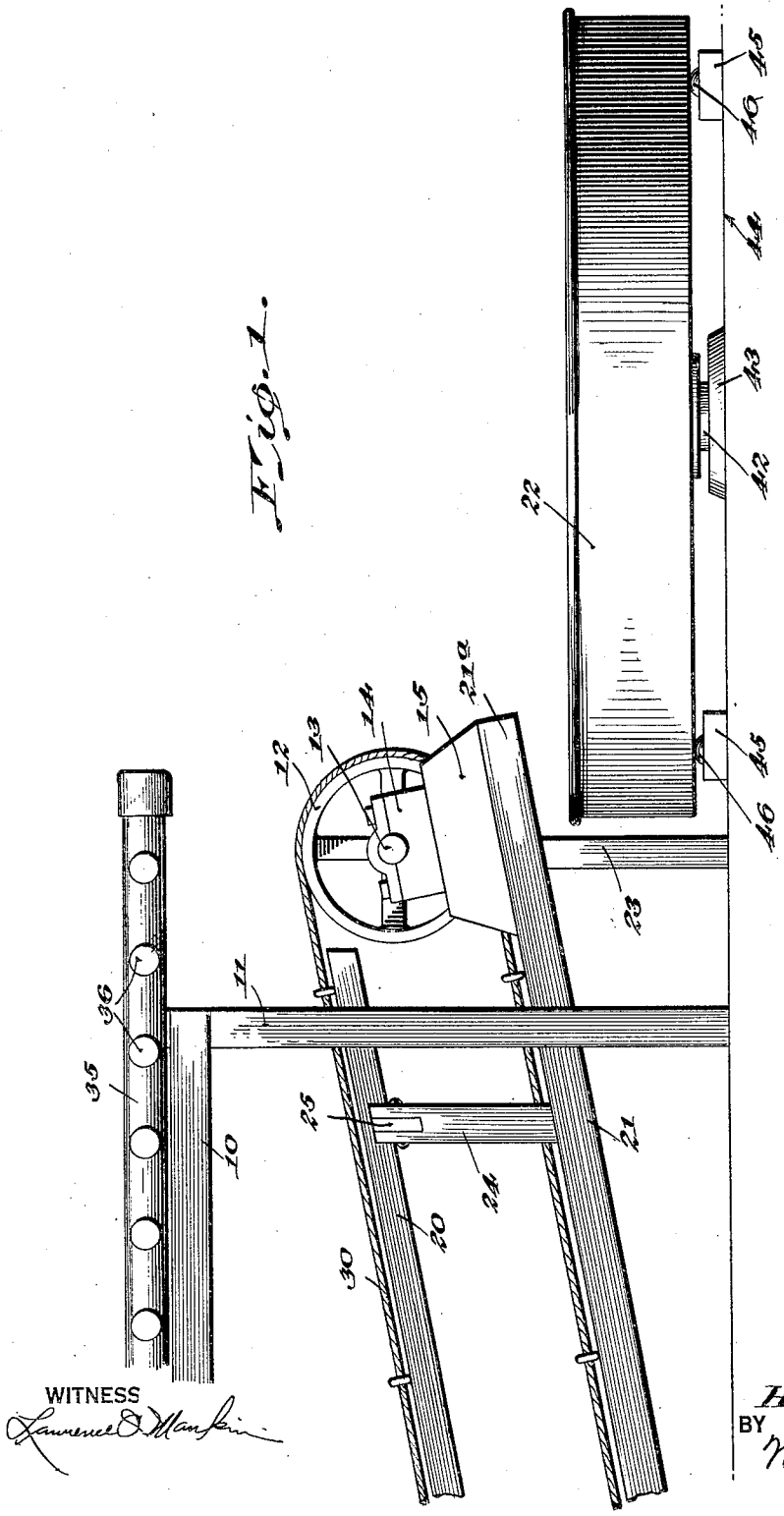
May 16, 1933. H. B. ROGERS 1,908,791

ROTARY RECEIVER AND PACKER

Filed April 19, 1932 2 Sheets-Sheet 1

Fig. 1.



WITNESS

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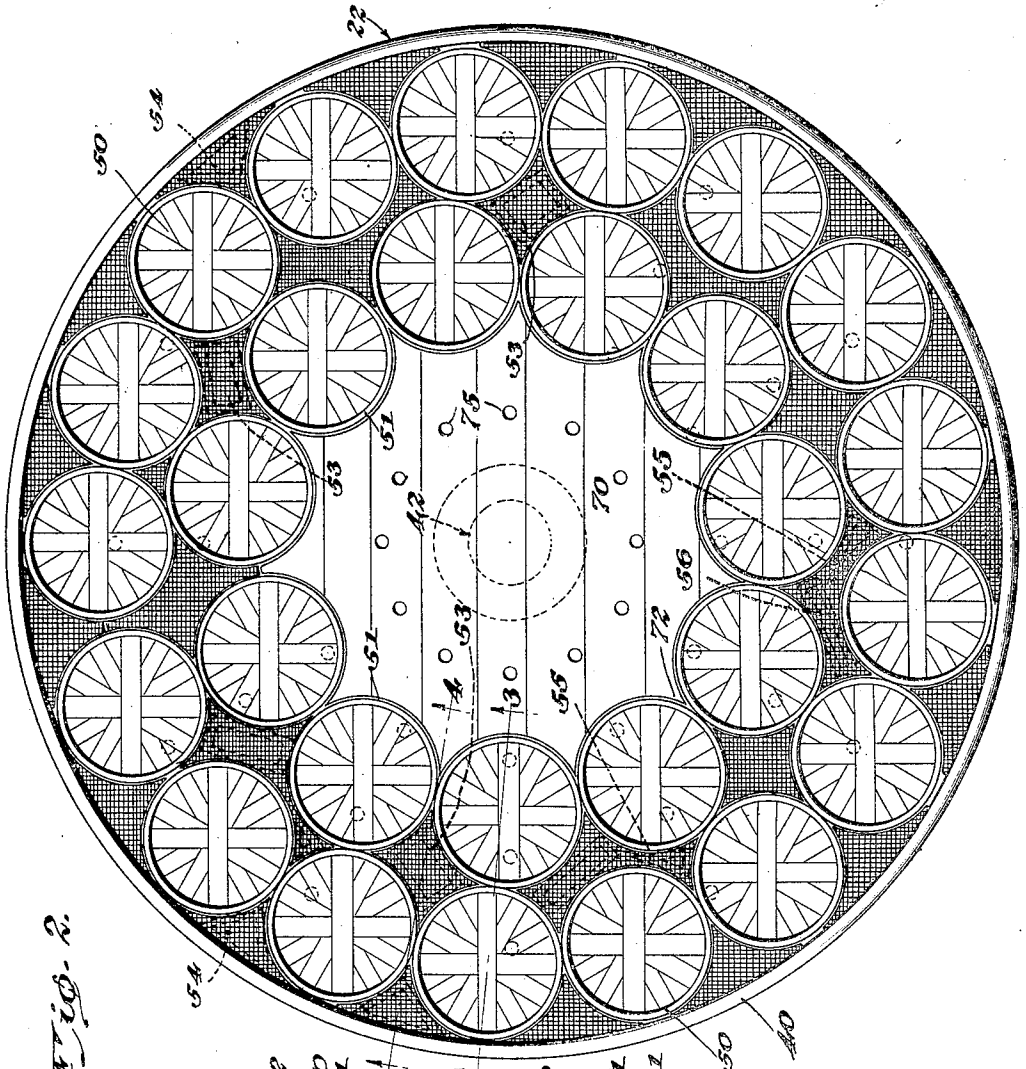

Fig. 2.

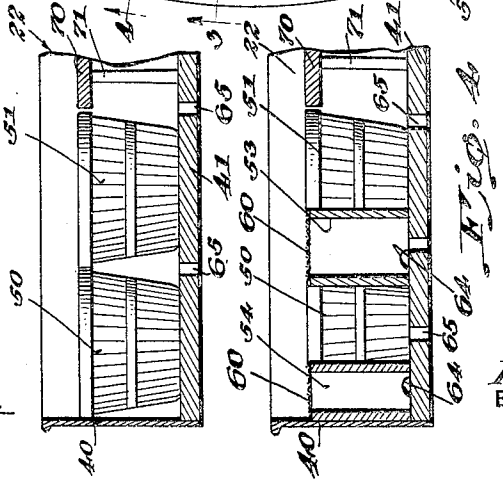

Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE

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ROTARY RECEIVER AND PACKER

Application filed April 19, 1932. Serial No. 606,215.

This invention relates to a rotary receiver and packer.

An object of the invention is the provision of a device adapted to be rotated at the end of a combined traveling carrier and washing device for supporting a series of packing containers which may be moved as desired beneath the end of the traveling carrier for receiving materials discharged from the end of the carrier, means being employed between the containers to prevent the materials from falling between said containers.

A further object of the invention is the provision of a device for positively applying materials which are discharged from a traveling conveyor directly to packing containers arranged in concentric circles within a basket carrier mounted for rotation at the end of the traveling carrier, boxes conforming to the shape of the space between the containers being located within the spaces between the container and being provided with a screen at the upper end to prevent materials falling between the spaces while permitting moisture to drain away from the materials.

This invention will be best understood from a consideration of the following detailed description, in view of the accompanying drawings forming a part of the specification; nevertheless, it is to be understood that the invention is not confined to the disclosure, being susceptible of such changes and modifications which shall define no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:

Figure 1 is a longitudinal side view of the device constructed in accordance with the principles of my invention,

Figure 2 is a plan view of the rotary receiver and packer device,

Figure 3 is a section taken along the line 3—3 of Figure 1, and

Figure 4 is a vertical section taken along the line 4—4 of Figure 2.

Referring more particularly to Fig. 1 of the drawings, it will be seen that the terminal portion of a washing device is disclosed and includes horizontally disposed beams 10 and supporting standards 11.

Idler wheels 12 are mounted on an axle 13 which are carried in bearings 14 supported by a base member 15.

A framework consisting of inclined beams 20 and 21 projects beyond the standards 11. The free ends 21*a* of the beams 21 project over a rotary receiver 22. The beams 21 at their outer ends are supported by legs 23 while the beams 20 are supported by posts 24 through a transverse bar 25 which is secured to the upper ends of the posts 24. The rotary receiver is shown as cylindrical but it may be of any shape suitable for the purpose. While the side walls and bottom are shown as made solid it will be appreciated that an open frame work may be used.

An endless traveling carrier 30 moves over the beams 20 and 21 and is trained on the wheel 12. The opposite end of the traveling carrier is not shown but is driven by means of a wheel or roller of well known construction. The traveling carrier is made of a fine mesh material to prevent the material which is washed thereon from passing through while permitting the dirt to be discharged from the traveling carrier and from the materials.

A longitudinally disposed pipe 35 is connected with a source of water under pressure and to this pipe are connected transversely disposed perforated pipes 36 which are supplied with water from the pipe 35 and this water is sprayed continuously on the materials on the traveling carrier 30.

While this device is adapted for use with any kind of materials which are to be washed it is particularly useful in the cleaning of spinach so that as the spinach is placed upon the traveling carrier 30 and is sprayed with water the dirt and other foreign matter is washed away and passes through the reticulated carrier 30. A certain amount of water, however, is carried to the end or beyond the wheels or rollers 12 and this water, together with the spinach or other materials are discharged into the receiver 22.

For the purposes of illustration the receiver 22 is shown as cylindrical and provided with a side wall 40 and a base 41. The center of the base is provided with an axle 42

which is mounted in a bearing 43 carried by the floor 44. At spaced intervals bearing blocks 45 are provided carrying ball bearings or rollers 46 upon which the underface of the bottom 41 rests. The receiver by this construction may be manually revolved at any desired speed.

A plurality of baskets or containers 50 are placed in close association in a concentric circle adjacent the wall 40 of the receiver 22. A second series of baskets 51 are placed between the baskets 50 and the center of the tub. As the baskets are arranged in this manner it will be noted that there are spaces between the walls of the baskets in the two series of the baskets and filler blocks or boxes 53 are placed between the two rows of baskets and they are shaped to conform substantially to the shape of the space between the baskets. The spaces between the outer concentric circle of baskets and the wall 40 of the receiver 22 are filled with triangularly-shaped boxes 54. Where necessary a variation of the boxes 53 may be made as shown at 55 and 56 in order to take care of irregular spaces between the baskets. The walls of the boxes are shaped to conform to the contour of the adjacent portions of the containers.

Each box has its upper end open but is covered by a piece of reticulated material or screen 60. The central portion of the box is hollow and has its bottom open so that as water passes through the screen 60 and enters the center of a box it will flow downwardly and pass through an opening 64 in the side wall of the box. The boxes 54 are also provided with openings 64 to permit the escape of water from said boxes. These boxes are also provided with a screen 60. It will be noted that the screen or wire fabricated members 60 are so arranged and extended beyond the side edges of the upper ends of the boxes.

The bottom 41 of the receiver 22 is provided with passages 65 through which water passes when it is being discharged from said receiver. It will be noted that a number of these openings or passages 65 are located beneath the containers 50 and 51.

The central space between the containers within the receiver 22 and substantially in the same horizontal plane with the tops of the containers is provided with a covering 70 spaced from the bottom 41 and supported on said bottom by posts 71. The peripheral portion of the covering is provided with projections 72 which are fitted into the spaces between the inner portions of the containers. The covering 70 and the screens 60 present a complete surface to the incoming materials so that none of the materials will fall between the containers.

The covering 70 is provided with a plurality of passages 75 to permit water when present to fall to the bottom 41 and pass out through the opening 65.

The operation of my device is as follows: The containers are placed in concentric rows within the receiver 22, as shown in Fig. 2 and the hollow boxes are placed within the spaces between the rows of baskets and the upper ends or the screen portions 60 of these boxes are located substantially in the same horizontal plane with the baskets and covering all of the spaces between the tops of the containers. As the traveling carrier 30 moves over the rollers 12 the materials or commodities pass over the same and fall downwardly into the receiver 22. Since the screens 60 at the tops of the boxes prevent the materials from falling between the containers a greater portion of the materials will fall into the containers while that part of the materials which falls on the screens may be scraped off the screen into the containers.

When the materials are wet the water which is carried over by the materials will pass through the screens 60 as the materials are discharged onto the screens and some of the water will pass through the containers 50 and 51 and be discharged through the openings 75 and 65.

While I have shown the containers in the form of baskets which are circular in cross section it will be appreciated that the containers may have any suitable shape or cross sectional area. Therefore, the cross sectional area of the boxes and the shapes of the screens 60 will be varied accordingly. It is also possible to provide a lid for the rotary receiver and packer which will have openings cut therein to receive the containers and the walls of the openings may be provided with hooks or any well known means for retaining the mouths of the sacks at the openings. In this manner the rotary receiver and packer may be employed for any kind of material which will be filled directly from the machines in various types of industries.

When the empty containers have been placed in the rotary receiver and packer and the screens placed in proper position, the conveyor is then started for carrying the materials to the end of the conveyor whence they are dumped into the containers. The rotary receiver is then revolved, and this is being done continuously during the filling of the containers, so that the filled containers will reach points directly opposite the end of the conveyor where they may be removed and other empty containers inserted into position. The screens and their supports are likewise placed in position with the renewal of the empty containers. It will be noted that the screens extend beyond the edges of the support and are shaped to conform to the contour of the containers. Supports are only supplied for those portions of the screen where there is any possibility of the screen dropping downwardly between larger spaces of the container.

Where the conveyor is feeding materials in bulk and where washing has been dispensed with the screens may be replaced with sheet material minus the perforations.

I claim:

1. A basket filling device comprising a tub, means for rotatably mounting said tub, the tub being adapted to receive baskets, removable and individual means for filling each of the spaces between the baskets and having the upper ends substantially in the same plane with the tops of the baskets to prevent materials being fed into the baskets from falling between said baskets, and means for feeding materials into the baskets.

2. A basket filling device comprising a tub, means for rotatably mounting said tub, the tube adapted to receive baskets arranged in a predetermined order, means for filling the baskets with a material, hollow boxes filling the spaces between the baskets and having their upper open ends substantially in the same horizontal plane with the tops of the baskets, screens covering the open ends of the boxes for preventing the material from falling between the baskets while permitting moisture on the material to pass through the screens.

3. A basket filling device comprising a tub adapted to receive baskets, means for rotatably mounting said tub, means for filling the baskets with material which have been previously washed, hollow boxes filling the spaces between the baskets, the opposite ends of the boxes being open, one open end resting on the bottom of the tub, a screen covering the opposite end of each box and adapted to receive material which would otherwise fall between the baskets.

4. A basket filling device comprising a tub adapted to receive baskets, means for rotatably mounting said tub, means for filling the baskets with material which have been previously washed, hollow boxes filling the spaces between the baskets, the opposite ends of the boxes being open, one open end resting on the bottom of the tub, a screen covering the opposite end of each box and adapted to receive material which would otherwise fall between the baskets, the bottom of the tub being provided with openings to permit the escape of moisture therefrom.

5. A basket filling device comprising a circular tub adapted to receive baskets arranged in concentric rows, boxes having the opposite ends open and fitted within the spaces between the baskets in the concentric rows and within the spaces between the outer concentric row of baskets and the wall of the tub, said boxes having their upper and lower ends open, the upper open ends being in substantially the same horizontal plane with the tops of the baskets, a screen covering the upper end of each box, and means for supplying the baskets with materials to be housed therein.

6. A basket filling device comprising a circular tub adapted to receive baskets arranged in concentric rows, boxes having the opposite ends open and fitted within the spaces between the baskets in the concentric rows and within the spaces between the outer concentric row of baskets and the wall of the tub, said boxes having their upper and lower ends open, the upper open ends being in substantially the same horizontal plane with the tops of the baskets, a screen covering the upper end of each box, means for supplying the baskets with materials to be housed therein, the lower portions of the boxes having openings to permit the escape of water therefrom to the tub, the bottom of the tub being provided with discharge openings for the water.

HORACE B. ROGERS.