C. A. MUSGRAVE.

ATTACHMENT FOR MILK CAN WASHING MACHINES.

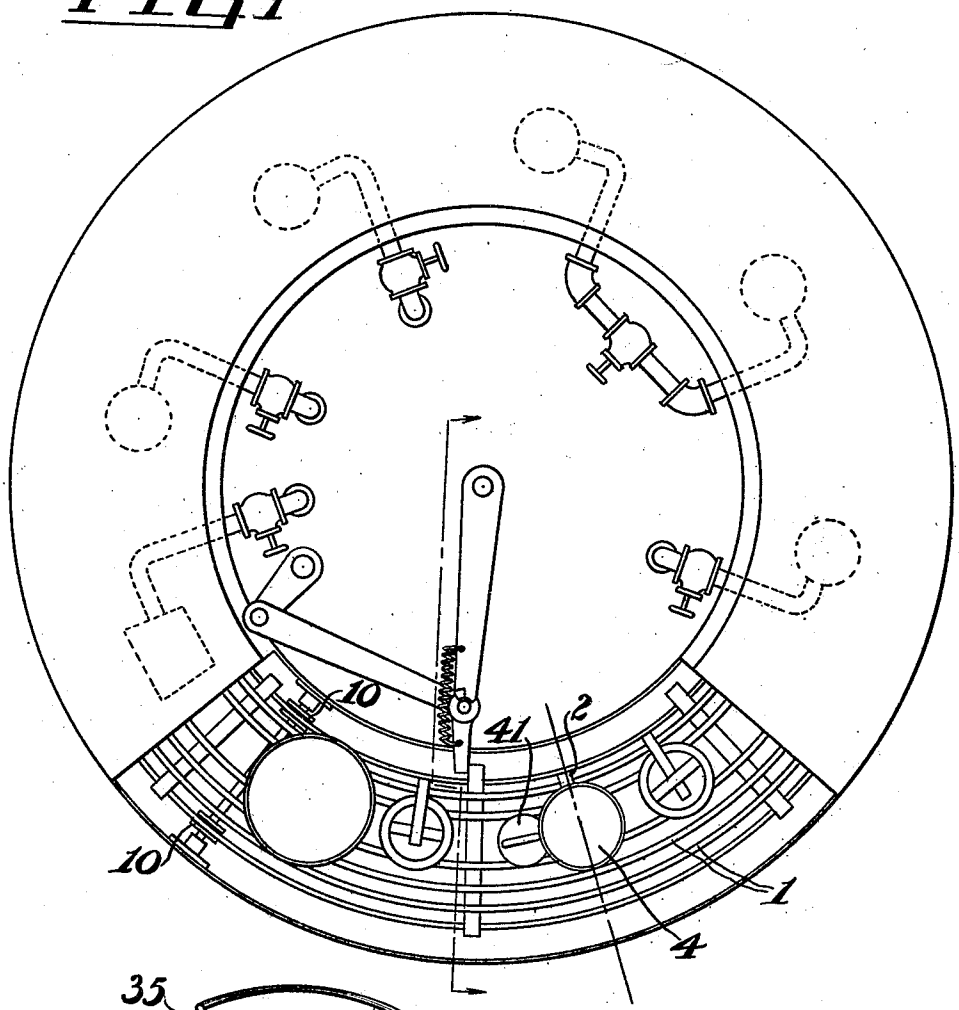
APPLICATION FILED FEB. 5, 1921.

1,428,491.

Patented Sept. 5, 1922.

2 SHEETS—SHEET 1.

FIG. 1



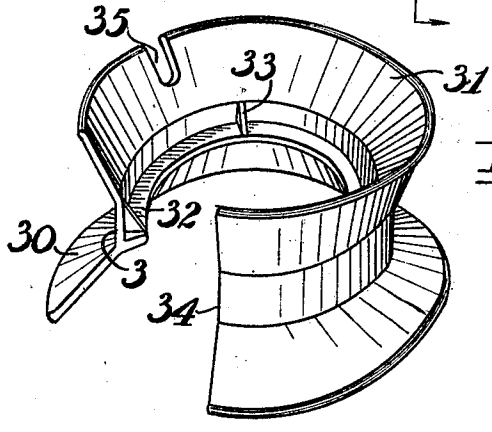


FIG. 2

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Fig. 3

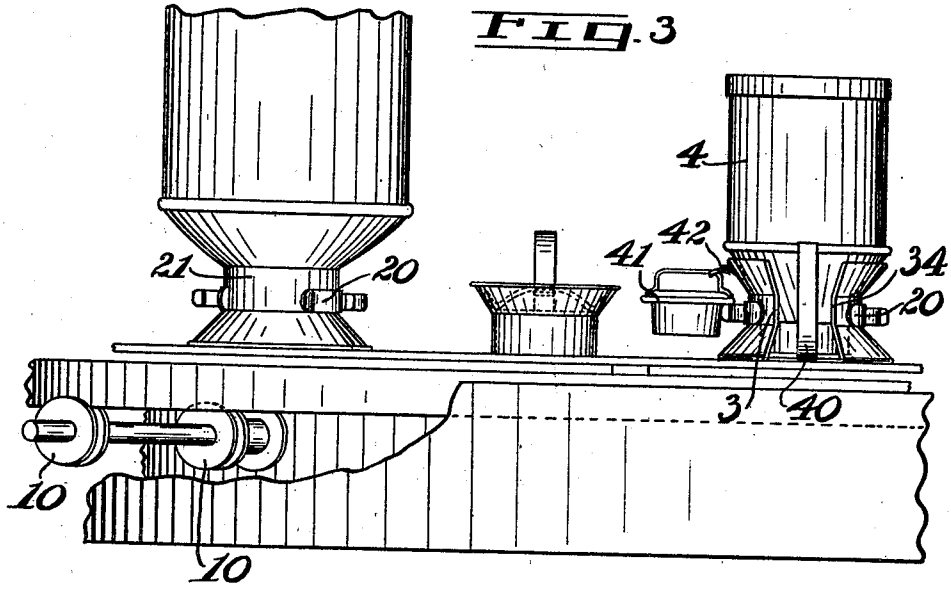
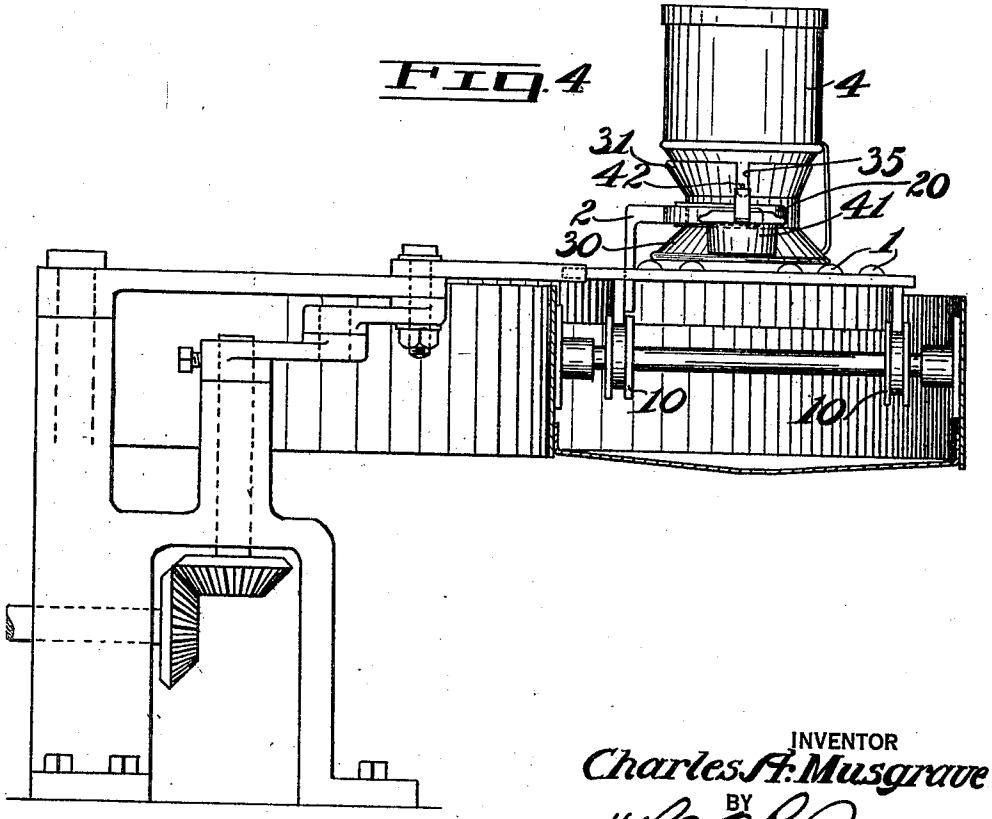


Fig. 4



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UNITED STATES PATENT OFFICE.

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ATTACHMENT FOR MILK-CAN-WASHING MACHINES.

Application filed February 5, 1921. Serial No. 442,705.

To all whom it may concern:

Be it known that I, CHARLES A. MUSGRAVE, a citizen of the United States of America, and resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Attachments for Milk-Can-Washing Machines, of which the following is a specification.

My invention relates to milk can washing machines and consists of an attachment to be used with such machines which will better adapt them to handle cans of small sizes.

The object of my invention is to provide an attachment which may be easily applied to and removed from such machines and which when applied will hold cans of small sizes securely while being washed.

The features of my invention which I believe to be new and upon which I desire to secure a patent will be hereinafter described and then particularly pointed out in the claims.

In the accompanying drawings I have shown my invention constructed in accordance with my present desires.

Figure 1 shows a plan view of a milk can washing machine indicating the manner in which my invention is applied thereto.

Figure 2 shows in perspective one of the devices which constitutes the attachment.

Figures 3 and 4 are fragmentary side views or elevations from different positions showing the washing machine and the manner of applying my attachment thereto.

In washing metal milk cans about dairies and such places, machines have been provided which in effect consist of a turntable of skeleton construction arranged to receive the cans which are placed thereon bottom side up and which are washed by jets of water discharged upwards through the skeleton floor into the cans. Such machines are provided with means whereby the necks of the cans are engaged to hold them in proper position for the reception of the jets of water. These devices are made to accommodate the large sized cans, as these large cans constitute a considerable majority of the cans used. The force of discharge of the water jets is often such that a small can placed upon the machine, being not firmly engaged and held by means which will so hold the large cans, is sufficient to tip the can over and thus prevent its being properly washed. The object of my present invention is to provide an attachment which may be quickly put in place upon the machine and as quickly removed, which will securely hold the small sized cans and prevent their being displaced by the jets of water.

In Fig. 1 the construction of the turntable which holds the cans is shown. This consists of a series of rings, as 1, which are made of metal rods spaced apart from each other and arranged concentrically one within the other. This forms a grid upon which the cans may be placed and one which will not seriously interfere with the upward discharge of the water. This ring is mounted to travel upon wheels, as 10, which are disposed about the machine. The rings which form the grid thus constitute traveling rails which run upon fixedly positioned wheels.

At intervals about the rails, arms 2 are secured thereto which extend upwardly and then forwardly, forking to form a yoke as 20, consisting of spring fingers so positioned and separated from each other, that they will snugly fit over the neck of a large sized can, as has been indicated in the can which has been shown at the left hand in Figure 3. The upper edge of the can neck for such large sized cans is often flared outwardly as has been shown in the large can in Figure 3. The spring yoke 20 engaging the part of the neck which is below it when the can is inverted, will securely hold the can against displacement.

Such a yoke will not engage and hold the smaller neck of the small sized cans. For this purpose the device which is shown in Figure 2 is applied to the machine. This consists of a sleeve which, as shown, has both its upper and its lower portions flared outwardly. As the necks of small sizes of cans are often not flared outwardly, the outward flaring of the under side of this attachment would, in such cases, be unnecessary. It is however desirable that this lower flange 30, or some equivalent which will give a wider base to the attachment, be employed. This attachment has a central zone 3 which preferably should be made of the same diameter as the outside diameter of the central portion 21 of the necks of the large sized cans, so that it will engage the holding finger or yoke 20 in the same way in which the neck of a large sized can engages these fingers.

The upper end of this sleeve is outwardly flared as shown at 31, this being made so as to conform to the flare which is given to the cans in that section which connects the main body with the neck. The sleeve may be so proportioned that this flared shoulder of the can will rest upon the upper surface of the flared end 31. While this condition is desirable, I do not consider it as being strictly essential.

On the inner surface of the sleeve a flange 32 is provided where this is necessary, in order to make the inner portion of the attachment fit the outer surface of the can neck. This flange may be omitted if at any time it is not needed in order to make a snug contact with the neck of the can. It may also be made as deep as necessary to hold the smallest sizes of cans.

To facilitate the ready insertion of the necks of the cans and to prevent the ends thereof from catching upon any shelf 32 which may be employed, I have provided a certain number of inclined ribs 33 which would be engaged by the ends of the cans and thus deflect the cans to the point where they will with certainty pass through the opening within the flange 32.

Small sizes of cans, such as that shown at 4 in Figures 3 and 4, are usually, or often, provided with a handle, as 40, which is at one side of the can. To accommodate such a handle the sleeve is cut through at one side thus forming a gap, as 34. This permits the handle to project outwardly beyond the sleeve. Such cans usually also have their covers 41 secured to the can, as by a chain 42. I therefore have shown a notch, as 35, placed in the upper edge of the attachment in such a position as to accommodate this chain when the handle is within the gap 34. This supports the cover in inverted position, as has been shown in Figures 3 and 4, as well as in Figure 1. In this position it is placed just beyond the edge of the base of the sleeve where it will receive the upwardly discharged water.

To apply an attachment of this sort to the ordinary milk can washing machine it is only necessary to place it upon the turntable and between the holding fingers 20. The can is then placed upon and enters into this sleeve. It may be removed with the can by simply drawing it out from the spring fingers 20. It is thus seen that the device may be quickly applied and removed from the washing machine. When in place it will securely hold the smaller sizes of cans and prevent their being displaced by the force of the washing jets. It will thus save a considerable amount of time and insure also an effective washing of the cans.

What I claim as my invention is:

1. An attachment for milk can washing machines for handling small sizes of cans comprising a sleeve adapted to be placed upon the normal can supports and to receive the neck of the smaller sizes of cans, the ends of said sleeve being flared outwardly.

2. An attachment for milk can washing machines for handling small sizes of cans comprising a sleeve adapted to be placed upon the normal can supports and to receive within it the neck of the smaller sizes of cans, said sleeve having a central portion of an outside diameter corresponding with that of the necks of the larger cans whereby it is engaged and held by the normal can holding fingers.

3. An attachment for milk can washing machines comprising a sleeve adapted to be secured upon the washing machine and to receive within it the neck of a smaller sized can and having a gap at one side to accommodate the can handle.

4. An attachment for milk can washing machines comprising a sleeve adapted to engage the can holding means of the machine and having an interior diameter proportioned to the exterior diameter of the necks of the smaller cans, and having a notch in its upper edge for receiving the cover-securing chain.

5. An attachment for milk can washing machines comprising a sleeve adapted to engage the can holding means of the machine and having an interior diameter proportioned to the neck diameter of the smaller cans, a handle receiving gap at one side and a notch in its upper edge for receiving the cover-securing chain.

6. An attachment for milk can washing machines comprising a sleeve adapted to engage the can holding means of the machine and having an interior diameter proportioned to the exterior diameter of the necks of the smaller cans and a base of enlarged diameter.

Signed at Seattle, King County, Washington, this 31st day of January 1911.

CHARLES A. MUSGRAVE.