

Frost-Proof Livestock Watering Device

By Richard Witz¹ and Ralph Hansen²

There are on the market several watering devices for livestock. Some are frost-proof but fail to provide protection for the riser pipe. To protect the riser pipe a thermostat and some kind of heating cable is required. The initial cost of this auxiliary heating equipment is high and replacement is inconvenient when failure occurs.

There appeared need for a frost-proof drinking device that was simple, so the farmer could make repairs himself. There was also evidence of need for a float type of watering cup so it could be used for sheep as well as other livestock.

On the basis of these facts a watering device was designed that can be built in a farm workshop, where a welder is available, at a relatively low cost. The heating element can be easily replaced by removing the cover and dropping a new one in place. Several installations were tested during the winter of 1950-51 and found satisfactory when properly installed. Care must be taken to have the supply pipe below frost level and to extend the insulated box far enough down to prevent freezing of the riser pipe below the box. This depth will vary, depending on location of the installation.

The heating unit used is self contained, with the element and thermostat in one unit. It is the type used for poultry water warming and can be purchased locally. The heating units are available in 150, 250, 500 watt and larger sizes. The 250 watt size was used on the installation tested and found satisfactory. The heating element size could be varied without much change in cost of operation. One unit is placed in the cup under the cover. If the unit is to be installed outside, or used under very cold conditions, an additional heating unit is necessary to protect the riser pipe. It is dropped down in the water surrounding the riser pipe.

The float valve used was of the type used for poultry watering cups. Height of the cups above ground level can be changed to suit the type of livestock it will be used for. Drinking cups are made with two drinking sections so they can be placed in a wall to serve two lots or pens from the same installation.

The accompanying diagrams show details of construction and assembly.

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