

Building Plans and Bill of Materials for O.S.C. Stationary Brooder House

By
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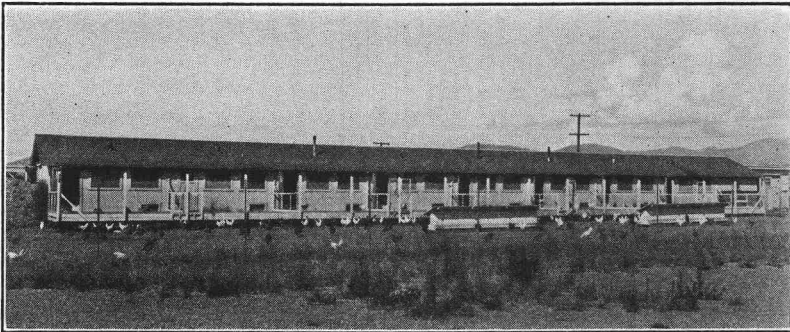


Figure 1. The O. S. C. Stationary Brooder House.

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The O.S.C. Stationary Brooder House

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TWO types of brooder houses are used by commercial poultrymen: the stationary brooder house and the portable brooder house. There is a difference of opinion among poultrymen as to their comparative merits. The plan shown herein is that of the brooder house used on the College plant for several years. It has proved satisfactory and is therefore recommended.

Size and capacity. The brooder house is 20 feet by 140 feet over all. It is divided by solid partitions into eight compartments and a feed room. Each compartment is 16 feet square and will accommodate from 400 to 500 chicks. A hallway four feet in width is provided. This permits the attendant to clean out or care for any one pen without disturbing chicks in other pens. A litter carrier operated from an overhead track in the hallway has been found of great value in reducing labor when cleaning out the pens.

Brooders. No recommendation as to type of brooder is made. Both electric and briquette-burning brooders have been used satisfactorily in this house. When electric brooders are used it is advisable to have a separate circuit for each two compartments or a separate fuse block for each room. Each one or two brooders thus operate independently of the others, and should a short circuit occur for one brooder all others would not be affected.

Walls and ceiling. The front wall as shown is of double construction. The partitions and rear walls are single. Modern brooding does not require a double-wall construction except that it is necessary to provide against draughts. The wall partition between hallway and pens, and the rear wall are of single construction and this has been found satisfactory. No ceiling is provided as such provision has been found unnecessary for average conditions. In sections where it becomes extremely cold or warm during the brooding period or for summer brooding the added expense of a ceiling is justified.

Floors. Double floor construction is shown and is recommended. Two thicknesses of floor with dead air space between insures a warmer and drier floor.

Windows and ventilators. Two windows equipped with cel-o-glass frames are provided for each pen. The frames are double, the two sections being hinged in such a way that the top frame may be tipped in or opened entirely according to the amount of ventilation desired. Wind baffles are arranged on either side of the top frame to prevent wind from blowing directly in when the frame is opened. The

entire frame is held in with thumb buttons allowing for its removal when desired.

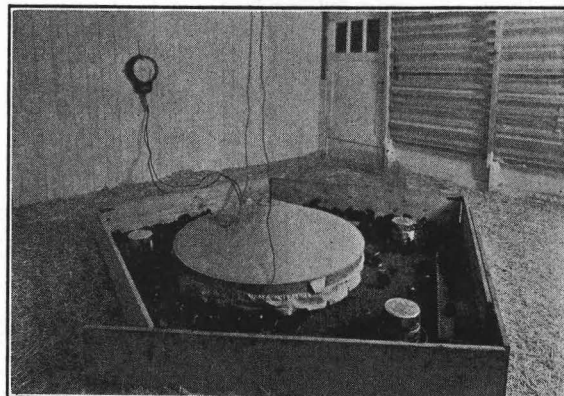
The window openings are covered with one-inch-mesh poultry netting tacked on the front under the casing.

In the rear of each pen a ventilator opening into the hallway is provided. The amount of ventilation is controlled by a slide regulated from the hallway.

Doors. A plan for door construction is shown that may be used for all doors. The hall doors leading into pens should be equipped with glass as shown, permitting the attendant to observe the chicks and brooder without entering the pen. All other doors should be solid.

At the base of each door on the pen side a 1"x12" board is fitted in slides. The board prevents the litter from interfering with the opening of the door. It can be lifted out when cleaning the pen.

The chick door lifts up and is so arranged that the porch and room floor are on the same level, making it more easy to train chicks to go back and forth.



Roosts. In order to allow chicks as much floor space as possible during the first three weeks of the brooding period, the roosts are constructed so as to lift up and be fastened to the wall. They are hinged with a bolt which passes through the roost supports and through a 2"x6" block nailed to the floor and wall. A 1"x6" board hinged to the wall covers the open space between the roost and wall as shown in the plan. The roosts are set into the supports one inch and nailed. One-inch-mesh poultry netting is tacked to the roosts on the under side.

Auxiliary perches are provided for use when the chicks are learning to roost. They are made of 1"x2" blind stop. These perches rest on the top side of the roost supports and are held together by strips over each support to which they are nailed. The auxiliary roost frame is taken away and hung on the wall after the chicks have learned to roost.

When it is desired that the chicks learn to roost the roost frame is let down upon the floor as indicated by the dotted line in the drawing. After the chicks have learned to roost the front of the frame is lifted up and supported by a 12" board extending along the entire front and end.

Water fountains and feed hoppers are not shown in the sketches because of limited space. Brooder-house equipment is illustrated in Extension Bulletin 435.

Runway or porch. The plan shows the construction detail of a wire-floored porch. It is recommended that the floor be made of panels as shown. This plan permits the panels to be stacked when it is desired to clean the ground under them.

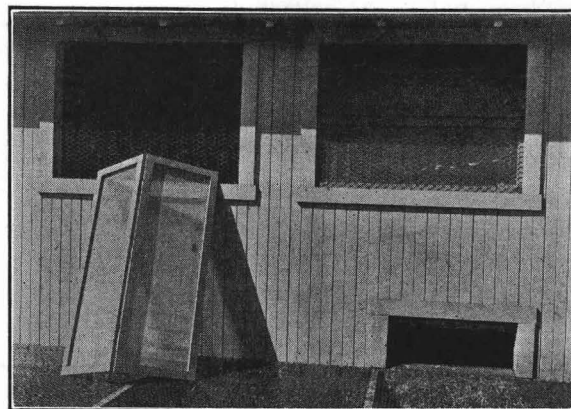


Figure 2 (top). Arrangement of pen when chicks are first put under brooder.

Figure 3 (bottom). Window and cel-o-glass frame arrangement.

An enlargement of the brooder house plan in blue-print form can be furnished by the College. The cost is one dollar.

MATERIALS LIST—O. S. C. BROODER HOUSE

Concrete
Foundation Blocks—material required:
1 cubic yard coarse aggregate
 $\frac{3}{4}$ cubic yard fine aggregate
5 sacks cement

Wood Blocks
As desired.

Stringers
3—4"x6"x12'—72 board feet } No. 2 Common
24—4"x6"x16'—768 board feet } mon

Floor Joists
71—2"x6"x20'—1420 board feet No. 2 Common

Floor
Shiplap—2800 square feet—1"x }
6"—3267 board feet } No. 3 Common
Furring strips—1540 linear feet }
1"x4" }
Building paper—2800 square feet
Flooring—2800 square feet 1"x4"—3500 board feet—No. 4

Plates (Outside walls)
Lower—23—2"x4"x14'—215 board feet No. 2 Common
Upper—46—2"x4"x14'—430 board feet No. 2 Common

Studs
85—2"x4"x14'—1300 board feet No. 2 Common

Ceiling Joists
37—2"x4"x20'—494 board feet No. 1 Common

Rafters
142—2"x4"x14'—1363 board feet No. 1 Common

Sheathing
2735 board feet 1"x6" No. 2 Common

Shingles
3650 square feet (28 $\frac{1}{2}$ M.)

Siding
2500 square feet—2916 board feet No. 4

Partitions
Plates—(lower)—
1—2"x4"x16' } 140 board feet No. 2
7—2"x4"x14' } Common
8—2"x4"x12' }
Plates—(Upper)—
9—2"x4"x16'—96 board feet No. 2 Common

Nailing Girts
1—2"x4"x16' }
7—2"x4"x14' } 310 board feet No. 2
8—2"x4"x12' } Common
16—2"x4"x16' }

Ceiling
2860 square feet 1"x6"—3337 board feet No. 4

Windows
10—4 light sashes (20"x24")

Muslin Curtains
(16 total) 352 linear feet 1"x2" No. 1 Common; 192 square feet muslin

Shields for Windows
4—1"x12"x12' No. 1 Common

Poultry Netting
80 linear feet 4' wide 1" mesh

Gutter
288 linear feet

Doors
2 with window sashes
16 without window sashes

Trim
800 linear feet 1"x6"—400 board feet No. 1 Common

Door Boards
6—1"x12"x10' No. 3 Common

Block in Between Rafters
20—1"x4"x14' No. 3 Common

Window Sills
2—2"x6"x14' No. 2 Common

Roosts
32—2"x 3"x 6' No. 2 Common
64—2"x 2"x12' No. 2 Common
64— $\frac{3}{4}$ "x 2"x12' No. 2 Common
32—1"x 2"x 6' No. 2 Common
8—1"x 8"x12' No. 2 Common
8—1"x12"x12' No. 2 Common
8—1"x12"x 4' No. 2 Common

Carrier
8—2"x 6"x16' No. 2 Common
1—2"x 6"x12' No. 2 Common
35— $\frac{3}{8}$ "x10" bolts
140 linear feet track
2 hangers

1—2"x 4"x12' No. 2 Common
1—1"x 3"x 7' No. 2 Common
1—1"x 2"x 8' No. 2 Common
1—1"x 6"x 7' No. 2 Common
3—1"x10"x16' No. 2 Common

Feed Room
150 square feet 1"x6" T & G No. 4 Common

Incline Approach
10—2"x6"x12' No. 4 Common

Screen Porch
17 posts 4"x4"x9' No. 4 Common
16—2"x4"x16' No. 4 Common
8—2"x6"x16' No. 4 Common
17 posts 4"x4"x3' No. 4 Common
64—1"x6"x12' No. 4 Common
32—1"x6"x16' No. 4 Common
384 linear feet 4' galvanized wire (No. 18—1" mesh)
9—2"x2"x10' No. 4 Common
9—2"x2"x16' No. 4 Common
236 linear feet of 5' poultry netting

Hardware
20 linear feet door track
4 pairs door hangers
23 pairs door hinges (5" strap)
16 pairs hinges (curtains) (2" butts)
Nails as required
Paint as required

SUMMARY OF LUMBER

4—1"x12"x12' No. 1 Common
37—2"x 4"x20' No. 1 Common
142—2"x 4"x14' No. 1 Common
3—4"x 6"x12' No. 2 Common
24—4"x 6"x16' No. 2 Common
71—2"x 6"x20' No. 2 Common
2—2"x 6"x14' No. 2 Common
8—2"x 6"x16' No. 2 Common
1—2"x 6"x12' No. 2 Common
168—2"x 4"x14' No. 2 Common
27—2"x 4"x16' No. 2 Common
17—2"x 4"x12' No. 2 Common
32—2"x 3"x 6' No. 2 Common
64—2"x 2"x12' No. 2 Common
64— $\frac{3}{8}$ "x 2"x12' No. 2 Common
32—1"x 2"x 6' No. 2 Common
8—1"x 8"x12' No. 2 Common
8—1"x12"x12' No. 2 Common
8—1"x12"x 4' No. 2 Common
1—1"x 3"x 7' No. 2 Common
1—1"x 2"x 8' No. 2 Common
1—1"x 6"x 7' No. 2 Common
3—1"x10"x16' No. 2 Common
6—1"x12"x10' No. 3 Common
20—1"x 4"x14' No. 3 Common
10—2"x 6"x12' No. 4 Common
17—4"x 4"x 9' No. 4 Common
17—4"x 4"x 3' No. 4 Common
16—2"x 4"x16' No. 4 Common
8—2"x 6"x16' No. 3 Common
64—1"x 6"x12' No. 4 Common
32—1"x 6"x16' No. 4 Common
9—2"x 2"x10' No. 4 Common
9—2"x 2"x16' No. 4 Common
2735 bd. ft. 1"x6" No. 2 Common sheathing
3267 bd. ft. 1"x6" No. 3 Common shiplap
3500 bd. ft. 1"x4" No. 4 Common flooring
3337 bd. ft. 1"x6" No. 4 Common ceiling
1540 linear feet 1"x4" No. 3 Common
352 linear feet 1"x2" No. 1 Common
800 linear feet 1"x6" No. 1 Common
2500 square feet siding
150 sq. feet 1"x6" T & G No. 4 Common
28 $\frac{1}{2}$ M. shingles
Windows—10—4-light sashes 20"x24"
Doors—2 with window sashes
Doors—16 without window sashes

SUMMARY OF HARDWARE

236 linear feet 5' poultry netting
384 linear feet 4' galvanized wire No. 18—1" mesh
80 linear feet 4' wide 1"-mesh poultry netting
288 linear feet gutter
160 linear feet track (barn door)
2800 square feet building paper
6 hangers (barn door)
35— $\frac{3}{8}$ "x10" bolts
23—pairs door hinges (5" strap)
16 pairs door hinges (curtains) (2" butts)
Nails as required
Paint as required.

MUSLIN

192 square feet

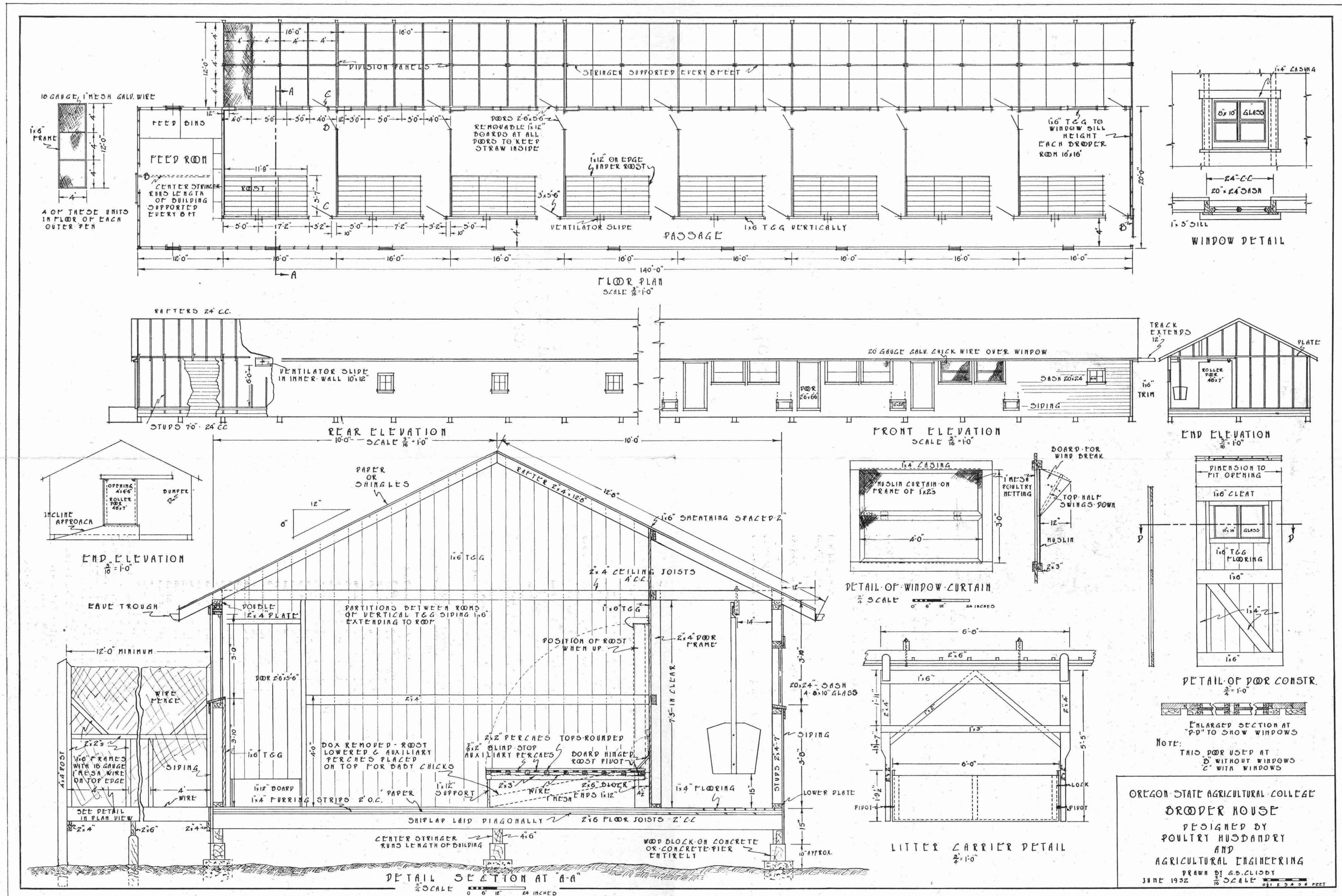


Figure 4. Details of O. S. C. stationary brooder house