

# A HOME MADE COMMERCIAL TYPE BROODER

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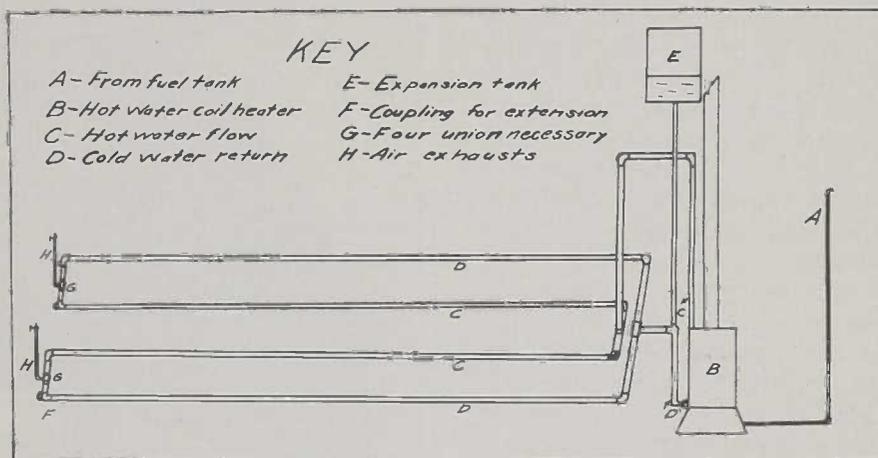
An Efficient Brooder at a Low Cost Can Be Made on the Poultry Farm—  
Successful Operation Demonstrated by Many Commercial  
Poultrymen of Arizona

THE brooding system as shown in the drawing is one that is in common use among commercial poultrymen in the Tucson district, and in every case to the writer's knowledge when it has been properly constructed satisfactory results have been obtained.

The Stove B as indicated in the drawing may be any type of either oil or coal burning stove that will heat the water in the coils sufficiently to create a circulation of hot water through the pipes, C and D, ample enough to properly warm the baby chicks resting on the sand which covers these pipes from three to five inches in depth. This stove should be placed in a pit at one end of the house, either inside or out, so that the top of the stove is on a level with the floor of the brooder house. Allowing the hot water to rise in vertical pipe C for two feet seems to aid in creating a good circulation throughout the system.

The common size of pipe used is either three-quarters or one inch in diameter depending on the convenience of obtaining the pipe. If three quarter-inch pipe is used, space the horizontal pipes on the floor six inches apart. However, if one-inch pipe is used they can be spaced eight inches apart. The horizontal pipes C and D are laid on the floor on the same level with respect to each other, but rise in elevation at the rate of one inch to every ten feet in length. This allows the cold water to return by gravity to the coils in the stove.

Connect the pipes as shown in the diagram using such fittings as will allow for extending the pipes into another brooder room. The unions, G, are necessary to complete the fitting of the pipes together. The vertical pipes, H, may be one-quarter inch in diameter and should be about two feet in length, with a valve at the top. These valves should be left open while the pipes are being filled in order to allow the air in them to es-



The Above Diagram Shows the Mechanical Construction of the Heating System Used in the Home Made Brooder.

cape. Any air pocket in the pipes will retard the circulation of the water. Use a T coupling with a plug at the top of the arch, marked H, in order to allow the air to escape from that section of the pipes when filling with water.

The expansion tank E may be a five gallon oil can soldered onto a pipe which in turn is connected to the cold water return pipe near the stove as indicated in the drawing. This tank must be above the level of the rest of the system in order that the pipes may be filled with water from this point. Keep water standing in this tank at all times.

The pipe A delivers oil to the stove from the fuel storage tank if oil is used for fuel. This tank should be placed on the out side of the house where it is easy to fill, and makes the fire hazard less acute.

The pipes C and D are laid flat on the brooder floor, as above mentioned, elevating them at the rate of one inch to every ten feet of distance away from the stove. The pipes should then be covered with about five inches of sand next to the stove and three inches at the upper end. Allow the chicks to hover on the sand, no litter is used under the canopies. The canopies are made of

either iron roofing material or a heavy grade of muslin tacked over wooden frames. The latter are proving very satisfactory especially where two thicknesses of muslin are used. They are made large enough to cover the floor space over the pipes, and are suspended from the ceiling to within about six inches of the floor while the chicks are young and raised higher as the chicks need less heat.

When the chicks become old enough to perch the hovers are raised to the ceiling and small temporary chick perches are placed over the pipes in the same location as first occupied by the canopies. The best temporary chick perches made made of a frame work about a foot high with sloping sides which rest on the brooder room floor. Cover this frame work with one inch mesh wire netting and then place the small chick perches about six inches apart on top of this wire.

In using the system illustrated in the diagram a room 16 feet wide and 20 feet in length is large enough to brood 1,000 baby chicks. A lower mortality rate and a better grade of chicks, however, will result in using a house 16 feet wide and 30 feet in length, dividing it into two rooms, fifteen feet long, and placing 500 chicks in each.