



[Times Photo Engraving Co. Ltd. photo.]
Fig. 3—Cross-section of plastic relief valve.

valve to be a little lower than the vacuum in the machine, due to the resistance of the rubber tube. With an ordinary valve this effect causes a loss in sensitivity. In the case of the compensated valve there is no loss. As the air flow increases the air blows against the specially shaped valve and gives the weight an extra lift. This means that the valve will stay open for a slightly lower vacuum than is needed to open it at first. By specially designing the seat the extra push due to the air blowing on the valve exactly compensates for the difference in vacuum caused by the air flowing down the rubber tube. This means that the regulator operates correctly only if fitted with the correct length and size of rubber tubing connecting to the machine by a nozzle or inlet tube which does not obstruct the air flow.

Vertical Mounting

The special seat also has the effect of keeping the valve centred properly, even if it is not mounted quite vertically, though it is recommended that the valve be mounted as near the vertical as possible.

As vacuum control is needed in the milk line, it is recommended that this sensitive regulator be connected to the vacuum tank or as near as possible to the tank on the air line. It should be screwed (not too tightly) to a firm

wall or other support above the level of the point to which connection is made, so that the length of rubber supplied with it runs downhill all the way from the regulator to the machine. The rubber supplied must not be shortened or added to. Because of the large volumes of air passing through it, the regulator should be fitted in the separator room where possible to avoid the trapping of cow hair, dust, and other possible contaminating materials.

Faults in Installation of Regulator

The following faults may occur when installing the regulator:—

1. Shortening of the rubber connecting tube: This causes the valve to be over-compensated and so to be slightly unstable.
2. Using rubber tube which is too long: This causes a loss in sensitivity.
3. Having a connector on the air pipe or vacuum tank which is too small: This will reduce the sensitivity and may cause the valve to oscillate; a good means of connecting the regulator to the machine is by the use of 3/4 in. milk dropper connector. Old gauge fittings and some types of relief valve fitting must not be used.
4. Setting up the regulator off the straight: This reduces the sensitivity.
5. Mounting the regulator on a support which is vibrated by some part of the machine drive: This causes chattering and wear.
6. Mounting the regulator on the air line at the far end from the releaser: In this position it collects dirt and attempts to compensate for the pulsator fluctuations.

If the compensated regulator is fitted correctly to a machine, its accuracy is such that it may be used to check the gauge. Its sensitivity is such that it will respond immediately to extra drains of the reserve air and so conserve useful pump capacity. The use of this instrument enables the pump to be run more slowly and thus more economically for the same effective reserve of air as will be obtained with a poor regulator and a faster pump

Little Maintenance Needed

Farmers are urged to see that when a vacuum regulator is installed care is taken to avoid the faults mentioned. Once installed correctly the device needs no attention other than to be carefully taken to pieces occasionally so that dust can be cleaned off the valve and seat with a small dry brush. How often this is done depends entirely on how dusty the air is where the regulator is working.

If the regulator is installed vertically on a solid wall and connected by the tubing supplied with it to a 3/4 in. milk inlet nipple fitted as near as possible to the vacuum tank on the air line side, it will give precise and reliable vacuum control. With a correctly adjusted leak-free machine evacuated by a pump running at the correct speed such a regulator will be found to improve the efficiency of the plant.

The following talk will be given to farmers from Station 1YA Auckland at 7.15 p.m.:

December 6—"Haymaking," by J. E. Bell, Fields Superintendent, Extension Division, Department of Agriculture, Auckland.

The following talk to farmers will be broadcast from Station 1XH Hamilton at 7.30 p.m.:

December 7—"Honey," by C. R. Paterson, Apiary Instructor, Department of Agriculture, Hamilton.

A radio talk will be given to farmers from Station 1YZ Rotorua at 7.15 p.m.:

December 14—"Summer Feeding of Stock," by E. R. Marryatt, Fields Instructor, Department of Agriculture, Whakatane.

Other talks are given from 1YA Auckland on Tuesdays at 12.35 p.m., 2YZ Napier on Tuesdays at 7.10 p.m., 2YA Wellington on Thursdays at 12.35 p.m., 3YA Christchurch on Mondays at 12.20 p.m., and 4YA Dunedin on Thursdays at 12.35 p.m.

Pig Broadcasts

Under the auspices of District Pig Councils broadcasts will be delivered as follows:—

Auckland—1YA, on December 19, at 12.35 p.m., discussion on problems of the care of pigs in summer, conducted by H. E. Clark, Supervisor, Auckland District Pig Council.

Hamilton—1XH, on December 5, at 7.30 p.m., "Is Meal Feeding Profitable?", by S. A. Morgan, Supervisor, Waikato District Pig Council.

Napier—2YZ, on December 8, at 7 p.m., "Selecting Breeding Stock," by H. T. Donaldson, Supervisor, Tairāwhiti District Pig Council.

Palmerston North—2ZA, on December 15, at 7 p.m., "The Case for the Pedigree Boar," by L. L. Marsdon, Supervisor, Wellington District Pig Council.

SHOW DATES

The following are dates and venues of A. and P. shows up to February 7.

- December 2—Winton A. and P. at Winton.
- December 2—Motueka A. and P. at Motueka.
- December 2—Tokomairiro A. and P. at Milton.
- December 2—Whangaroa A. and P. at Kaeo.
- *December 5 and 6—Gore A. and P. at Gore.
- December 9—Wyndham A. and P. at Wyndham.
- December 12 and 13—Southland A. and P. at Invercargill.
- January 1—Nuhaka A. and P. at Nuhaka.
- January 12 and 13—Waioara County A. and P. at Waioara.
- January 13—Blueskin A. and P. at Waitati.
- *January 20—Central Hawkes Bay A. and P. at Waipukurau.
- January 24—Marton District A. and P. at Marton.
- *January 26 and 27—Horowhenua A. and P. at Levin.
- January 27—Helensville A. and P. at Helensville.
- January 27—Waiau A. and P. at Tuatapere.
- January 27—Golden Bay A. and P. at Takaka.
- *January 30 and 31—Feilding A. and P. at Feilding.
- February 3—Clevedon A. and P. at Clevedon.
- February 3—Rodney Agricultural Society at Warkworth.
- February 3—Rotorua A. and P. at Rotorua.
- February 3—Banks Peninsula A. and P. at Little River.
- February 3—Woodville A. and P. at Woodville.
- February 3—Palmerston and Waihemo County A. and P. at Palmerston.
- *February 6 and 7—Dannevirke District A. and P. at Dannevirke.

*The Department of Agriculture exhibit will be staged at this show.