

the latter case the inflation does not close beneath the teat, and so does not at any stage obstruct the flow of milk.

The general principle of the modern pulsator is as follows:—Figs. 1 and 2 show cross-sections of a typical “Thule” type cup. In Fig. 1 the rubber liner or “inflation” is shown in a relaxed position, which applies when the vacuum is the same on either side. Now the inner chamber A is connected by the nipple B to the milk pipe via the claw, while the outer chamber C is connected by the nipple D to the pulsator valve. The latter connects the pulsator chamber of the cup C alternately to the vacuum (in the milk pipe in a single pipe machine, in the vacuum pipe in a double pipe machine) and to the air. In order that the relation of the squeeze and release phases, as we shall call them, may be clear, a pulsator valve is illustrated diagrammatically in Figs. 3 and 4. In Fig. 3 the valve is shown connecting the pulsator claw lead A to the vacuum lead B. In this position the inflation is at the position shown in Fig. 1 if the machine is of the orthodox type. Fig. 4 shows the pulsator valve connecting the claw pulsator

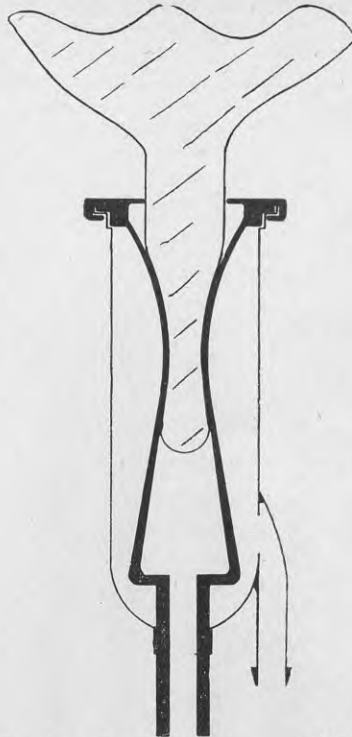


Fig. 5.—The action of a moulded inflation when collapsed.

lead A to the air. The vacuum lead in this position is simply blocked by the pulsator slide valve C. This position corresponds to the position of the inflation shown in Fig. 2. In this position the atmospheric pressure acting on the outside of the inflation squeezes its walls together (the inside being partially evacuated) and so causes it to collapse.

### *How Does the Teat Cup Milk?*

Sometimes we hear it said that a milking machine “milks on the squeeze.” By this is meant, of course, that the milk flows from the teat when the inflation is squeezing and the flow stops when the inflation releases. In order to solve this problem the writer constructed cups with glass walls and fitted with inflations which had small celluloid windows let into them. As a matter of interest a photograph showing details of one such cup is given as Fig. 6. The following notes sum up many observations.

In most cases milk flows within a few seconds after the cups are put on the cow, and is continuous for the first two or three minutes. There is no

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