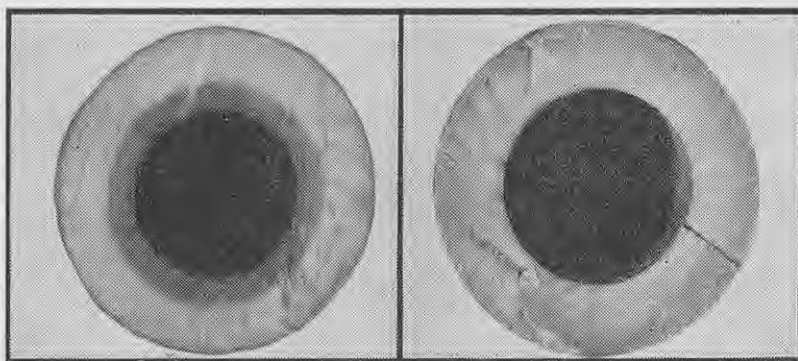


CLEANING MILKING MACHINES



Left—End view of long milk rubber, after one season's use, perished by fat absorption. The dark inner circle indicates the depth to which fat has penetrated and the extent of perished surface. Right—End view of long milk rubber after four years' use and treatment by the boiling water-caustic soda method.

done stone will form on metal only in exceptional cases, and rubberware, with the exception of inflations, will remain effective and sanitary for up to 6 years. The steps in the cleaning of the machine are:—

1. Before milking is begun draw cold water through each set of teat cups. This will wet the parts and help to prevent milk film adhering to the metal. Lift the cups in and out of the water, allowing an intake of air to provide greater rinsing and flushing.
2. After milking remove all dirt from the outside of teat cups and claws by hand brushing them in a warm caustic soda solution.
3. Stop the releaser pulsator or disconnect the releaser rubber and draw one bucket of cold water through each set of teat cups. This will fill the releaser and remove milk deposits from all parts before the boiling solutions are applied. Lift the cups in and out of the water to allow an intake of air and to produce a surging effect. Insert in the main milk pipe a traveller brush or cleaner attached to a cord and allow it to travel to the releaser under vacuum. Draw it back against the air pressure to brush the pipe thoroughly. Break the vacuum to discharge the water from the releaser and vacuum tank.
4. Draw 1 gallon of boiling water and caustic soda solution at the strength of 1 level teaspoon of caustic soda to 4 gallons of boiling water through each set of teat cups. Lift the cups in and out of the solution to allow an intake of air and to produce a surging effect. Better results and greater sterilisation are obtained by immersing 2 sets of cups in the solution simultaneously. Break the vacuum to discharge the solution from the releaser and vacuum tank. (The solution from the releaser is discharged into a container and used for other purposes.)

5. Through each set of teat cups draw 1 gallon of clean boiling water. Lift the cups from the water first and once only to flush out the caustic soda solution. Generate the utmost heat and give the most effective sterilisation by leaving the cups immersed and preventing an intake of cold air. Turn off vacuum taps before removing the cups from the liquid. Better results and greater sterilisation are obtained by immersing 2 sets of cups in the boiling water simultaneously. Break the vacuum and discharge the water from the releaser and vacuum tank.

6. Treat the pulsator and vacuum systems in the same manner by drawing the solutions through the systems from the claw air rubber or from behind the inflations. The rubber connecting the releaser to the releaser pulsator must also have daily attention.

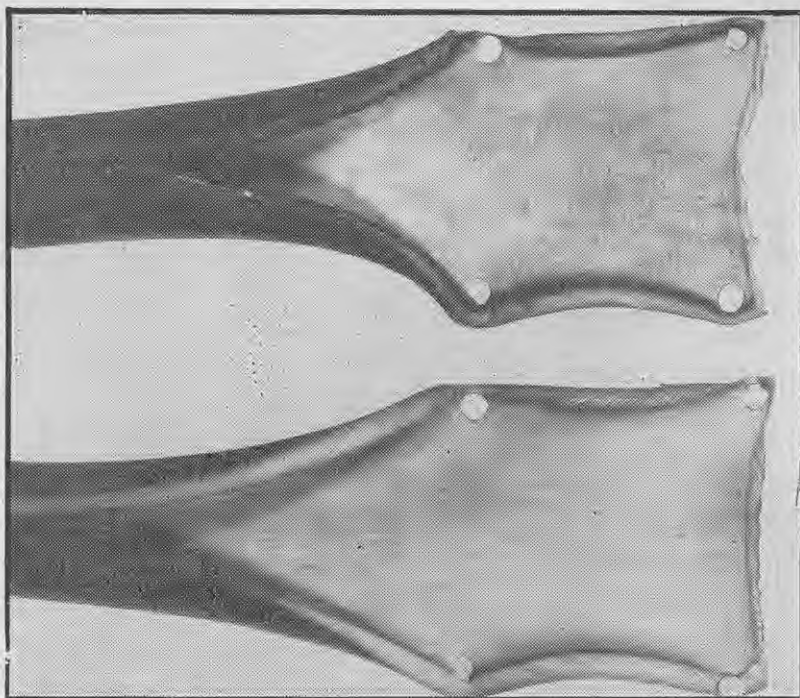
7. Brush the metal pipes regularly with a to-and-fro motion. A brush and cord, ball of horsehair and cord, or a rubber cleaner and cord are all suitable for cleaning the main milk pipe under vacuum.

8. Wash the outside of teat cups and rubbers with caustic soda solution collected from the releaser and rinse them. Disconnect them from droppers and hang them in a clean, dry place, protected from sunlight.

9. Scrub the releaser, vacuum tank, separator parts, and utensils with a brush and sterilise them in boiling water.

10. To allow a circulation of air remove all rubber plugs from piping and leave all ports and the vacuum tank open.

Analyses, following practical trial, have shown that the penetration of fat into rubber is very rapid and very considerable; milk elevator inflations have been found to absorb 6 per cent. (by weight) of fat in 2 months and teat cup inflations much more. Consequently, it is essential to remove all trace of fat after each milking, and tests have shown conclusively that completely satisfactory results can be obtained only by using the boiling water-caustic soda method twice daily. Analyses of rubber after the use of this method twice daily have shown no penetration of fat, but following its use during a comparable period once



Surface view of the rubbers shown at the top of this page. Note the perished surface of the upper rubber and the dark lines indicating fat penetration.