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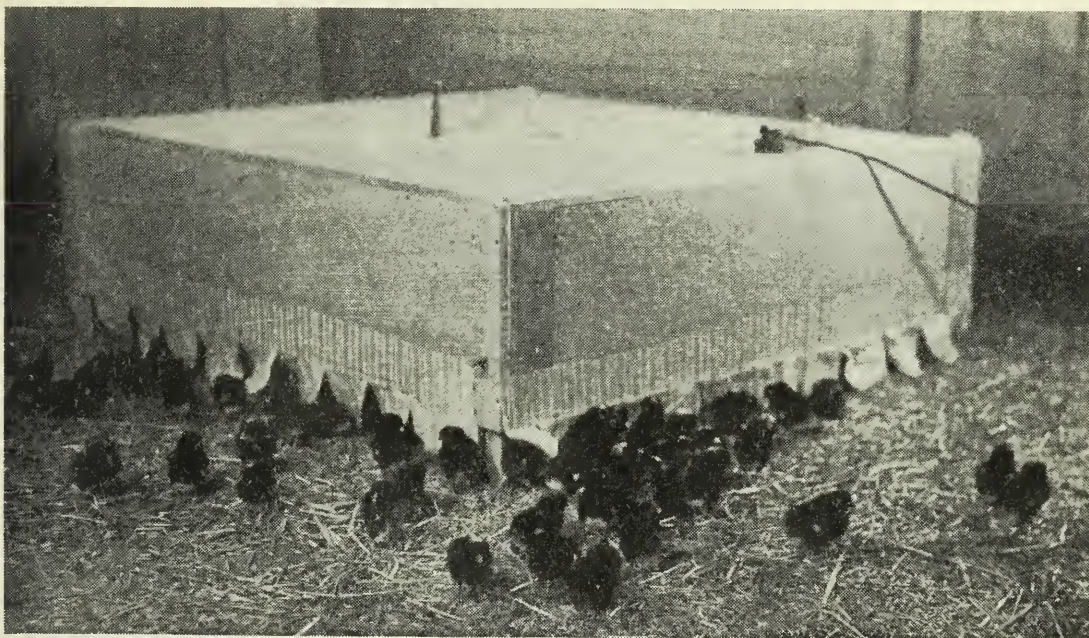
## Homemade Electric Brooders

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It has been observed that many chicks are raised annually without standard brooding equipment. Results are sometimes satisfactory, but losses are often too high and too much attention is necessary to brood a comparatively small number of chicks. The electric brooder is very often the solution to the problem, offering advantages in ease of operation to the small flock owner and economy to those who wish to brood chicks after the month of April. The importance of numerous small producers is recognized and greater production is urgently needed but there is a shortage of new factory-made equipment, due to conditions brought about by the war. Supplementary brooding equipment would, therefore, seem to be necessary to meet present-day needs.

The brooder described and illustrated in this leaflet can be constructed at home easily and cheaply from materials which are readily available. It has given excellent results in the hands of poultrymen, some with little or no experience, as well as in tests at the Dominion Experimental Station, Fredericton, N.B.

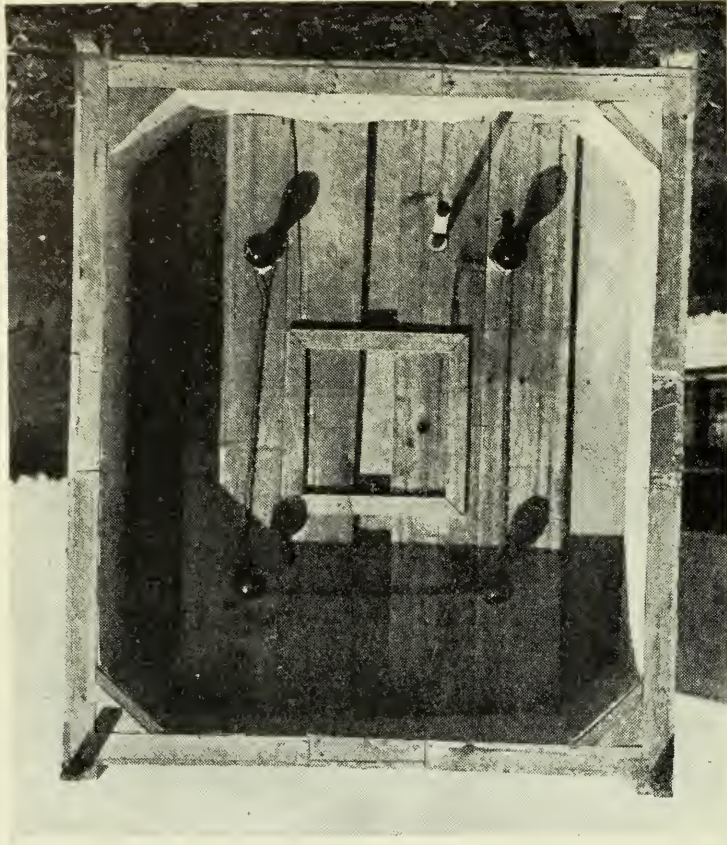


Homemade Electric Brooder without Thermostat.

### Construction Details

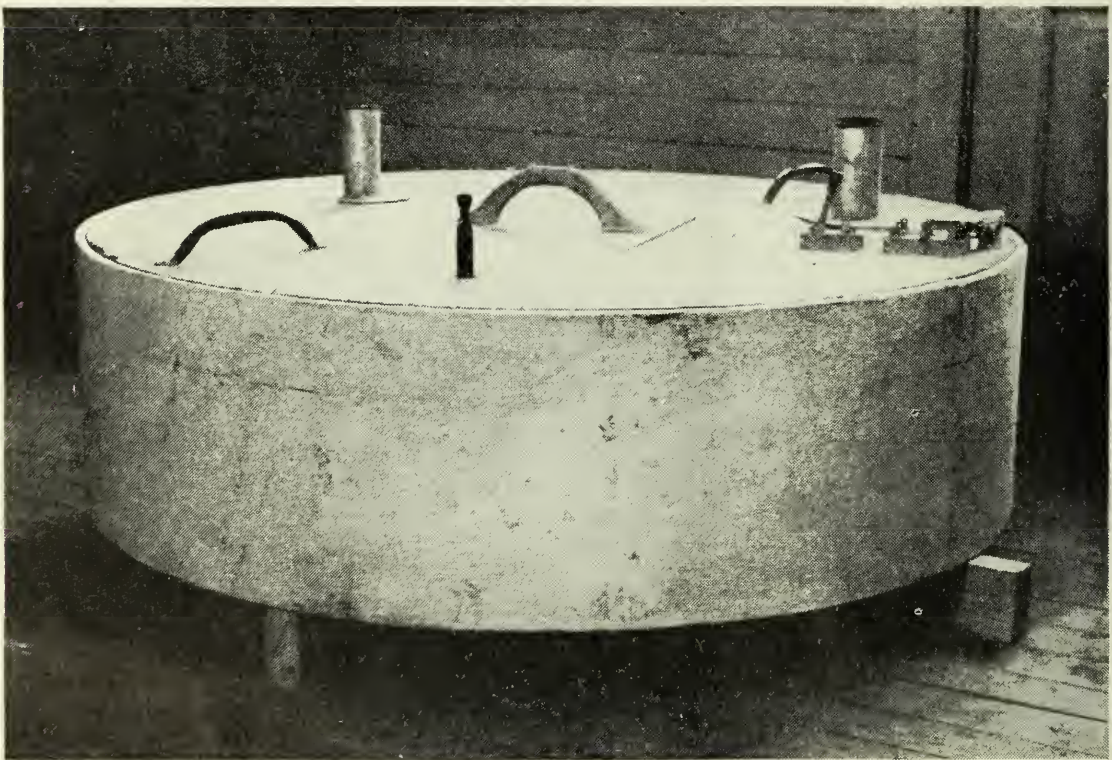
The brooder consists of a wooden frame of one-inch by two-inch material, covered with insulating building board and wired to hold four 60-watt electric bulbs.

Brooders may be either circular or rectangular in shape. The size recommended is four feet in diameter, or four feet long by three and one-half feet wide. If the rectangular type is made, it is suggested that the corners be rounded, as shown in the illustration.



Brooder Showing Construction Details.

View of the brooder from below. Note inspection plate in centre, arrangement of lights, location of thermometer, adjustable legs and rounded corners.



Circular Brooder

This brooder is fitted with a thermostat and micro-switch under the cover. A separate switch controls the pilot light. The ventilators were found to be unnecessary. A curtain may be attached, if desired.

To make the frame for a circular brooder, it is suggested that each circle be made up of eight sections of equal length. A section can be made from a piece of 4-inch by 1-inch material approximately  $18\frac{1}{2}$  inches long. When marking the material from which the section is to be cut, the radius of the circle should be 24 inches and the arc should be extended through an angle of 45 degrees.

A convenient method of joining the sections of a circular frame, or of joining the corners of a rectangular frame, is by the use of corrugated metal strips (wiggle nails). The sections are simply placed on the floor with the ends butting together to form a complete circle, or rectangle, and the sections fastened on both sides with wiggle nails.

The posts for the frame should be about ten inches long, thus making the brooder about one foot high.

An adjustable leg fitted on each corner of a rectangular brooder is desirable for adjusting the brooder to the proper height. Legs may also be attached to the circular brooder, if desired.

The top should be nailed on to the rectangular brooder in order to make it as strong as possible. A removable section about one foot square should be placed in the centre, however, to facilitate feeding, watering and regular inspections.

The electric light sockets are fastened to boards under the top of the brooder. These may be wired to an ordinary extension cord, fitted with a push-in plug.

### Operating Instructions

The brooders are intended primarily for chicks hatched in May. If they are used for April hatched chicks, the brooders should be placed in a room of at least 50° F. for the first two weeks, after which they may be moved to an unheated colony house. The temperature should be about 100° F. eight inches from the floor inside the brooder at first, but can be lowered a few degrees each week after the first week.

Ventilation is important. The brooders should be raised four inches off the floor when in operation. This may be done by placing the brooder on blocks or by the use of adjustable legs. If no curtain is used, one side of the brooder may be lowered to within one inch of the floor, if necessary, to raise the temperature.

A thermostat simplifies the operation of these brooders, but is not essential. If the room is well ventilated, but free from draughts and not too cold, four 60-watt bulbs will supply enough heat to allow the brooder to be raised four inches off the floor. If the temperature is too high during the day, one or two bulbs can be turned off where no thermostat is used, although no harm will result if the temperature goes over 100° inside the brooder after the first few days, because under such conditions, the chicks will remain outside of the brooder for longer periods.

A brooder measuring four feet in diameter, or four feet long by three and a half feet wide, will accommodate 100 chicks. Results may be unsatisfactory if this number is exceeded.

Provide dry mash in small troughs and water in a drinking fountain inside the brooder for the first two or three days. This seems to be necessary, especially when the room is cool. However, feeding and watering should be done outside the brooder, regardless of room temperature, after the first two or three days.

While probably not essential, the electric light bulbs are preferably darkened to reduce the glare. This can be done by dipping them in a mixture of blue



ochre and water. This material rubs off easily so the bulbs must be in their respective sockets before being dipped. The bulbs can also be dipped in a thin lacquer, but this burns off in a few days and redipping is necessary.

Satisfactory results can be obtained with or without a curtain attached to the brooder. There is some indication that a curtain is an advantage for the first week or two, especially in a cool room.

Dry litter, such as cut straw or chaff, should be used both inside and outside the brooder. There should be no necessity for changing it during the first two weeks, unless weather conditions cause it to become damp. The litter should be kept dry and reasonably clean at all times.

For the first few days, a guard made of either square mesh, stiff wire cloth or galvanized iron about a foot high should be used to encircle the brooder, until the chicks become familiar with the source of heat. The guard should be set at a distance of about 20 inches from the outside of the brooder.

Sometimes chicks develop a habit of pecking at the sides of the brooder. These side walls can be protected by pasting heavy cotton cloth over them.

After the chicks are three weeks old, some provision should be made to prevent their fouling the top of the brooder. Wire netting about a foot high fastened around the upper edge of the brooder gives good protection.

Although chicks require very little attention in these brooders, the usual care in feeding, watering and other details involving the chicks, comfort and health should be observed.

Bulletins on poultry can be obtained on request from any Experimental Farm or Station or from the Publicity and Extension Division, Dominion Department of Agriculture, Ottawa.



Circular brooder with the top removed. Feed and water should be placed inside for the first three days.