April 26, 1960 C. HIGDON 2,933,747

DAIRY UTENSIL

Filed March 25, 1955

Fig. 1.

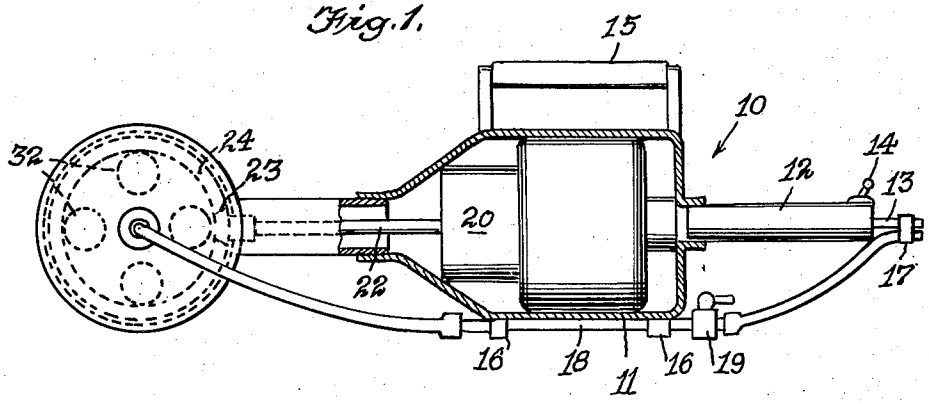


Fig. 2.

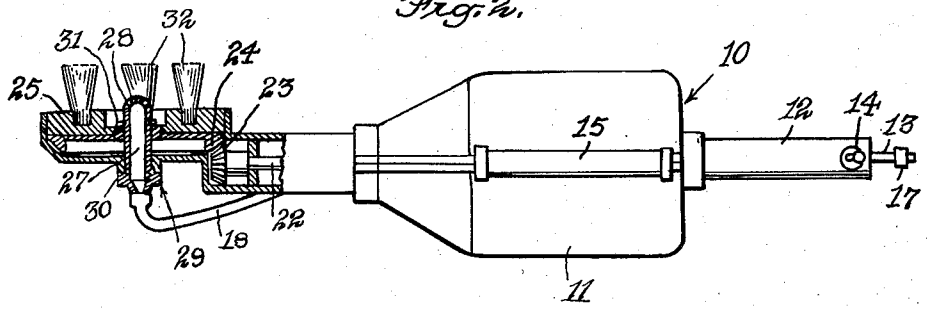
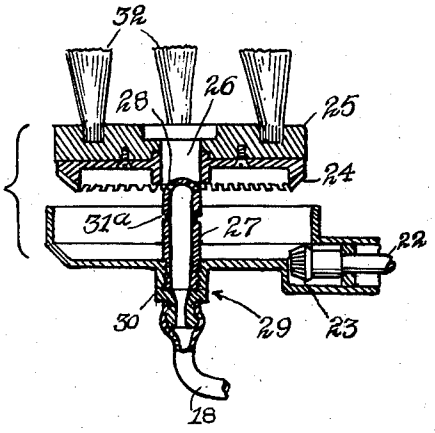


Fig. 3.



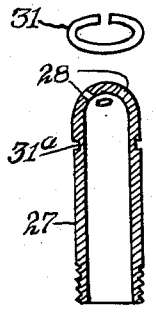


Fig. 4.

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DAIRY UTENSIL

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1 Claim. (Cl. 15—29)

This invention relates to a dairy utensil and more particularly to an improved machine for washing udders. Heretofore udder washing machines have been proposed utilizing for the most part a spray of water within a receptacle in which the udders are disposed. Such machines have not proven totally effective in that particles of dirt or the like were oftentimes not removed simply by the water spray.

It is an object of the present invention to provide a washing machine for udders which will thoroughly cleanse the udders.

It is a further object of the present invention to provide a washing machine for udders which is light, compact and portable.

It is still a further object of the present invention to provide a washing machine for udders which, while effectively cleaning the udders, will not injure the same.

It is still a further object of the present invention to provide a washing machine for udders which is durable and has longevity despite extended use.

Still another object of the present invention is to provide a washing machine for udders having all the desired advantages which is nevertheless inexpensive to manufacture and easy to produce.

Other objects and advantages are set forth in greater detail in the accompanying specification taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a side elevation view partially in section of the machine for washing udders of the present invention;

Fig. 2 is a top view partially in section of the machine of the present invention;

Fig. 3 is an enlarged view of the means for cleaning udders according to the present invention; in partially disassembled relation and

Fig. 4 is an enlarged axial sectional view of the water nozzle of the machine of the present invention with the retaining ring removed.

Referring particularly to the drawings, there is shown an apparatus **10** for washing udders of cows. The machine consists of power means in the form of an electric motor contained within the housing **11**. The electric motor is of the usual conventional fractional horsepower type. A handle **12** is provided to the rear of the housing **11** for the electric motor. The handle **12** has a hollow bore accommodating a wire **13**, the end of which (not shown) is to be connected to an outlet for supplying a source of electrical energy. A switch **14** is located on the handle **12** for switching the electric motor on and off as desired. Another handle **15** is provided, as shown, above the housing **11** for the purposes hereinafter set forth. Clips **16** are provided at the base of the housing. Another clip **17** engages the electric cord **13**. A water pipe **18** passes through the clips **16** and **17** which maintain the water pipe in position. One end of the water pipe, not shown, is secured to suitable water supply means. A water valve **19** is disposed to the rear of the housing for controlling the flow of water through the pipe **18** as desired.

According to the present invention, secured to the motor at the forward portion thereof is a reducing box **20** containing reduction gears for the purposes hereinafter set forth. A rotatable shaft **22** is provided through the reducing box **20** and engaging the reduction gears. The forward end of the shaft **22** has a bevel gear **23** which, according to the present invention, engages a gear **24**, as shown. Secured to the gear **24** and rotatable therewith is a disk **25** made of any suitable material. The disk is provided with a central opening **26** adapted to receive a nozzle **27**. One end of the removable nozzle is provided with perforations **28**. The other end of the nozzle is connected by a coupling **29** to the end **30** of the water pipe **18**.

To maintain the nozzle **27** in position in the disk **25** a snap ring **31** is secured around the shaft in the groove **31***a* below the perforations **28**. The snap ring prevents the hollow shaft from inadvertently passing through the aperture **26** in the disk **25**. Brushes **32** are secured to the upper side of the disk **25** at predetermined spaced intervals.

The operation of the apparatus for washing udders of the present invention is as follows: The wire **13** is connected to a suitable source of electrical supply. The water pipe **18** is connected to a suitable source of water supply. The switch **14** is thrown permitting energization of the electric motor rotating the shaft **22**. The electric motor causes the shaft to rotate. The rotation of the shaft, according to the present invention, is decreased for the purposes hereinafter set forth by means of the reducing gears within the reduction box **20**. The bevel gear **23** at the forward end of the shaft causes rotation of the disk **25** carrying the brushes **32** around the nozzle **27**. The water valve **19** is opened permitting the flow of water through the pipe **18** and nozzle **27** and out of the perforations **28**. The apparatus **10** is supported by the handles **12** and **15**, and brought into position wherein the tops of the brushes **32** engage the cow's udders. The lightness and compactness of the apparatus permits it to be portably manipulated as described. The rotation of the brushes **32** causes them to clean the cow's udders removing dirt and like matter therefrom in a brushing action. The water is ejected from the perforated nozzle **28** onto the brushes keeping them wet whenever desired.

According to the present invention, injury to the cow's udders is prevented even with the use of relatively hard bristle brushes which are used for effective cleaning, by means of the gearing arrangement. The disk **25** carrying the brushes **32** turns at a desired speed so that a gentle cleansing action is applied to the udder of the cow to clean the same without injury to the udders.

The disk and brushes may be removed for cleansing simply by disconnecting the clip **31** from the nozzle **27** whereby the nozzle may be removed through the opening **26** and the entire brush unit may be cleaned apart from the remainder of the apparatus for an effective cleansing between uses.

According to the present inevntion all moving parts of the apparatus except the bristles are contained within a protective housing as shown.

While the invention has been described in some detail, it will be understood that variations and modifications may be made without departing from the spirit thereof or the scope of the appended claim.

I claim:

A brush for cleansing the udders of cows, said brush comprising a housing, said housing having a bottom wall and a peripheral side wall integral with said bottom wall and extending upwardly from said bottom wall, said bottom wall and said side wall defining an upwardly opening recess having an upper peripheral edge, means forming a central aperture in said bottom wall, a nozzle posi-

tioned in and closing said aperture and extending vertically upwardly above said upper edge, said nozzle having a cylindrical periphery, a brush disk, said disk having a central aperture, said nozzle extending through said aperture with said disk being rotatably journaled on said nozzle, a ring gear depending peripherally beneath said disk, a second gear in mesh with said ring gear, said disk having an upper surface substantially flush with said upper edge, said upper surface extending from the peripheral edge of said disk radially inwardly of said disk to substantially said central aperture, said disk having an annular recess in its said upper surface axially aligned with the aperture, the latter recess having a lower wall extending radially of said aperture, said nozzle having a peripheral groove adjacent the latter wall, a removable retaining member seated in said groove and bearing against the latter wall and releasably and rotatably retaining said disk on said nozzle, brushes secured to said disk radially outwardly of the latter recess and projecting vertically above the latter recess, means forming orifices in said nozzle above said disk but beneath the tops

of said brushes, said orifices being adapted to direct fluid spray outwardly and upwardly toward the tops of said brushes, means removably connecting said nozzle to said housing, means connecting said nozzle to a source of fluid supply, said disks, ring and brushes being readily removable from said recess to expose the interior thereof for cleaning purposes, means for rotating said second gear.

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