

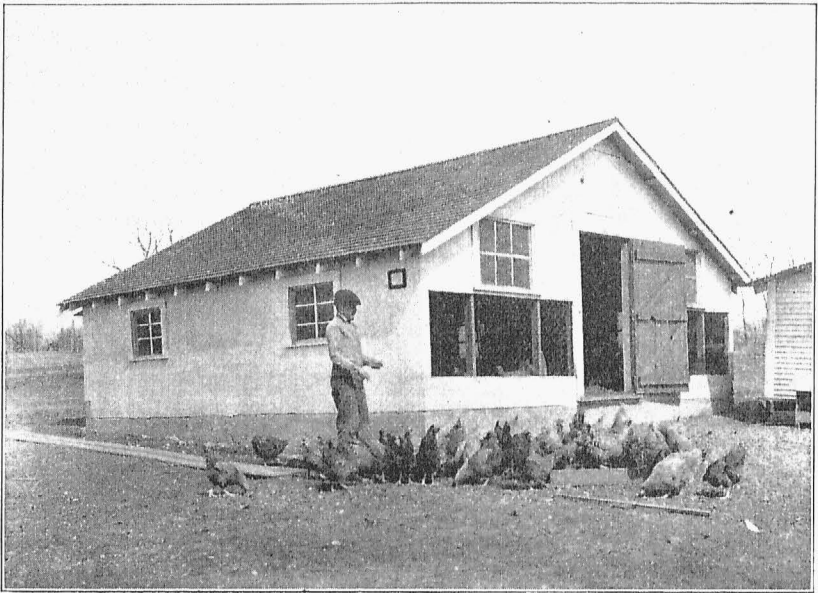
UNIVERSITY OF MISSOURI

COLLEGE OF AGRICULTURE

Agricultural Experiment Station

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CIRCULAR 80



LIGHT FROM ALL SIDES

The Missouri Poultry House

H. L. KEMPSTER

The Missouri poultry house has been designed by the Poultry Department of the University of Missouri, College of Agriculture to meet the demand for a house of such size as to accommodate the average Missouri farm flock and also be adapted to Missouri conditions.

Since the average farm poultry flock in Missouri is from 100 to 150 hens, this house is 20 feet square, the square house being the most

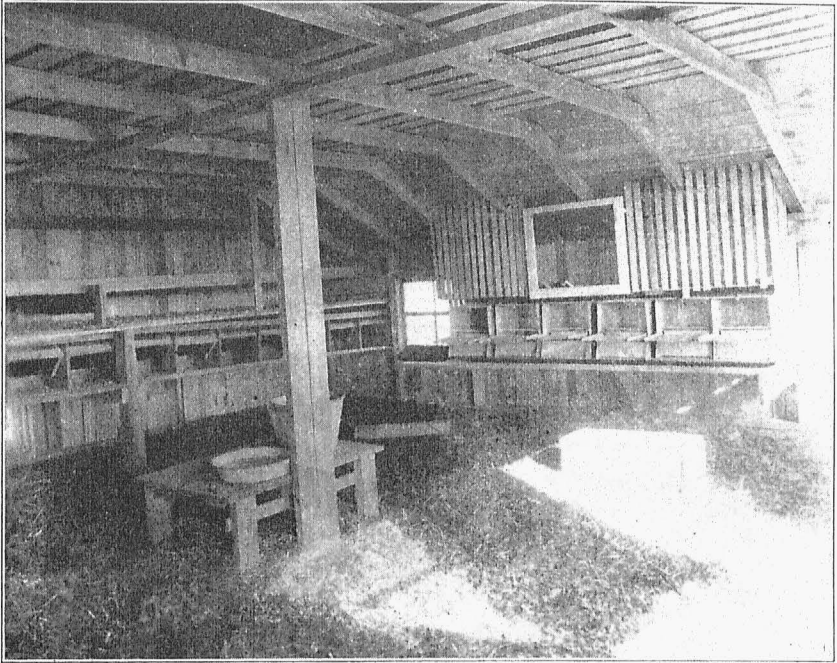


FIG. 1.—NO FLOOR SPACE WASTED

The droppings platform keeps the floor clean and increases the capacity of the house.

economical to construct and affording a maximum amount of floor space. The ridge of the roof runs north and south, the roof being of equal spans. The walls are five feet at the eaves. It is eleven feet high at the peak. The south side contains a door in the center and a window 2x3 feet on each side of the door. These windows are placed high enough to afford a thirty-inch opening beneath, one foot above the floor and extending the entire length each side of the door. This opening is covered with wire screen which keeps the hens in and the sparrows out.

LIGHT

On the east and west sides are two windows each 2 feet high and 3 feet wide. On the north end next to the floor is a six-light, 8x10-inch glass window. An arrangement which admits light from all directions has decided advantages because the light is so distributed that there are no dark corners, thus discouraging the laying of eggs on the floor. Also, when light comes from one direction the hen always faces in

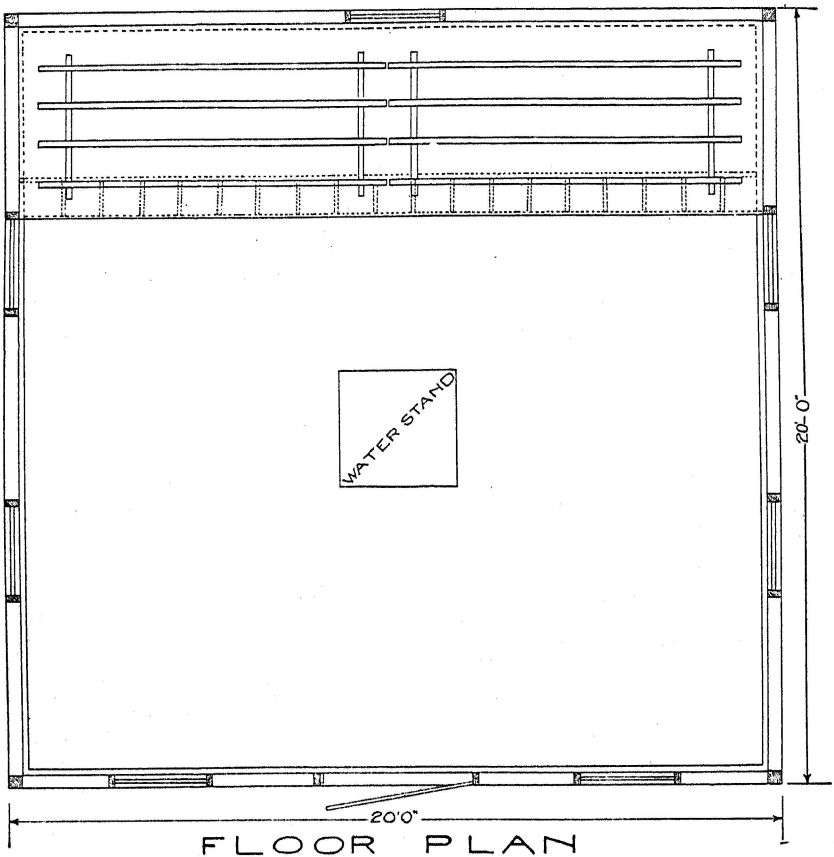


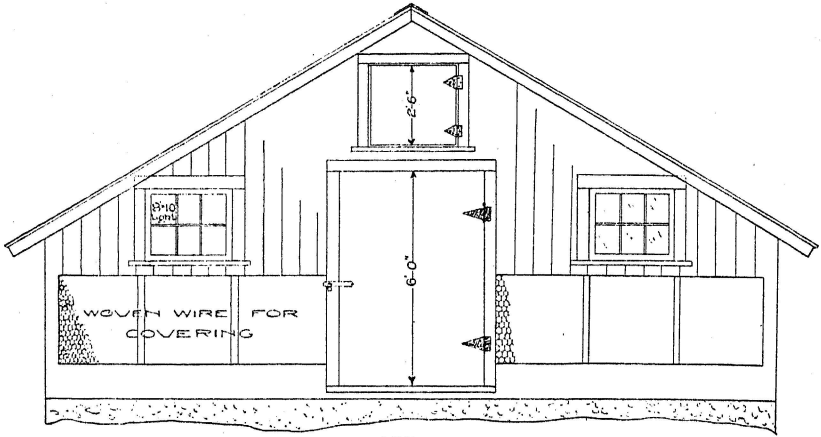
FIG. 2.—ROOMY BUT ECONOMICAL

The roosts should be on the north side away from drafts.

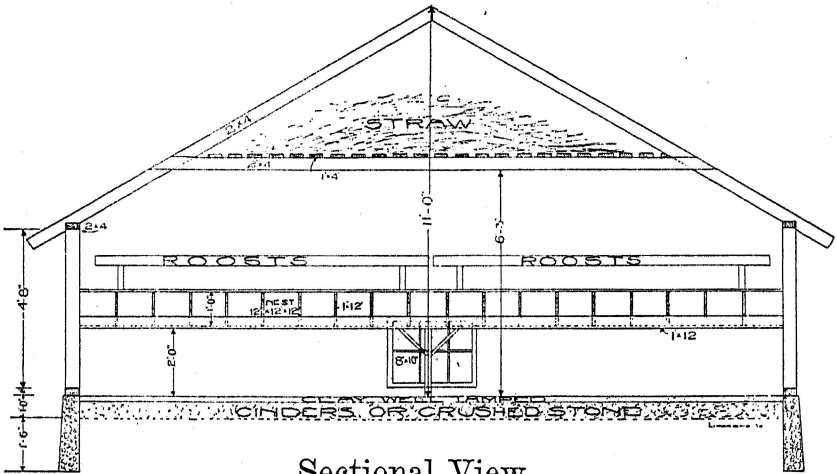
that direction when she scratches. In consequence, there is a gradual movement of the litter toward the back side of the house. When light is evenly distributed this trouble is eliminated. One hen scratches in one direction and another in another and the litter never piles up on the dark side of the house, because there is no dark side in such a house.

VENTILATION

Another decided advantage in having openings on all sides is the excellent summer ventilation which can be afforded by removing the windows. This is an important point and should not be overlooked in constructing a house under Missouri conditions. Summer ventilation is as important as winter ventilation.



Front View



Sectional View

FIG. 3.—VENTILATION AND INSULATION

The open front insures fresh air at all times; the straw loft helps keep the house dry in winter and cool in summer.

During the winter the success of ventilation of this type depends upon having the east, west, north, and roof entirely air-tight so that wind will drive into the house only a short distance and never back to the roosts which are on the north side. There is a gradual movement of the air from the inside out, thus insuring an abundance of ventilation without drafts. The open-front ventilation has an advantage over all other ventilation because it requires no adjusting, never plugs up, and always works. This type of ventilation will adapt itself to temperature

changes without the constant attention of the attendant and in this way reduces to a minimum the labor of caring for the house. It probably meets the requirements of a simple, efficient farm poultry house more nearly than any house that has been previously designed.

WALLS

The walls are of car siding, running up and down, which forms a tight and attractive wall. The roof is made of shiplap covered with shingles.

FLOOR

The floor is made of dirt which is an economical and durable type. Dirt floors are very efficient if properly constructed. In constructing a dirt floor there should be a wall six to eight inches high. A fill of four inches of coarse material, such as cinders, should be made to prevent damp floors from the rise of water. On top of the tamped cinders should be placed two or three inches of damp clay which should be packed well and then permitted to dry so that it will harden.

On top of the clay should be placed half an inch of loose dirt. The clay prevents the dirt and straw from mixing with the cinders to such an extent as to cause the moisture to rise. A covering of a foot or more of straw will keep the floor dry at all times.

The greatest objections to dirt floors are (1) the possible invasion of rats, (2) the fact that the straw will become dirty quicker than with a concrete floor and also dust rising, which in many cases has caused throat trouble. However, because of the low cost of construction, the dirt floor can be safely recommended and it will prove very efficient.

ROOSTS

The roosts should be level at the back; 4 feet high, 14 inches from the wall, 12 inches apart, and made of 2x4s with rounded corners. Poles two inches in diameter, if firmly placed, will serve the purpose nearly as well. Eight inches beneath the roosts is placed a droppings platform, which keeps the floor clean and increases the floor space available for other purposes. Underneath the droppings platform are placed the nests. There should be eight inches of roosting space for each bird and one nest for every six or seven hens.

LOFT

Joists or collar beams are placed in the house just high enough to afford head room. In order to prevent the birds from roosting on these, they are covered with inch boards four inches wide placed two inches apart. This forms a loft which is filled with straw. The straw acts as a sort of sponge by absorbing both dampness and heat and helping to keep the house drier in the winter time and cooler in the summer time.

FEED BOXES

Feed should be stored in two boxes with sloping tops hung on the wall. This teaches the hens that the house is the source of their food supply and discourages them from seeking other places for their food.

COOPS FOR BROODY HENS

A slat-bottomed coop should be placed under the eaves for the confinement of any hens which show signs of broodiness. This keeps them out of nests which should be occupied by laying hens and causes them to begin laying again.

COST

Prices vary greatly from place to place, and while such a house can be constructed for \$25 in some sections of Missouri where native lumber is abundant and cheap, in most sections it will probably cost about \$1 a hen or a little less to build such a house. It will accommodate from 120 to 175 hens, depending in part on the breed, and, aside from the painting, will cost about \$120 in most sections of the state.

BILL OF MATERIAL

| Use | Pieces | Size | Grade | Board Feet | Cost | Total |
|--|--------|-----------------|-------|------------|--------|---------|
| Rafters | 22 | 2x4-12 | 1 | 176 | \$2.50 | \$ 4.40 |
| Plates and sills | 8 | 2x4-20 | 1 | 107 | 2.50 | 2.68 |
| Studding and framing | 1 | 2x4-10 | 1 | 7 | 2.50 | .18 |
| Roosts | 5 | 2x4-20 | 1 | 74 | 2.50 | 1.85 |
| Finishing | 6 | 1x4-10 | 2 | 20 | 2.00 | .40 |
| Finishing | 1 | 1x4-16 | 2 | 6 | 2.00 | .12 |
| Finishing | 4 | 1x4-10 | 2 | 14 | 2.00 | .28 |
| Finishing | 8 | 1x4-12 | 2 | 32 | 2.00 | .64 |
| Floor for loft | 52 | 1x4-14 | 2 | 260 | 2.00 | 5.20 |
| Sides car siding ..... | ..... | 1x6-10 | ..... | 600 | 2.00 | 12.00 |
| Roof and droppings plat- form shiplap ..... | ..... | 1x8-12 | ..... | 720 | 2.25 | 16.20 |
| Shingles ..... | ..... | ..... | ..... | 5½M | 3.00 | 16.50 |
| Sashes | 7 | 6 light 8x10 | ..... | ..... | .60 | 4.20 |
| Front and over windows wire netting ..... | ..... | 3x32 | ..... | ..... | .04 | 1.28 |
| Hinges | 1 pair | ..... | ..... | ..... | .10 | .10 |

Materials excluding nails and foundation \$71.11

Labor 28.28

Foundation, 3 cubic yards at \$6 18.00

Total \$117.39

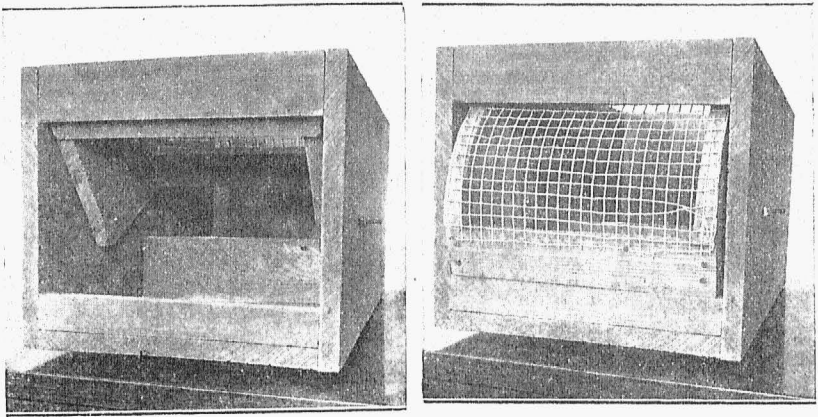


FIG. 4.—THE TRAP NEST OPEN AND CLOSED

The revolving door is easily forced shut by the back of the hen. The nest keeps her trapped until someone lets her out, and so finds out which hens are laying the eggs.

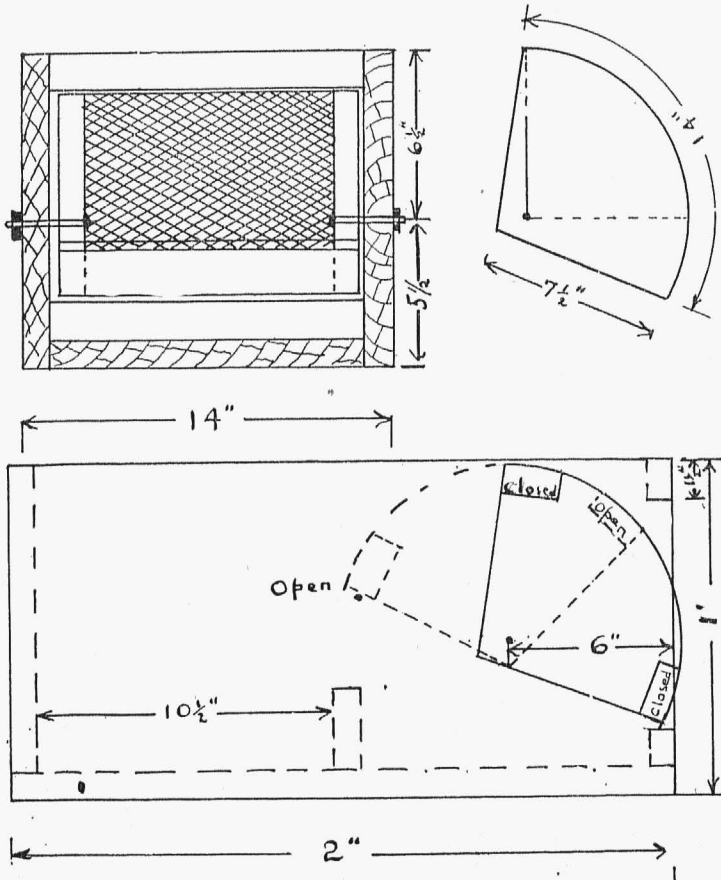


FIG. 5.—DETAILS OF TRAP NEST

Dotted lines show the position of the revolving door when open, and solid lines when closed. The lower drawing shows the nest from the side, while the front view is given in the upper left-hand figure.

THE MISSOURI POULTRY HOUSE

1. Is cheaper to construct than the average house.
2. Has a ventilation that always works.
3. Is large enough to accommodate the average farm flock.
4. Is constructed of cheap material and yet is durable.
5. Has an excellent circulation of air during the summer and is a comfortable house.
6. Is easily constructed because uniform in type with other buildings found on the farm.