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Farm poultry houses

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FARM POULTRY HOUSES

Iowa Colony Houses in Use

AGRICULTURAL EXPERIMENT STATION
IOWA STATE COLLEGE OF AGRICULTURE
AND THE MECHANIC ARTS

Agricultural Engineering and Animal Husbandry Sections

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FARM POULTRY HOUSES

BY J. B. DAVIDSON AND WM. A. LIPPINCOTT.

ESSENTIALS OF A SUCCESSFUL HOUSE.

Good growth of poultry and heavy egg production depend to a large extent upon the proper housing of the stock. This bulletin sets forth the essentials of a good house for Iowa in brief form and then offers working plans of three houses that embody these essentials.

LOCATION.

The first consideration in building a poultry house is its location. It is of greatest importance to select a site having well-drained soil as will be explained later. It is next important to have a convenient location. The poultry house may be nearer the residence than the live stock barns and as women have a large share in the management of the flock on the average farm, it should be so located. It is undesirable to build the poultry house near granaries, cribs, or barns which may furnish a harbor for rats and other vermin which prey on poultry. A sunny location well sheltered from the north winds is highly desirable whenever it is possible to obtain it without sacrificing good ground drainage.

DRYNESS.

The first essential of the house itself is that it be dry. There is no condition, unless it be actual starvation, that will be more surely and quickly fatal to fertility and egg production than dampness in the hen house. It is likely to cause an outbreak of disease as well.

To secure a dry hen house it is necessary first of all to select a dry location. A gentle slope to the south with good air drainage and a porous soil is the ideal building spot. The ground immediately surrounding will then drain quickly and the yards will be dry and warm. Where yards are damp, evaporation is constantly going on. Evaporation is a cooling process; so damp yards give the hens cold and dirty feet. Cold feet will lessen egg production; dirty feet will make dirty nests and eggs, and dirty eggs bring poor prices.

Often it is not possible to have an ideal location and then extra precaution must be taken. If the best site available is inclined to hold moisture, the moisture must be kept from getting into the house. Placing a 3 inch tile even with the bot-
tom of the foundation and just at the outside as in plate VII, and giving it proper outlet will prevent the entrance of moisture to a large extent. The foundation should be high enough above grade to prevent the entrance of surface water.

Especial care needs to be taken in building the floor; its improper construction is one of the most common causes of dampness in hen houses. The board floor is generally dry because of the air space below it. Because of the high cost of lumber the tendency is toward the cement or dirt floor. In either case, if special precautions are not taken the moisture is likely to come up just as oil travels up a lamp wick.

To avoid this the capillary attraction must be broken. Whether a dirt or cement floor is used, remove enough dirt so that 6 to 8 inches of coarse material, preferably crushed rock, may be filled in. If a dirt floor is desired, spread some finer material as cinders over the rock and finally put six inches of dirt on top. Many people seem to prefer the dirt floor, but it is not nearly so sanitary as the cement floor. It requires much more labor to care for it properly. The cement floor is readily cleaned and will soon pay for its extra cost in the labor it saves. However, the cement will get as damp as the dirt unless the precaution noted above is taken to keep the moisture out. Over the crushed rock place a thickness of two ply roofing and carefully seal all seams and edges. Lay the grout above the roofing and finish with a half-inch finishing coat.

What has proven to be a very satisfactory floor was constructed in the poultry house shown in figure 6 by laying clay building blocks on their flat side on a bed of well settled gravel and plastering the whole with cement plaster. This floor is cheap and has proved to be warm and dry in the particular instance in which it was tried.

Single wall houses are cheaper than double wall houses and this, together with the fact that they are generally drier, commends their use. Whether or not the double wall can be made entirely satisfactory the authors cannot say at this time, but the single wall has proved to be eminently successful.

VENTILATION.

Good ventilation without drafts is the second essential of a good poultry house. Without it, it is difficult to have a house that is either dry or sanitary.

The hen, compared with other animals, has a high temperature which will average about 106° F. This means a rapid combustion within the body and for rapid combustion much fresh air is necessary. It has been estimated (King, Physics of Agriculture), that a horse weighing 1,000 lbs. breathes little less than 3,500 cu. ft. of air in every 24 hours. A 1,000 pound cow requires less than 3,000 cu. ft. Two hundred 5 pound hens,
while weighing the same as the horse or the cow, will breathe over 8,000 cu. ft. of air in the same length of time.

Instead of ridding the body of the excreta of the kidneys in liquid form as other farm animals do, the hen gives them off as a white paste that is passed with the feces. All the water that in other animals passes off in the urine must be largely gotten rid of by the respiratory system. In order to do this work, nature has given the hen not only a good pair of lungs, but also a system of air sacks extending to all parts of the body which are even connected with the cavities in the bones. Unless there is fresh air to reach all parts of the body, the hen will not do well. Unless there is a good ventilation to carry off the moisture of respiration, the house is bound to be damp.

The fact that the birds are kept in quite large flocks is an added reason for thorough ventilation. King points out in his Physics of Agriculture that the poisonous principle given off by one individual is much more poisonous to another individual who is compelled to breathe it than it is to the individual giving it off. It is no uncommon thing to see a hundred hens on an Iowa farm crowded into a little house with practically no ventilation. No matter how well such hens are fed there will be a lack of thrift if each hen is compelled to breathe the poisonous gases given off by the rest of the flock.

In order to secure good ventilation and at the same time have absolute freedom from draughts, a house termed the "open front" or "curtain front" house is built. See figures 3 and 6. This house is made absolutely tight on three sides by the use of matched boards and prepared roofing. The fourth side is equipped with cloth covered frames as in figure 6. These are opened in calm weather even though it is cold. When it is stormy, they are lowered to keep out the rain and snow. While a hen can roost in a tree in a high wind without catching cold, the moment she is placed in a direct draught inside of a house, she becomes sniffly. It takes only a short time for a cold to progress into a well-developed case of roup. Once established, roup is likely to go through the whole flock. It is well to place cloth frames rather high so as to avoid having the wind blow directly on the fowls when scratching on the floor. A good wind break on the north and west sides often makes it possible to leave the curtains open on quite stormy days.

SUNLIGHT.

A third essential of a successful chicken house is plenty of sunshine. It is in the spring that hens lay the most eggs. If we are to secure winter eggs we must reproduce spring conditions as far as possible. So far as the hen house is concerned, nothing comes nearer to it than flooding the house with
light. To do this the front of the house is so constructed that it may be thrown completely open on sunny days. See figure 3. This is an advantage, not only because it brings comfort to the house, but also because sunlight is one of the best germicides and disinfectants. It helps to prevent disease. It has been found that hens, in common with plants, prefer the morning to the afternoon sun if they cannot have both. For this reason the window which must be the source of light on windy days or stormy days is placed at the east end of the front side of the pens. It should be placed as high as possible so that the sun will go clear to the back of the pen. Below it is placed a cellar sash as in plate VI which admits the sun to a covered dust bath where the hens may wallow all winter as they do in early spring. This dust bath will take care of the louse problem.

DISINFECTION.

Because of the small size and corresponding small value of the individual hen, not much time can be spent doctoring her if she is taken sick. Yet many of the poultry diseases are highly contagious. If they once gain entrance to the flock, every bird is likely to be affected. The only satisfactory way to deal with poultry disease, therefore, is to prevent it and this is done by cleaning and disinfecting.

A fourth essential of a good poultry house, then, is ease of disinfection. This means that all nests, perches, dropping boards and other appliances must be removable, so that they may be easily cleaned and sprayed. The construction should be as light as possible so that there will be a minimum of cracks and crevices. It is in the cracks that the mites breed. They attack the hens when on the nest or the perch and hide between the boards or in any crack they can find during the day. Such cracks as are unavoidable must be easily gotten at. Build perches, nests, and similar fixtures so they are removable. Matched boards used for siding should be laid on perpendicularly where practicable, instead of horizontally as is usually done. When the house is sprayed, this allows the disinfectant to run down the cracks and penetrate more deeply and thoroughly.

PORTABILITY.

The hen house on the farm is generally, as it should be, a permanent structure. For raising stock, however, it is highly advantageous to have a house that may be moved from place to place. This is particularly true where the incubator is used and the chicks reared artificially. Several of the common chicken diseases live in the ground from year to year. If the chickens are raised on new ground each year, the danger of disease creeping in one season, contaminating the ground and attacking the chicks the next season, is avoided.
Range raised stock, other things being equal, is more vigorous and sturdy than stock raised in confinement. With a portable house, the chicks may be given the run of the corn field or the orchard and two crops raised on the same ground.

The portable house differs from the ordinary hen house only in two particulars. It is usually smaller. It is placed on sills which act as runners. If it is to be hauled down the orchard rows without interfering with the tree limbs, it should have a combination or gable roof. A team can haul it to any part of the farm where the ground is reasonably level.

ECONOMY.

An essential of any building used for making money is economy. The hen house should be no larger than is necessary and of such a shape that there will be the most floor space for a given length of wall. There should be 5 square feet of floor space allowed for each bird if good results are looked for.

If we build poultry houses on the basis of allowing a cubic foot of air space per pound live weight as we do barns, a 5 pound hen with 5 square feet of floor space allotted to her would have a house but one foot high. In order to have head room for working, however, it is necessary to make the house a great deal higher. Just how high depends on the preference of the owner.

For practical purposes, the square pen gives the most floor space for a given length of foundation wall. The round pen gives the most floor space but increased cost of construction and the irregular yards resulting overbalance this advantage.

PLANS.

Any poultry house which is built along the lines suggested above ought to be a good house. Detail plans, however, are furnished in the following pages for three different styles of construction which have been tried at the Iowa Agricultural Experiment station and found to be eminently successful. The authors do not wish to claim originality for the designs submitted, as ideas have been gathered from many sources.*

These designs offer a considerable range of choice. It is not essential that they be followed absolutely, yet an attempt has been made to furnish definite and detailed plans and instructions to those who desire such explicit information. In addition to the regular design, some modifications of shape and materials are suggested.

*It is desired to make particular mention of the assistance secured from the work of Professor H. C. Pierce, formerly in charge of Poultry Husbandry at Iowa Agricultural Experiment Station.
The three poultry house plans furnished in this bulletin have been designated as follows:

A-Shaped Portable Poultry House,
Iowa Colony House,
Farm Poultry House.

A-SHAPED PORTABLE COLONY HOUSE

Fig. 1—Front View of A-Shaped Portable Poultry House.
It is more convenient to lay the prepared roofing over the ridge instead of lengthwise as shown.

This A-shaped movable colony home is cheap and light and has been thoroughly tried out and found to be very satisfactory for raising chicks in flocks of 200 to 300. It will winter from 15 to 20 hens. The house is 8x10 feet and because of its lightness and substantial construction it can be readily moved from place to place on the skids which furnish the foundation for the house. It is warm and the fowls are well protected from drafts. It is convenient and the minimum of work will be required to care for the flocks.
Plate I—A-Shaped Portable Poultry House.

Door to be lapped one inch over inside framing all around.

Roof, sides, and ends of house to be sheathed with prepared roofing, carefully lapped and nailed.
CONSTRUCTION.

The skids which form the foundation of the house are 6x6 inch pieces, 11 feet long; 4x6 stock might be used, in which case the pieces should be set on edge. Yellow pine or any good quality of lumber will be satisfactory. The joists are 2x4 inch scantlings laid across the skids, two feet apart. To stiffen the foundation, a 2x4 piece is spiked across the ends of the joists but this piece may be omitted. The floor joists as well as the remainder of the frame should be made of a good quality of framing lumber, yellow or white pine being preferred. The frame shown in the accompanying drawings is made entirely of 2x4 stock with the exception of the ridge pole. Rafters 1x3 inches have been used with good success.

The floor is made of plain, tongued and grooved 6-inch flooring and laid entirely over the joists before the studding is put in place. The frame is nailed securely to the floor and sheathed with a good grade of shiplap planed on one side and nailed in place with the smooth side in. With the style of framing used, it is quite necessary to nail this sheathing on horizontally. After this sheathing is securely nailed in place, the whole structure outside of the door opening is covered with a good grade of prepared roofing. The roofing is more easily applied if the strips are run over the ridge of the building rather than horizontally as is usually customary. This method also adds some to its appearance. The laps should be well cemented and nailed with washered nails or through a batten.

The window opening for the rear window is sawed out and the window is set in the frame against a 1/2-inch strip used as a stop. The front windows as shown in figure one and plates one and three are larger than the opening and rest against the frame all the way around, obviating the use of a stop inside of the frame. In some styles of construction the window frames are omitted, but in the judgment of the authors they are desirable and worth the extra cost. To permit the hinges to be placed on the windows readily, a casing is put around them of such a thickness as to build the sheathing up to the thickness of the windows.

The front windows should be made of six 8x10 inch light sash, although a smaller sash is shown in the illustrations. The rear window is made double with two sashes of three 9x12 inch lights in the same opening. As the birds roost near this window, it is desirable that all possible drafts should be guarded against. In the summer time, the inside window may be removed and stored inside of cleats nailed to the rafters.

The door is made of matched flooring and made substantial with three battens. The door is 1 inch larger than the opening all around as this not only gives a tighter fit but requires less labor in construction.
Plate II—A-Shaped Portable Poultry House.
The loor has an opening 18x24 inches, covered outside with 1/2-inch mesh galvanized wire netting and fitted on the inside with a frame covered with light muslin. This frame is hinged at the bottom, permitting it to be swung downward on the inside during the mild weather or to admit sunlight.

Figure 1 shows the general outside appearance of the building after construction.

NESTS.

There are 5 nests altogether, placed on the left side of the building although it would be possible to place nests on the opposite side if desired. The nests are removable for cleaning and rest on brackets nailed to the studding. The partitions, bottom, and front of the nests are nailed together. The platform in the front of the nests is 4 inches wide and is set out 2 inches in front of the nests in order to prevent the latter from becoming fouled with droppings. Seven-eights inch material is used throughout in the construction of the nests.

ROOSTS AND DROPPING BOARD.

The dropping board is made to slide into place at the rear of the building over strips nailed to the plates at either side.
Plate III—Details of A-Shaped Portable Poultry House.
The roosts or perches, which are 2 in number, each 6 feet long, rest on brackets made up from any convenient material. The roosts are loose and are notched and set in notches in the brackets or supports.

In moving the building from place to place, some care should be used in drawing the skids and not subjecting the building to any undue racking. One good plan is to hitch one horse to each skid. If this is not done, a spreader should be placed between the chains to each skid.

**BILL OF MATERIALS FOR A-SHAPED MOVABLE HOUSE.**

**Skids:** 2 pieces 6"x6" or 4"x6"x12 feet dimension.

**Joists:** 6 pieces 2"x4"x8' yellow pine.

2 pieces 2"x4"x10' yellow pine.

**Floor:** 17 pieces 1"x6"x10' matched flooring.

**Studding and frames:** 8 pieces 2"x4"x2'6" studs.

2 pieces 2"x4"x6'0" studs.

**Plates:** 8 pieces 2"x4"x2'6" yellow pine dimension.

2 pieces 2"x4"x10'.

**Rafters:** 12 pieces 2"x4"x6' yellow pine dimension.

**Ridge pole:** 1 piece 1"x6"x10' white pine.

Sheathing for ends and door: 18 pieces 1"x6"x10' white pine flooring.

3 pieces 1"x6"x16' white pine flooring.

Sheathing for sides and roof: 23 pieces 7/8"x10"x10' shiplap.

**Nests:** 2 pieces 2"x4"x2' brackets.

2 pieces 1"x4"x2'6" braces.

2 pieces 1"x6"x5' floor.

2 pieces 1"x4"x5' front and landing.

1 piece 1"x14"x5'.

**Roosts and dropping board:** 2 pieces 2"x4"x6'.

2 pieces 2"x6"x3'.

2 pieces 2"x6"x3'.

2 pieces 1"x12"x6'.

1 piece 1"x8"x6'.

**Windows:** 2-6 light 1½" sash 8"x10" glass for front.

2-3 light 1½" sash 8"x10" glass for rear.

5 pieces ¾"x8"x9' window casing.

**Roofing:** 3 rolls 3-ply best quality prepared roofing.

**Hardware:** 3 prs. 4" Tee hinges.

3 only 6" Tee hinges.

1 rim lock with knobs.

3 lbs. 16d nails.

2 lbs. 10d nails.

6 lbs. 8d nails.

3 lbs. 6d nails.

1 lb. 6d finish nails.

1 piece of ½" square mesh wire cloth 3' wide and 7' long.

**SUMMARY.**

Order List and Estimate of Cost.

2 pieces 4"x6"x12' yellow pine dimension.

48 feet @ $32.00 per M. ........................................... $1.54

9 pieces 2"x4"x10 No. 1 framing lumber.

8 pieces 2"x4"x12'.

3 pieces 2"x4"x16'.

1 piece 2"x6"x6'.

162 feet @ $30.00 per M. ........................................... 4.86
1 piece 1"x4"x16' No. 2 pine S2S.
2 pieces 1"x6"x10'.
1 piece 1"x8"x6'.
1 piece 1"x12"x12'.
1 piece 1"x14"x6'.
38 1-3 feet @ $40.00 per M. .............................. 1.13
35 pieces 1"x6"x10' No. 2 matched flooring.
3 pieces 1"x6"x16' No. 2 matched flooring.
199 feet @ $38.00 per M. ................................. 7.56
23 pieces 1"x10"x10' No. 2 shiplap S2S.
191 2-3 feet @ $36.00 per M. ............................ 6.90
3 rolls of 3-ply roofing @ $2.50 ......................... 7.50
Hardware ........................................... 2.30
Labor ................................................. 8.00

Total estimated cost...........................................$39.79

It is to be noted that the cost can be made to vary widely by using different grades of materials. Costs will also vary with localities.

**THE IOWA COLONY HOUSE.**

The following plans are for a colony house which has been used with good success by the poultry section of the Iowa Agricultural Experiment station for several years. It is 2

![General View of Iowa Colony House](image-url)
feet longer than the house previously described and will accommodate a correspondingly larger flock. Larger houses have been built upon the same general lines but they have not withstood moving well. A general view of the house is shown in figure 3. The plans are for a house with a shed roof although a combination roof as shown in figure 5 may be used successfully. The house has two curtained openings and one large window in front which provides a large measure of sunlight and ventilation. The illustration shows the window near the door and the drawing shows it at the opposite end. In the latter case, more value is placed upon the sunlight entering through the curtain opening while the curtains are open.

The openings for the curtains are covered with screen and the curtains are hinged at the top and arranged to be swung up to the rafters. The front wall, directly below the window and one of the curtains, is made to open and admit sunlight directly on the floor near the front wall. This trap door is hinged at the top and provided with a hook to hold it up. This opening is also covered with wire cloth or poultry netting. A small door is provided in the front or the end for the fowls.

The roosts and dropping board are placed along the back wall about 2 feet from the floor. The nests are placed on a continuation of the dropping board and with the roost fill the back side.
Fäaont Elevation.

PLAN

2' x 4' Sills 2' x 6' Centers
Screene\nCurtain Window Screen
Roosts

4 x 6' Skid.

FRONT ELEVATION.

Door
Trap 2' 5" x 5' 9"

FRAMING OF FRONT

Plate IV—Iowa Colony House.
Plate V—Framing and Details of Iowa Colony House.
CONSTRUCTION.

In many respects the construction of the Iowa poultry house is much similar to the A-shaped house previously described. The skids are made of any good quality of dimension lumber. White or yellow pine is usually selected for this purpose, although other kinds of lumber might resist decay to better advantage. The floor of 1x6 inch flooring is laid on 2x4 inch sills which are slightly notched onto the skids. The framing is of 2x4 inch material, white or yellow pine being satisfactory, and arranged with girts or headers which permit the siding to be nailed on vertically.

The siding is 1x6 inch matched flooring which has been found to be warmer and drier than drop siding or clapboards. The rafters are 2x4 inch material spaced 2 feet apart. The roof is made of 1 inch tongued and grooved sheathing covered with a good grade of prepared roofing. The sheathing which is usually flooring, should be dressed on both sides.

BILL OF MATERIALS.

Skids: 2 pieces 4"x6"x14' yellow pine dimension.
Sills: 7 pieces 2"x4"x8' No. 2 yellow or white pine.
Studs: 9 pieces 2"x4"x8' No. 2 yellow or white pine.
    2 pieces 2"x4"x7' No. 2 yellow or white pine.
    7 or 9 pieces 2"x4"x6' No. 2 yellow or white pine.
Girts and Plates: 5 pieces 2"x4"x12' No. 2 yellow or white pine.
    2 pieces 2"x4"x8' No. 2 yellow or white pine.
Rafters 7 pieces 2"x4"x9' No. 2 yellow or white pine.
Floor: 17 pieces 1"x6"x12' No. 2 white pine flooring.
Siding: 16 pieces 1"x6"x10' No. 2 white pine flooring.
    17 pieces 1"x6"x14' No. 2 white pine flooring.
Sheathing: 21 pieces 1"x6"x12' No. 2 white pine flooring.
Roofing: 1 1/4 rolls best 3-ply roofing.
Door: 1, 4 panel 2' 8"x6' 8"x1 3/8" No. 3 Standard Door.
Window: 1, 12 light 9"x12 1/4" window.
Finish for curtain frames: 1 piece of 1 1/4"x6"x12' C finish white
    pine.
Roosts and Nests: 2 pieces 2"x4"x6'.
    6 pieces 2"x4"x3'.
    2 pieces 1"x4"x12'.
    8 pieces 1"x12"x6'.
    2 pieces 1/2"x12"x6'.
Miscellaneous: 2 pieces of 1/4" rd. 12'.
    2 pieces 3/4 rd. 10'.
Hardware: 1 1/2 prs. 3" wrought steel buts for main door.
    4 1/2 prs. 4" Tee hinges for chick door, curtain frames and
    nests.
    1 1/2 pr. 6" Tee hinges for trap door.
    3 sash locks.
    1 rim lock.
    1/2 doz. screw hooks and eyes.
    1 special long hook for trap door.
    25 lbs. 8d nails.
    8 lbs. 10d nails.
    20 lbs. 20d nails.
    20 feet of wire cloth or poultry netting 36 inches wide.
### SUMMARY.
**Order List and Estimate.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Dimensions</th>
<th>Material</th>
<th>Price</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 pieces 4&quot;x6&quot;x12' Dimension.</td>
<td>48 feet @ $32.00 per M.</td>
<td>$1.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 pieces 2&quot;x4&quot;x12' No. 1 white or yellow pine.</td>
<td>96 feet @ $30.00 per M.</td>
<td>$2.88</td>
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<td></td>
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<tr>
<td>3 pieces 2&quot;x4&quot;x14'.</td>
<td>48 feet @ $32.00 per M.</td>
<td>$1.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 pieces 2&quot;x4&quot;x16'.</td>
<td>144 feet @ $30.00 per M.</td>
<td>$4.32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 pieces 2&quot;x4&quot;x18'.</td>
<td>160 feet @ $30.00 per M.</td>
<td>$4.80</td>
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<tr>
<td>308 feet @ $30.00 per M.</td>
<td>$9.24</td>
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<tr>
<td>18 pieces 1&quot;x6&quot;x10' No. 2 flooring.</td>
<td>180 feet @ $38.00 per M.</td>
<td>$6.84</td>
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</tr>
<tr>
<td>38 pieces 1&quot;x6&quot;x12'.</td>
<td>460 feet @ $30.00 per M.</td>
<td>$13.80</td>
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</tr>
<tr>
<td>17 pieces 1&quot;x6&quot;x14'.</td>
<td>272 feet @ $30.00 per M.</td>
<td>$8.16</td>
<td></td>
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</tr>
<tr>
<td>437 feet @ $38.00 per M.</td>
<td>$16.61</td>
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</tr>
<tr>
<td>1 piece 11/4&quot;x6&quot;x12' C finish white pine.</td>
<td>71/2 feet @ $65.00 per M.</td>
<td>$4.94</td>
<td></td>
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<tr>
<td>2 pieces of 1/4 rd. 12'.</td>
<td>44 feet @ 1c per foot</td>
<td>$0.44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 pieces of 1/4 rd. 10'.</td>
<td>52 feet @ $40.00 per M.</td>
<td>$2.08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 piece 11/2&quot;x12&quot;x12' No. 2 white or yellow pine S2S.</td>
<td>144 sf. @ $40.00 per M.</td>
<td>$5.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 pieces 1&quot;x12&quot;x12'.</td>
<td>64 feet @ $40.00 per M.</td>
<td>$2.56</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>52 feet @ $40.00 per M.</td>
<td>$2.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 piece 11/2&quot;x12&quot;x12' No. 2 white or yellow pine.</td>
<td>144 sf. @ $40.00 per M.</td>
<td>$5.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 panel 2&quot;x8&quot;x6&quot; 8&quot;x11/2&quot; No. 3 Standard Door.</td>
<td>192 panel @ $2.50 per M.</td>
<td>$4.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 12 light 9&quot;x12&quot; window.</td>
<td>36 feet @ $40.00 per M.</td>
<td>$1.44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/2 rolls 3-ply roofing @ $2.50.</td>
<td>36 rolls @ $2.50 per M.</td>
<td>$9.00</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Hardware.</td>
<td>5.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Labor.</td>
<td>15.00</td>
<td></td>
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</tbody>
</table>

Total estimate cost: $58.22

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**Fig. 5—Showing How Construction Roof may be Adapted to the Iowa Portable Colony House.**

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http://lib.dr.iastate.edu/bulletin/vol11/iss132/1
THE FARM POULTRY HOUSE.

The house to be described next is a style of house quite widely used and is one well adapted to general farm conditions. It is a permanent structure built upon a substantial foundation and is provided with a cement floor. Attention is called at this point to the general discussion of floors previously given.

The house as per accompanying drawings, will accommodate in the neighborhood of 50 grown birds, and will permit this size of flock to be cared for with the minimum of labor. The dimensions of the house as per the accompanying drawings, is 14 feet wide and with a 16 foot front. This type of house, however, has been built in varying sizes up to 20 feet by 20 feet in dimension. The roof construction in some of these larger houses has not been made sufficiently strong to resist the heavy snow loads which may come upon them in Iowa. The house has a shed roof with a front, providing adequate window and curtain surface which is arranged to face the south.

CONSTRUCTION.

The house as illustrated in the drawings of plates VI, VII, and VIII, is entirely of frame construction. Figure 6 shows the same house built of hollow clay building blocks, 5x8x12 inches in size, and laid so as to make a 5 inch wall. This illustration shows two wide curtains filling the space between the two windows of the front with the door in the end while the drawings show smaller curtains. Th. arrangement may be varied much more, but in any case there should always be care used to secure a sufficient amount of effective glass and curtain surface in the south front. For a house of the size shown, the front should have two 12x9x12 light windows and two curtained openings of the same size. As in the former houses, these curtains are made of light muslin or cheese cloth tacked onto frames, which are hinged at the top in such a manner as to permit them to be swung up and hooked against the roof.

Another small window, (plate VI), should be provided in the front directly in front of the dust box which is best when made in the form of a 6 inch depression in the house floor. A trap door below the curtains which may be opened during warm days of the summer will add materially to the comfort of the fowls.

The wall and roof construction of this house is much like that of the Iowa colony house previously described. Matched flooring nailed in place vertically is used for siding and the same material is used for the roof sheathing, being covered with a good grade of prepared roofing. Extreme care should be used in joining the roof to the walls to see that all joints are perfectly air tight. The roosting compartment has matched
Roosts and Center Horse can be removed separately from the flooring board.

NOTE:

End doors may be omitted if only one section of the house is built.

Plate VI—Farm Poultry House.
METHOD or FRAMING
FRONT SIDE.

END FRAMING

CURTAIN and SCREEN

PERSPECTIVE OF BROODY COOP AND DUST Box

Plate VII—Framing and Details of Farm Poultry House.
249

sheathing surrounding it and, if desired, a muslin curtain may be provided in front of the nests.

ROOSTS AND NESTS.

The roosts are placed at the back side of the house and together with the dropping board, are made removable for cleaning.

The nests are made in two sections where several are needed and are placed on the side walls.

The nests are similar in design to those described for the Iowa colony house.

BILL OF MATERIAL AND ESTIMATE OF COST FOR FARM POULTRY HOUSE, FRAME CONSTRUCTION.

Size of house, 14x16 feet.

Foundation and floor: Excavation ........................................ $ 2.50
Foundation wall. 5 yds. concrete @ $4.00 ............. 20.00
Gravel for filling. 4 yds. @ $1.00 .......................... 4.00
Cement floor. 224 sq. ft. @ 12½¢ ....... 28.00
Water proof layer Asphalt paint 1 coat. .................. 3.00
Drain tile. 75 feet @ 2.5¢ ............................... 1.86

$59.36

Sills: 2 pieces 2"x4"x16' No. 2 yellow or white pine
2 pieces 2"x4"x14' No. 2 yellow or white pine
Studs: 5 pieces 2"x4"x16' No. 2 yellow or white pine
8 pieces 2"x4"x14' No. 2 yellow or white pine
5 pieces 2"x4"x10' No. 2 yellow or white pine
Plates: 3 pieces 2"x4"x16' No. 2 yellow or white pine
Girts: 2 pieces 2"x4"x16' No. 2 yellow or white pine
2 pieces 2"x4"x14' No. 2 yellow or white pine
Rafters: 2 pieces 2"x4"x16' No. 2 yellow or white pine
Total 295 feet @ $30.00 .................... $ 8.85

Siding: 400 ft. 1"x6" D & M flooring No. 2 pine.
Sheathing: 320 feet flooring No. 2 white pine.
Inside sheathing: 120 feet flooring No. 2 white pine.
840 feet @ $38.00 per M ................................... $1.92

Roofing: 3 rolls best quality 3-ply @ $2.50 ................ 7.50
Mill work: 2 windows 12 lights 9x12 ......................... 5.50
1 sash 6 lights 9x12 ........................................ 1.40
1 door 2" 8"x6" 8"x1½" No 9 ........................... 2.20
4 curtain and screen panes, 3' 1½"x6' 0" ........................................ 3.00
2 pieces of ¼" rd. 14' .................................. .60
2 pieces of ½" rd. 14' .................................. 
3 yds. muslin @ 10¢ ........................................... .30

Roosts: 3 pieces 2"x4"x16' No. 2 white or yellow pine
32 feet @ $30.00 .................................................. 960
3 pieces 1"x12"x16' No. 1 white pine
48 feet @ $46.00 ................................................ 220.8

Nests: 4 pieces 1"x12"x10' No. 1 white pine
1 piece 1"x4"x12', 14 feet @ $46.00. .............................. 62
2 pieces ½"x12"x10'. ........................................ 1.09
1 piece ½"x6"x10'. ........................................

Dust Box: 1 piece 1"x12"x16' No. 2 white pine
16 feet @ $38.00 .............................................. .61

Published by Iowa State University Digital Repository, 1911
Hardware:  
1½ pr. 3 inch wrought steel butts @ 15 ............................................ .23
2½ pr. 4 inch Tee hinges @ 10¢ ....................................................... .25
3½ pr. 6 inch Tee hinges @ 15¢ ....................................................... .52
1 rim door lock @ 35¢ ...................................................................... .35
3 sash locks @ 10¢ .......................................................................... .30
4 lbs. 5d nails.  
25 lbs. 8d nails.  
15 lbs. 20d nails @ 3½¢ .................................................................... 1.54
80 sq. ft. of poultry net or wire cloth @ 6¢ .......................................... 4.80
Total cost of hardware .................................................................... 7.99
Total cost of materials ................................................................. $133.79
Labor, estimated at 30 per cent of materials ................................. 40.15
Total cost ....................................................................................... $173.64

**FARM POULTRY HOUSE—MASSONRY CONSTRUCTION.**

Where the walls are built of hollow vitrified clay building blocks with the window openings shown in plate seven, the bill of materials and estimate of cost will be as follows: The estimate is for 5x8x12 inch blocks laid so as to make a 5 inch wall. Four inch blocks may be used.

Fig. 6—Farm Poultry House Built of Hollow Clay Building Blocks.

This house is similar to that shown in Plates VI, VII and VIII, and proved to be quite satisfactory during the past winter.
Fig. 7—Interior View in House shown in Figure 6.

**BILL OF MATERIALS AND ESTIMATE OF COST.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost (per unit)</th>
<th>Total Cost</th>
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<tbody>
<tr>
<td>Foundation as before</td>
<td></td>
<td></td>
<td></td>
<td>$59.36</td>
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<tr>
<td>Window and door frames:</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8 pieces 2&quot;x4&quot;x16' No. 2 yellow or white pine 85 feet @ $30.00</td>
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<td></td>
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<td>2.55</td>
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<tr>
<td>Rear plate:</td>
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<td></td>
</tr>
<tr>
<td>1 piece 2&quot;x4&quot;x16' No. 2 yellow or white pine 11 ft. @ $30.00</td>
<td></td>
<td></td>
<td></td>
<td>0.33</td>
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<tr>
<td>Front trap door:</td>
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<tr>
<td>4 pieces 1&quot;x6&quot;x14' No. 2 white pine flooring 28 feet @ $38.00</td>
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<td></td>
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<td>1.06</td>
</tr>
<tr>
<td>Rafters as before</td>
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<td></td>
<td></td>
<td>8.85</td>
</tr>
<tr>
<td>Roof sheathing as before</td>
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<td>12.16</td>
</tr>
<tr>
<td>Roofing as before</td>
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<td></td>
<td>7.50</td>
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<tr>
<td>Mill work as before</td>
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<td></td>
<td></td>
<td>13.00</td>
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<tr>
<td>Muslin as before</td>
<td></td>
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<td></td>
<td>0.30</td>
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<tr>
<td>Roosts as before</td>
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<td>3.17</td>
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<tr>
<td>Nests as before</td>
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<td></td>
<td>1.09</td>
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<tr>
<td>Dust box as before</td>
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<td>0.61</td>
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<tr>
<td>Hardware as before</td>
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<td>7.99</td>
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<tr>
<td>375 5&quot;x8&quot;x12&quot; hollow vitrified clay bld. blocks @ $40.00 per M</td>
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<td>15.00</td>
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<td>40 corner blocks @ 5¢</td>
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<tr>
<td>Mortar</td>
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<td></td>
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$138.97 Labor 30%

Total $180.66