

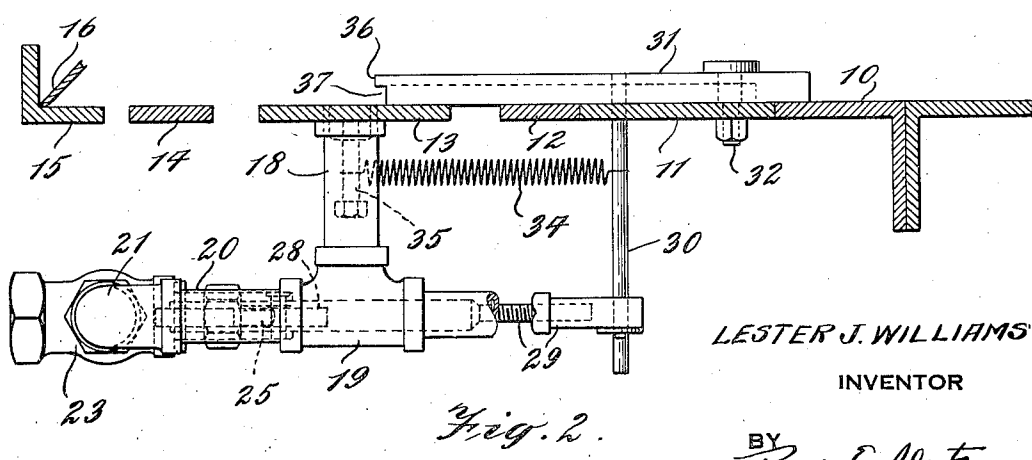
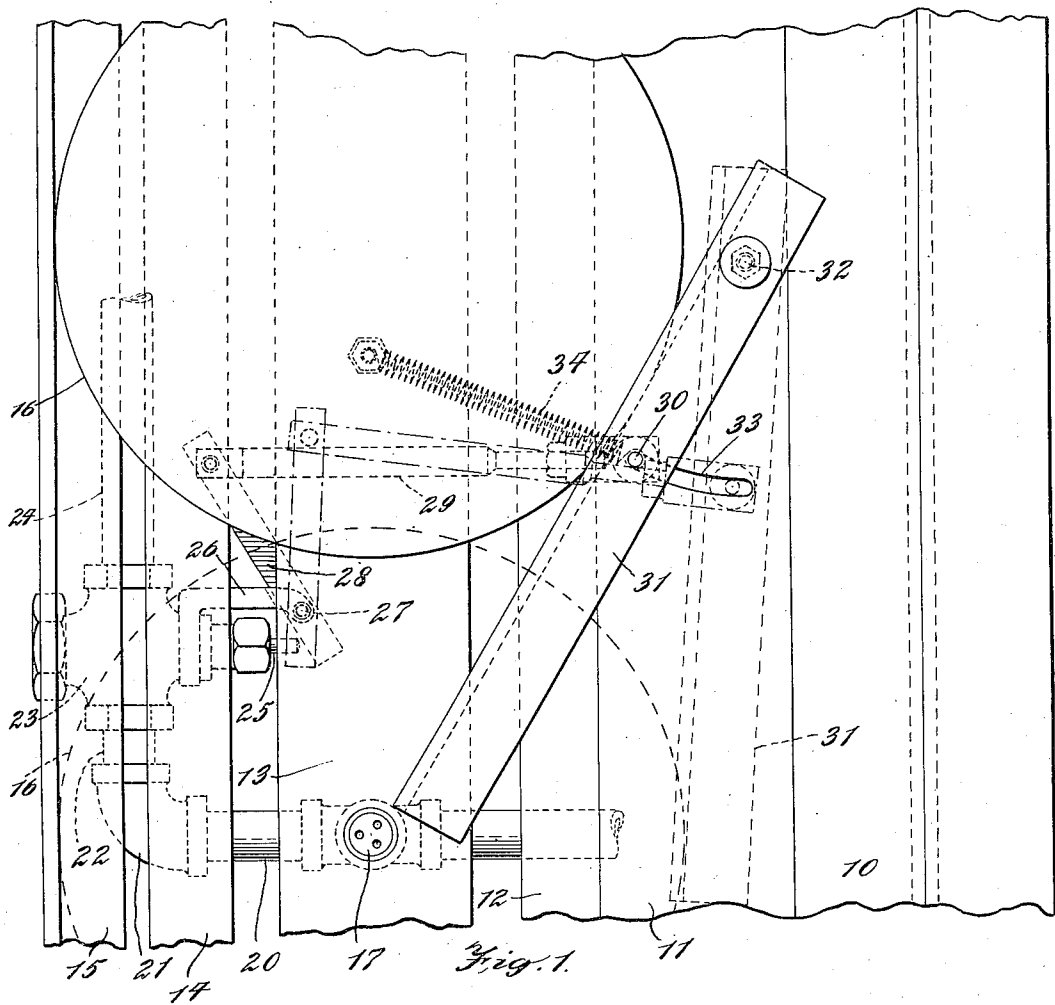
Oct. 22, 1935.

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2,018,000

CAN WASHING MACHINE

Filed July 15, 1930



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CAN WASHING MACHINE

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Application July 15, 1930, Serial No. 468,185

3 Claims. (Cl. 141—7)

My invention relates to can washing mechanism or apparatus, and especially to apparatus in which can bodies are advanced inverted and in a horizontal course, with improved means by which the neck or mouth portions of the can bodies as they move to or are located at washing positions, operate valves controlling supply of steam or washed liquid to a nozzle located below the body.

To this end the invention structure includes, in addition to a guideway and any known or suitable means for advancing the can bodies, an angularly located valve operating member, or pivoted lever, which is acted on by the can neck, or lip at the edge of the can mouth. The lever, moved by the can, acts through suitable adjustable linkage on the valve which controls supply of steam or washing liquid.

As an important detail improvement the valve operating member, or lever has on its active face a flange, or undercut formation cooperating with the lip of the can neck to prevent undesired tilting of the can while in engagement with the lever or in washing position.

The characteristics and advantages of the invention are sufficiently explained in connection with the following detail description of the accompanying drawing, which shows a representative embodiment. After considering this example, skilled persons will understand that many variations may be made without departing from the principles disclosed and I contemplate the employment of any structures that are properly within the scope of the appended claims.

Fig. 1 is a top plan of a portion of a washing machine, showing particularly a portion of the track or guideway, and one nozzle, valve, valve operating lever and linkage, and embodying the invention in one form.

Fig. 2 is a partly fragmentary vertical section of Fig. 1.

There may be any reasonable number of washing units, each consisting of a nozzle, valve and valve operating means, located longitudinally of the guideway for the can bodies. The drawing shows one such washing unit in association with a part of the guideway. There is also provided any known or suitable means for advancing the can bodies, usually step by step, with a pause at the washing positions, such for example, as shown in my copending application Ser. No. 468,184, filed July 15, 1930. Showing of such advancing or feed mechanism is omitted since its details may be varied without affecting the present improvements.

The guideway comprises horizontal flat strips such as 10, 11, 12, 13, 14 and 15 of which strip 15, at one side of the guideway, may be of angle section as shown, so that the flange or angularly directed lip of a can body, as sufficiently indicated at 16, Fig. 2, and also shown in its circular contour in Fig. 1, will be guided by the vertical flange of the angle strip. Also, certain of the strips below the can body, such as strips 13, 14 and 15, may be spaced apart as shown, to permit discharge of wash water or condensed steam downward through the guideway.

At one of a plurality of longitudinally spaced positions along the guideway there are inserted in one of the strips such as 13, in a position which is centrally below the can when positioned for washing, nozzles for supply of steam or washed liquid, only one of these nozzles, 17, being shown. The nozzle is inserted in or formed as an upper end of a pipe 18, which is connected by a T 19, and other pipe connections 20, 21 and 22 to a valve body 23, and this valve body is connected as by a pipe 24 to a main supply pipe for steam or wash liquid. The body includes a suitable spring-actuated valve having a projecting stem 25. The body also supports a bracket 26 in which is fulcrumed at 27 a short lever 28 arranged to engage and move the valve stem inward. The long end of the lever is connected by an adjustable link 29 to an arm or rod 30 fixed in a main valve operating or can actuated lever 31 resting on the upper face of the guideway, that is, on the upper faces of certain of the strips forming the guideway, such as 10, 11, 12 and 13. The lever is pivotally connected as by a bolt 32 to one of the strips, at a point outside the path of the can necks or neck flanges 16, and rod 30 is accommodated in an arcuate slot 33 in one of the guideway strips. A spring 34 is tensioned between rod 30 and a bolt or pin 35 secured in strip 13, to normally hold lever 31 in the angular position shown in full lines in both figures and ready for engagement by a can neck or neck lip, and actuation of the valve.

In its active face—that is, the edge engaged by the can neck or lip, the lever has at its upper margin a projecting flange 36, producing thereunder a channel or undercut formation 37 in which a segment of the can lip 16 engages below the flange, thus overcoming any tendency of the can to tip laterally toward the left, as viewed in Fig. 2, that is, looking toward the advancing cans.

As each can is moved toward a washing position (this position being indicated by the dash line 16, in Fig. 1) its neck lip is engaged with the active face of the lever, in the undercut 37, and

below flange 36, and the lever is moved from angular position as shown in full lines to active position as shown in dotted lines in Fig. 1, and in this movement the linkage is operated in an obvious way to open the valve, whereupon steam or wash liquid under suitable pressure is injected into the interior of the can through the apertures of nozzle 17. As the can is moved away from washing position the main operating lever is moved by its spring 34 back to normal angular position and supply of the washing fluid is discontinued.

By the described arrangement the washing medium is applied to the can only while it is in proper position and any waste of such medium is avoided, and at the same time tilting of the cans at and adjacent washing position is prevented by engagement of their neck lips or flanges with the undercut or flanged formation of the main valve operating lever.

I claim:—

1. A machine for washing cans having flanged cover receiving ends, combining a washing unit, parallel guide rails for guiding the advancing cans past the washing unit, a movable member having one end pivoted on one of the guide rails and having its opposite free end extending across the path of the advancing cans and adapted to be swung about its pivot point, connections between the movable member and the washing unit to actuate

the washing unit as said member is swung about its pivot by an advancing can and said member having a flanged edge adapted to overlie the flange of the cover receiving end.

2. A machine for washing cans having flanged cover receiving ends, combining a washing unit, a plurality of guide members for guiding the cans past the washing unit, a movable member having an undercut portion having one end pivoted on one of the guide members and having its opposite free end extending across the path of the advancing cans and adapted to be swung about its pivot point to actuate the washing unit and a spring resisting movement of the movable member to press a portion of the can flange against the guide member opposite to the one on which the movable member is pivoted during the washing operation, the undercut portion overlying and guiding a portion of the can flange.

3. A machine for washing cans having flanged cover receiving ends, combining a washing unit, means for supporting the cans in inverted position, a movable member on said supporting means adapted to be moved by the cans and having a flange adapted to overlie the can flange to prevent its overturning and means connecting the movable member and the washing unit so that movement of the member operates the unit.

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