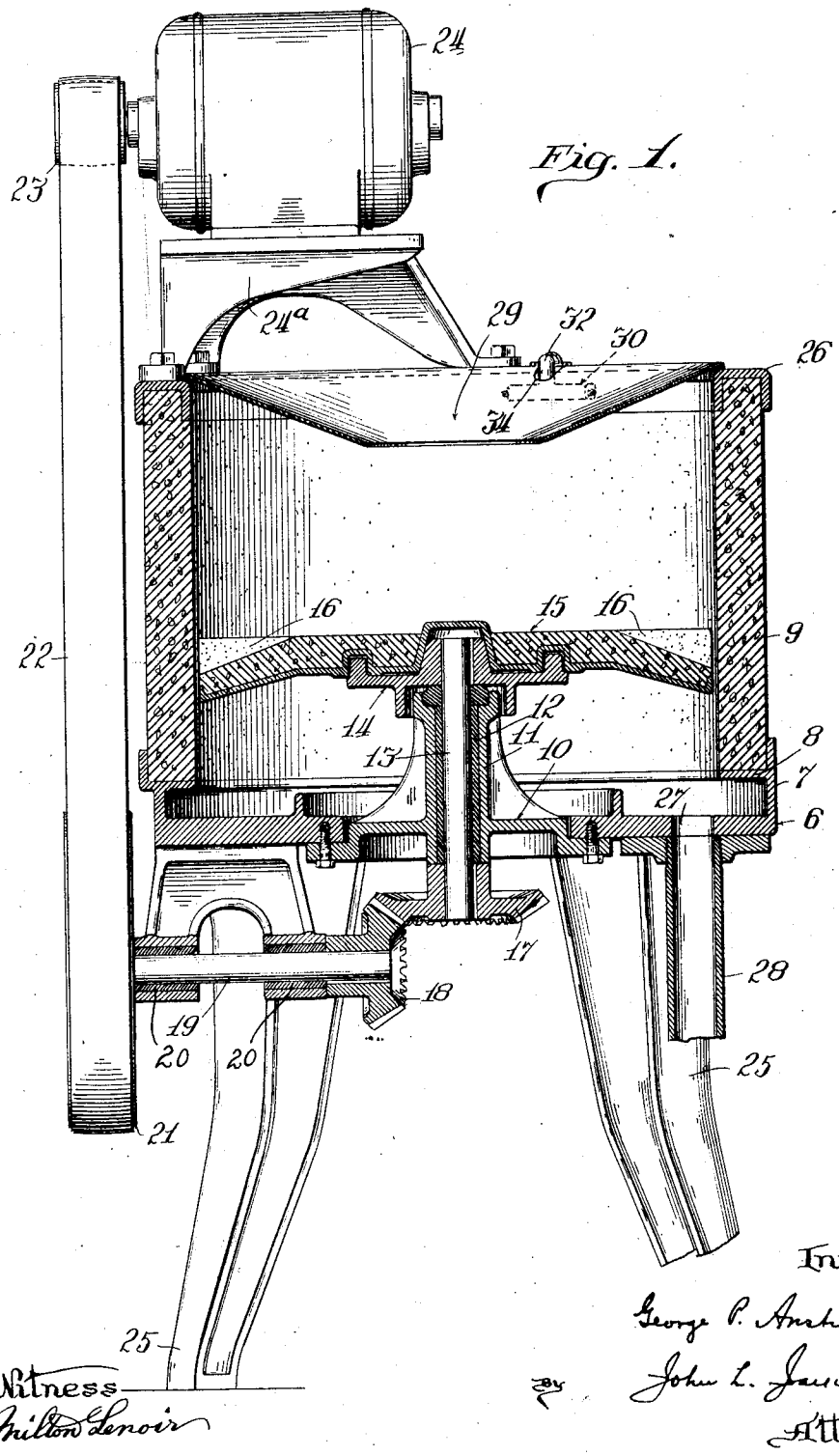

Fig. 1.

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Fig. 4.

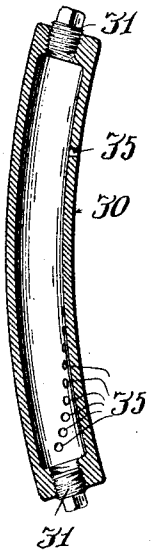


Fig. 2.

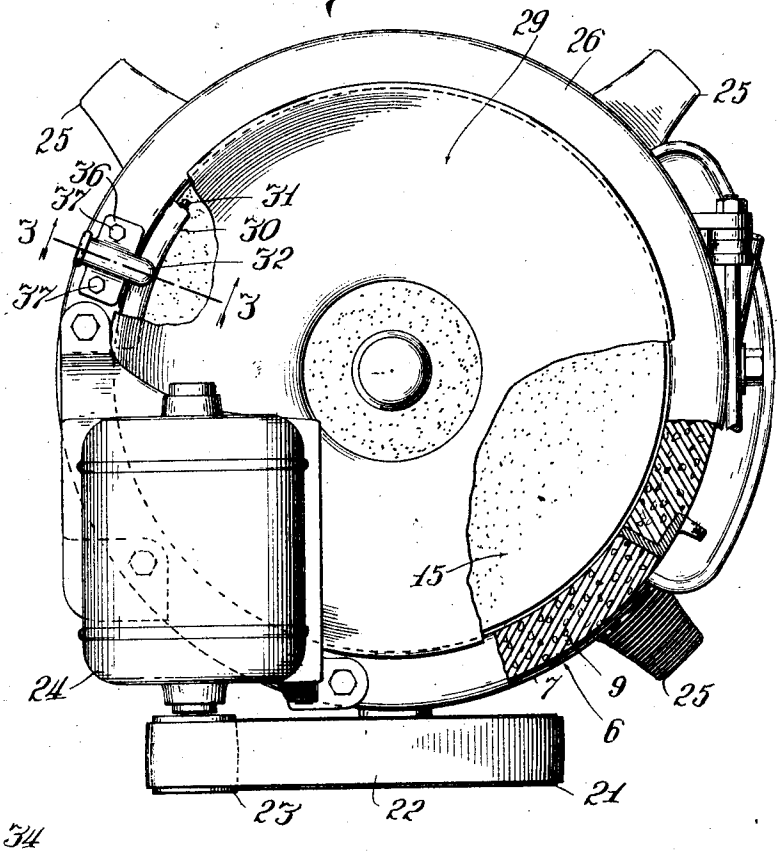


Fig. 3.

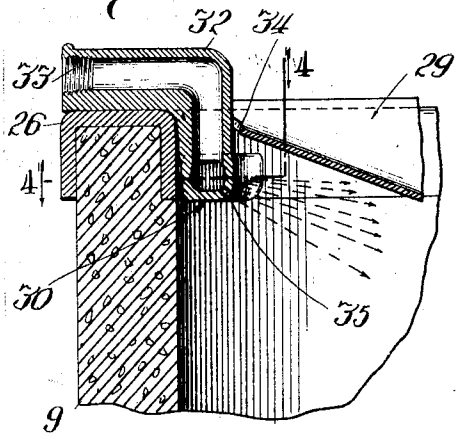
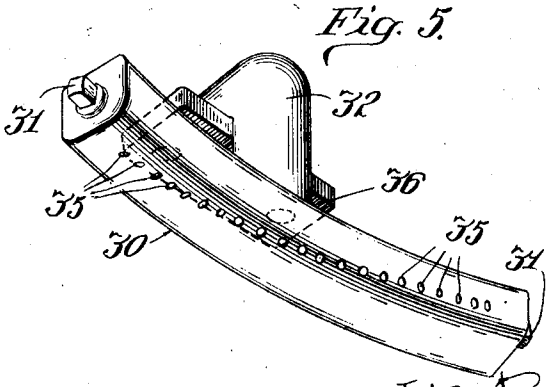


Fig. 5.



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UNITED STATES PATENT OFFICE.

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PEELING MACHINE.

Application filed March 3, 1926. Serial No. 91,885.

My invention relates to peeling machines such as are commonly used for peeling potatoes, and has to do particularly with peeling machines of the type shown and described in Letters Patent to George S. Blakeslee, No. 1,039,689, dated October 1, 1912, which machine comprises a suitable receptacle having an abrasive inner wall and a rotary bottom plate therein having an abrasive upper surface, the bottom plate having one or more recesses or protuberances for effecting agitation of the potatoes or other articles being peeled, and accomplishing the peeling by their contact with such abrasive surfaces. In the use of such machines water is usually applied to the articles under treatment for the purpose of moistening them and thereby promoting the peeling operation, and also for removing the peelings, and the object of my present invention is to provide a peeling machine equipped with improved means for applying the water to the articles so that it will aid in cleansing them and in the removal of the peelings from the machine. I accomplish this object as illustrated in the drawings and hereinafter described. What I regard as new is set forth in the claims.

In the accompanying drawings,—

Fig. 1 is a vertical section of my improved machine;

Fig. 2 is a plan view thereof, partly broken away;

Fig. 3 is a partial vertical section on line 3—3 of Fig. 2;

Fig. 4 is a partial horizontal section on line 4—4 of Fig. 3; and

Fig. 5 is a perspective view of a tubular head by means of which the water is introduced into the machine.

Referring to the drawings,—6 indicates the base of the machine which is in the form of a circular casting having an upright marginal flange 7 provided with an inwardly projecting ledge 8 on which is mounted a vertically disposed cylinder 9 composed of a suitable abrasive and a bonding material therefor, said cylinder forming a receptacle in which the potatoes or other articles to be peeled are placed.

The central portion of the base 6 is provided with an opening in which is fitted a plate 10 carrying an upright tubular standard 11 having an anti-friction lining 12 so that it forms a bearing for an upright shaft 13. Upon the upper end of said shaft is secured a disc 14 keyed thereto so that it rotates with said shaft, and on said disc is mounted an abrasive bottom plate 15 disposed horizontally and arranged to rotate with said disc. In the construction shown the bottom plate 15 is provided with a number of recesses 16 adjacent to its periphery which serve to effect the agitation of the potatoes as said bottom plate rotates, as is well understood by those familiar with machines of this type.

The lower end of the shaft 13 carries a bevel gear 17 which meshes with a bevel pinion 18 mounted on a shaft 19 supported in bearings 20 that depend from the base 6. The shaft 19 at its outer end carries a pulley 21 which is driven by a belt 22 from a pulley 23 mounted upon the armature shaft of an electric motor 24. Said motor is preferably mounted on a suitable base 24ª secured to a channel ring 26 that fits upon the upper margin of the receptacle 9. It will be apparent that when the shaft 19 is rotated it will effect the rotation of the vertical shaft 13 and consequently rotate the bottom plate 15.

The base 6 is preferably mounted on legs 25 so that the receptacle 9 is carried at a convenient height, and connected with an opening 27 in the base 6 is a discharge pipe 28 through which the water and peelings are discharged.

The diameter of the bottom plate 15 is slightly less than the interior diameter of the receptacle 9 so that the peelings may pass down between the peripheral portion of said bottom plate and the inner wall of the receptacle and escape through the discharge pipe 28 along with the water introduced into said receptacle as hereinafter described.

At the upper end of the receptacle is a hopper 29 which is secured to the channel ring 26 and discharges centrally into the receptacle 9 so that potatoes or other articles deposited in said hopper will fall upon the central portion of the bottom plate 15.

Water is supplied to the receptacle 9 through an arcuate head 30 in the form of a hollow casting curved to conform to the curvature of the receptacle 9 so that it is adapted to fit against the inner surface of the channel ring 26. The ends of said head are closed, as by plugs 31, and at some convenient point, preferably intermediate

its ends, the head is provided with a tubular elbow 32 that rises therefrom and is adapted to extend over the upper surface of the channel ring 26, as best shown in Fig. 3. The outer end of said elbow is screw-threaded as shown at 33 so that it may be conveniently connected to a source of supply of water under pressure. As also shown in Fig. 3, when the head 30 is in position it underlies the outer marginal portion of the hopper 29, which is cut away at the proper point to permit of the passage of the elbow 32, as shown at 34 in Fig. 3. In the lower and inner surface of the head 30 are provided a number of holes 35 arranged in a series extending spirally from one end of said head to the other in such manner that the water discharged through said holes is directed downward and inward under the hopper 29 and against the articles under treatment. By this arrangement it will be seen that the water supplied through the head 30 will be directed in jets at different angles to each other so that they will strike the articles in different parts of the receptacle and at angles inclined at different degrees to the vertical, with the result that the articles in all parts of the receptacle are thoroughly scoured and the peelings adhering thereto are removed and discharged through the outlet 28.

For holding the head 30 firmly in position I provide the elbow 32 with a horizontal plate 36, as shown in Figs. 2 and 5, which extends laterally at opposite sides of the horizontal portion of the elbow and bears on the upper surface of the channel ring 26 to which it is secured by bolts 37, as shown in Fig. 2.

The construction described permits of the ready removal of the hopper to permit of the removal of the articles and for cleansing purposes, without disturbing the head 30, and said head may also be easily removed if desired. The location of the head under the outer marginal portion of the hopper not only protects it and gets it out of the way of the articles in the receptacle, but also causes the under surface of the hopper to function as a deflector to direct any water striking it down into the receptacle and prevent it from flying out of the machine.

What I claim as my invention and desire to secure by Letters Patent, is—

1. In a peeling machine, the combination with a cylindrical receptacle having an abrasive inner surface and a rotary bottom plate therein, of a tubular head mounted on the upper marginal portion of said receptacle and extending partly around the same, said head having perforations for discharging water thereinto inwardly and downwardly, and being arranged for connection with a source of water supply, and means for protecting said head and deflecting water discharged thereby comprising a hopper mounted on the upper marginal portion of said receptacle and extending inwardly therefrom over said head.

2. In a peeling machine, the combination with a cylindrical receptacle having an abrasive inner surface and a rotary bottom plate therein, of a tubular head mounted on the upper marginal portion of said receptacle and extending partly around the same, said head having spirally arranged perforations for discharging water thereinto inwardly and downwardly, and being arranged for connection with a source of water supply, and a hopper mounted on the upper marginal portion of said receptacle and extending inwardly therefrom over said head, said hopper being removable independently of said head.

3. In a peeling machine, the combination with a cylindrical receptacle having an abrasive inner surface and a rotary bottom plate therein, of a tubular head mounted on the upper marginal portion of said receptacle and extending partly around the same, said head having perforations for discharging water thereinto inwardly and downwardly, an elbow carried by said head and extending over the upper margin of the receptacle and adapted to be connected with a source of water supply, a plate carried by said elbow and adapted to bear on and be secured to the upper marginal portion of said receptacle, and a hopper mounted on the upper marginal portion of said receptacle and extending downwardly and inwardly over said head.

4. In a peeling machine comprising a receptacle and a bottom plate having relative rotary movement, an open hopper removably mounted upon the receptacle and converging downwardly and inwardly thereof, and a spray head mounted on the receptacle adjacent the upper end thereof and disposed closely adjacent the under face of the hopper adjacent the outer periphery thereof, said head having perforations disposed to direct water supplied thereto under pressure downwardly and inwardly of the receptacle.

5. In a peeling machine comprising a receptacle and a bottom plate having relative rotary movement, an open hopper removably mounted upon the receptacle and converging downwardly and inwardly thereof from the periphery of the upper end of the receptacle, and a spray head mounted on the receptacle adjacent the upper end thereof and disposed closely adjacent the under face of the hopper adjacent the outer periphery thereof, said head having a plurality of spray openings arranged in a series disposed spirally about and longitudinally of the head.

6. In a peeling machine comprising a cylindrical casing and a bottom plate having relative rotary movement, an open hopper removably mounted upon the receptacle and

converging downwardly and inwardly thereof from the periphery of the upper end of the receptacle, and an arcuate spray head mounted on the receptacle adjacent the upper end thereof and in substantially concentric relation to the hopper, said spray head being disposed adjacent the under face of the hopper adjacent the outer periphery thereof and having openings for directing the spray downwardly and inwardly of the receptacle.

7. In a peeling machine comprising a casing and a bottom plate having relative rotary movement, an open hopper mounted on the receptacle and converging downwardly and inwardly thereof, and a spray head substantially concentric with the hopper and disposed closely adjacent the under face thereof and remote from the inner periphery of the hopper, said head having openings for directing the spray downwardly and inwardly of the receptacle.

GEORGE P. ANSTISS.