Jan. 15, 1946. H. GAUDET 2,392,911

WASHING MACHINE

Filed Sept. 1, 1944

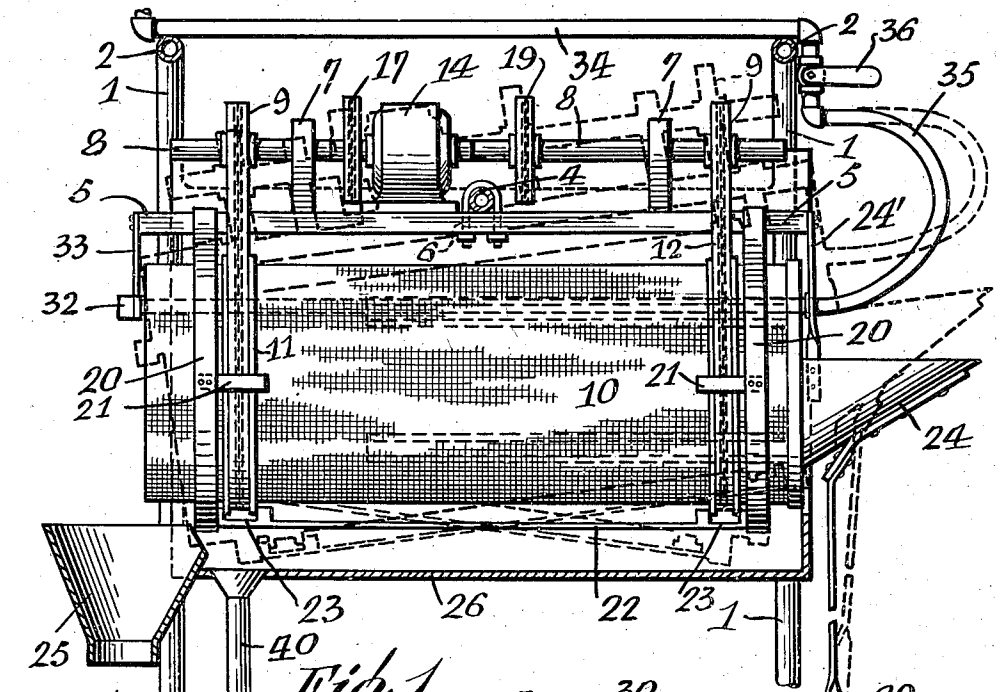


Fig. 1

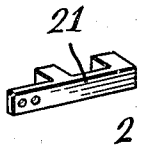


Fig. 4

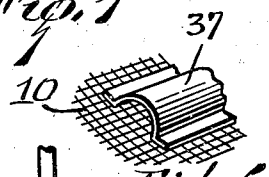
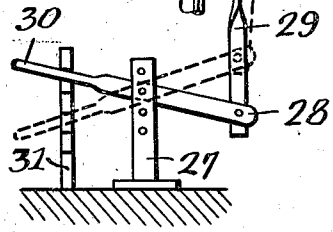


Fig. 5



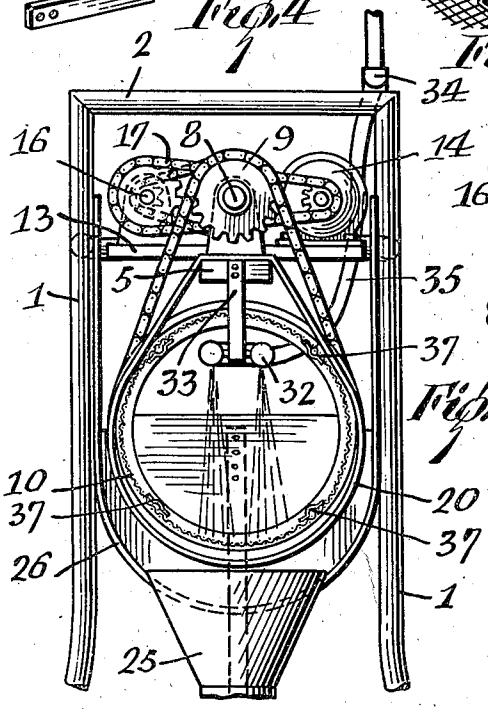


Fig. 2

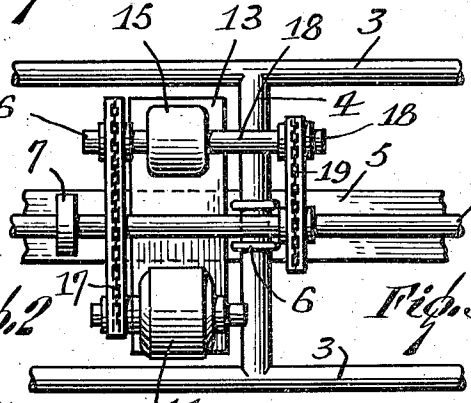


Fig. 3

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Patented Jan. 15, 1946 2,392,911

UNITED STATES PATENT OFFICE

2,392,911

WASHING MACHINE

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Application September 1, 1944, Serial No. 552,262

2 Claims. (Cl. 51—164)

The present invention pertains to a novel apparatus for washing various solid articles such as vegetables or ores. The apparatus embodies a rotary screen drum, and one of the objects of the invention in this connection is to provide a simple mechanism for tilting the drum when ready for discharge.

Another object of the invention is to provide simple means for restraining the drum from slipping when adjusted to an angular position.

In the accomplishment of these objects, the machine embodies a frame in which a main supporting plate is pivotally mounted. The plate carries driving mechanism from which is suspended and driven a screen drum mounted beneath the plate. The tilting mechanism is preferably connected to the supporting plate, or to a filling spout supported by the plate.

The rotary drive of the drum is accomplished through chains received in channel rings mounted on the drum. In order to hold the drum from slipping when tilted, as stated above, the supporting plate carries retaining rings loosely surrounding the drum and provided with guide members or retainers engaging the channel rings.

The invention also includes a spray head mounted in the drum and fed with washing fluid from a suitable source, as well as equipment for drainage, discharge of the washed articles, and turning of the articles within the drum while being washed.

The invention is fully disclosed by way of example in the following description and in the accompanying drawing in which:

Figure 1 is a side elevation of the device, partly in section;

Figure 2 is an end view;

Figure 3 is a top plan view;

Figure 4 is a perspective view of one of the drum retaining clips, and

Figure 5 is a perspective view of a detail.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

The frame consists of four vertical posts or tubes 1 joined transversely at their upper ends by rails 2 and longitudinally below their upper ends by rails 3. The latter serve to support a central transverse axle 4 for a purpose that will presently appear. A longitudinal plate 5 is pivotally suspended at its midpoint from the axle 4 by means of U-bolts 6 passed over the axle. The plate, moreover, carries a suitable number of bearings 7 in which is journalled a longitudinal shaft 8.

Sprocket wheels 9 are mounted on the ends of the shaft for the purpose of suspending a cylindrical screen drum 10. The latter carries channel rings 11 directly beneath the sprockets 9, and the suspension is effected by sprocket chains 12 passed around the sprockets and the corresponding channel rings.

Across the plate 5 is laid a platform 13 (Figure 3) carrying a motor 14 and opposite thereto a gear reduction box 15. The motor is connected to the input shaft 16 by suitable gearing 17, and the output shaft 18 of the gear box is connected to the shaft 8 by suitable gearing 19. By this means the screen drum 10 is rotated at the desired speed.

Adjacent to each ring 11 is a larger ring 20 suspended from the plate 5 and spacedly surrounding the screen drum. Bifurcated guides or retainers 21, as shown in Figure 4, are fastened to the rings 20 and straddle the adjacent rings 11 for a purpose that will presently appear. Further, the rings 20 are joined at the bottom by a longitudinal strip 22 carrying similar retainers 23 also engaging the respective rings 11.

Adjacent to one end of the drum 10 a loading spout 24 is fastened to the frame by arms 24', and beneath the other end is a fixed discharge funnel 25 carried by the frame structure. Along the entire bottom of the screen is a curved pan 26 extending upwardly along the sides of the drum and secured to the vertical posts 1 as shown in Figure 2.

The screen is tilted on the axle 4 by the linkage shown in Figure 1. A pivot post 27 mounted on the floor supports a pedal lever 28. One end of the lever is joined by a link 29 to the spout 24. The other end is in the form of a pedal 30 and is adapted to be locked in adjusted positions in a toothed rack 31.

In the upper portion of the screen drum 10 is mounted a suitable spray head 32 which may be suspended by hangers 33 from the ends of the plate 5. The frame structure supports an overhead water pipe 34 connected to the spray head by a flexible pipe 35, and a hand valve 36 may be interposed if desired.

To the inner surface of the drum 10 is secured a suitable number of longitudinal ribs 37 consisting preferably of split tubing as shown in Figure 5.

The rotation of the screen drum has already been described. The articles contained therein are turned and more thoroughly cleaned by the action of the ribs 37. The drum is adjusted to a substantially horizontal axis while loading and

washing, the filling spout 24 maintaining a relatively fixed position by reason of its attachment to the plate 5 through the arms 24'. The water or other fluid sprayed into the drum drains from the pan 26 through a drain pipe 40. On completion of the washing, the drum is tilted to the dotted line position and discharges into the funnel 25. The apparatus is suitable for washing various materials such as vegetables and ores. In the case of vegetables, for example, bags may be filled by attachment to the lower end of the funnel.

Although a specific embodiment of the invention has been illustrated and described it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention as indicated by the appended claims.

What I claim as my invention is:

1. A washing machine comprising a frame, a plate pivotally supported therein, a drive shaft journalled on said plate, sprocket wheels on said shaft, chains suspended from said wheels, a screen drum cradled in said chains, channel rings on said drum receiving said chains, means for adjusting said plate on its pivotal support, and retaining means carried by said plate and loosely engaging said rings.

2. A washing machine comprising a frame, a plate pivotally supported therein, a drive shaft journalled on said plate, sprocket wheels on said shaft, chains suspended from said wheels, a screen drum cradled in said chains, channel rings on said drum receiving said chains, means for adjusting said plate on its pivotal support, retaining rings carried by said plate and loosely surrounding said drum adjacent to said channel rings, and guide members carried by said retaining rings and loosely engaging said channel rings.

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