

## Testing the Pulsator

It is important to ascertain just how a pulsator is functioning. This is most

readily done by the use of a recording vacuum gauge. A suitable instrument has been worked out at Wallaceville,

and the accompanying figures show the type of graph obtained when the vacuum at the pulsator nipples of the claw is recorded.



You don't sell over 6,000 Units in the short period of 8 milking seasons without there being some outstanding reason for the G.V.B. popularity

The reason is that the G.V.B. approaches more nearly the natural suck of the calf than any other machine on the market. Owners of many of the highest pedigree herds in the Dominion have proved this. They have found that this outstanding machine gives them all-the-year-round trouble free and economic milking. Others claim less udder trouble, healthier contented cows; no need for chains or leg ropes.

## NON STRIPPING

Many of our users claim that they never strip their cows and that their production has gone up by leaps and bounds as a result. These are proved facts.

Why not convert your old milker now to the G.V.B. principle, and thus obtain the satisfaction which we are giving to many users today. Send in the handy Coupon today. It will bring you full particulars of an unrivalled proposition for making good cows better!

The costs are not great, but the results are!

### THE GORDON VACUUM BREAK MILKERS LTD.,

Head Office: ALBERT STREET, AUCKLAND.  
P.O. BOX 1687.

Branches at Whangarei, Palmerston North,  
Hamilton, Stratford and Christchurch.

To GORDON VACUUM BREAK  
MILKERS LTD.,

44 Albert St. (Box 1687), AUCKLAND.  
I am interested in the G.V.B. I want the facts. Please send  
me, without obligation, full details by return.

NAME .....

ADDRESS .....

My herd comprises.....cows. J.A

Firstly, let us consider Fig. 7. In this diagram the vertical axis OY represents vacuum and OX represents time (the direction of motion of the tracing pencil is shown by the arrows). The graph represents the way in which the vacuum would vary in a perfect pulsator system operating at a 50:50 ratio, that is one-half of the total cycle is occupied by the squeeze phase, and one-half by the release.

In all subsequent references to pulsator ratio we shall mean the ratio duration of squeeze phase/duration of release phase. Sometimes the reciprocal ratio is used, but for convenience we shall always employ the above.

The curvature of the "vertical" portions of the graph is due to the use of a recording instrument employing a simple arm with no correction for parallel motion. This is no disadvantage in the graph provided it is borne in mind when reading it, and it simplifies the instrument considerably.

### Pulsator Ratio

Theoretically, the pulsator ratio is the ratio of the area BCDE to the area ABEF. In the ideal case this is equal to the ratio BC:AB, and for most practical purposes we may take the latter. In Figs. 8 (a, b, c) we see three different pulsator ratios:—

$$a = 40:60$$

$$b = 30:70$$

$$c = 60:40$$

The "snappiness" of the pulsator is indicated by the sharpness of the angles at A, B, C, D, E, and F. In a poor pulsator these angles become

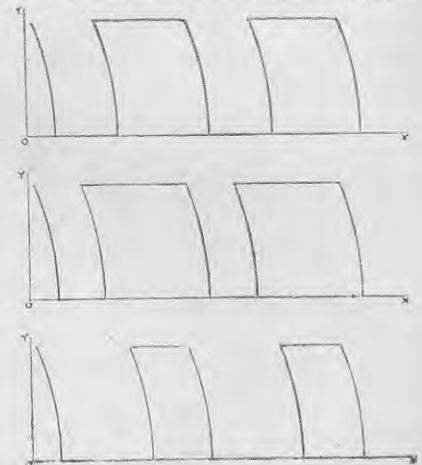


Fig. 8.—The three different pulsator ratios.