

O.S.C. 400-Hen Laying House



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O.S.C. 400-Hen Laying House

By

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ONE of the hardest problems in successful poultry keeping is to maintain the vigor and health of the flock. Housing has particular bearing on this problem. If the laying-house is poorly lighted, has insufficient ventilation, or is overcrowded, the health of the fowls will be affected. The purpose of housing is to increase productiveness. In order to accomplish this the fowls must be comfortable.

So far as is now known there is no one style of laying-house that will suit all conditions. There is ample evidence that fowls may be kept successfully in different kinds of houses.

The O. S. C. 400-hen laying house has been in use at the College and by poultry keepers throughout the state for a number of years. As improvements have been found the plans have been altered accordingly.

Dimensions. The house is 20 feet deep and 70 feet long. This includes a 10-foot feed room in which an insulated egg storage room is provided. There are 1200 square feet of floor space provided which, on the basis of 400-hen capacity, allows 3 square feet per hen. This has been found satisfactory for a flock of this size. If it is desired to house more than 400 fowls the house may be extended in length 15 feet for each additional 100 fowls.

Floor. From the standpoint of durability, sanitation, ease of cleaning, etc., the concrete floor is recommended. It is important, however, that coarse rock or gravel be laid under the concrete as a foundation in order to protect the floor from dampness which otherwise would come up from the ground. The plan shows the floor construction. It is also important that the surface of a concrete floor be troweled smooth. Otherwise difficulty will be experienced when cleaning out the litter.

Under some conditions a board floor will be found best. A board floor plan is shown in the drawing. It will be noted that a double floor is provided with an air space between. It has been demonstrated that such a floor is warmer and will cause less trouble from damp litter than a single floor. Four-inch flooring is specified as wider material will buckle and cause trouble when cleaning.

Nests. The plan shows the construction details of an open type of nest. Allowing one nest for each four hens would require 100 nests or

compartments. The nests may be built in tiers and located on the walls at either end of the house and on both sides of the center partition. If trap-nests are to be used they should be located along the front of the house. An egg carrier may then be constructed that will hang from a track similar to the litter carrier.

Ventilation. A ventilation shaft has been provided for each 100-hen capacity. The shaft is 15½ inches square when made of wood or 15½ inches in diameter when made in circular form of galvanized iron. The shafts open at the ceiling with an air-outlet control slide provided as shown in the

plan. For winter use in Central and Eastern Oregon the shafts should extend to within eighteen inches or two feet from the floor. On the front of the house the air inlet is controlled by the cel-o-glass frames, the frames being opened, partly opened, or closed according to weather conditions.

Water fountain. The plan shows a circular water fountain that has been used successfully at the College and by poultrymen throughout the state. It is cheap in construction, easy to install, and requires but little labor to clean. It consists of two parts: a water pan and a cone or funnel-like holder in which the pan rests. To the funnel is soldered a piece of two-inch down spout which carries the overflow to the waste pipe. Your local tinsmith can make the fountains. For winter use the rod type of electric water heater can be used by bending it into circular form.

Egg room. A detailed plan of the egg storage room is given in Extension Bulletin 445, *How to Construct an Insulated Egg Storage Room*, which will be sent free upon request to Extension Service, Oregon State Agricultural College, Corvallis.

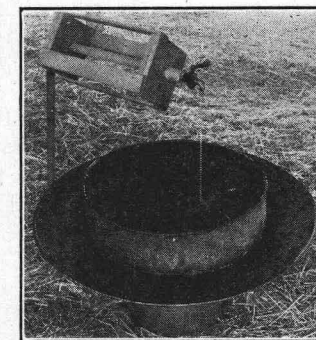
Blue-print. For those desiring a larger working plan, an enlargement in blue-print form 24 x 35 inches in size of the drawing shown in this circular may be obtained for \$1.00.

A detailed blue-print of the ventilator cap may also be had for 25¢.

Orders for blue-prints should be sent to Department of Poultry Husbandry, Oregon State Agricultural College, Corvallis, Oregon.



Interior of O. S. C. 400-Hen Laying-house.



Water Fountain.

(See drawing showing construction.)

BILL OF MATERIALS

Floor—Concrete

Mixture—1:2:4
Total yards 15
22.5 bbls. cement
4.5 cu. yd. fine ag.
13.0 cu. yd. coarse ag.
25.0 yds. gravel

Floor—Wood*

Concrete piers:
1.5 bbls. cement
.5 cu. yd. fine ag.
1.0 cu. yd. coarse ag.

Sills:

21—4"x6"—10'—420 bd. ft. (No. 1 Common)

Joists:

36—2"x6"—20'—720 bd. ft. (No. 1 Common)

Shiplap:

1600 board feet 1"x8" (No. 2 Common)

Flooring:

1750 board feet 1"x4" T & G (No. 4 Clear)

Building paper:

3 rolls

Furring strips:

240 board feet 1"x4" (No. 2 Common)

Anchors:

16— $\frac{1}{2}$ "x1 $\frac{1}{2}$ "x8" straps
16 lag bolts

Sills and Plates

39—2"x4"—10' (No. 2 Common)

Purlins

14—2"x4"—10' (No. 2 Common)

14—2"x8"—10' (No. 1 Common)

Posts

6—2"x4"—18' (No. 1 Common)

Studs

36—2"x4"—6' (No. 1 Common)

36—2"x4"—8' (No. 1 Common)

22—2"x4"—10' (No. 2 Common)

Crossies

18—2"x4"—18' (No. 1 Common)

Rafters

36—2"x4"—10' (No. 1 Common)

36—2"x4"—16' (No. 1 Common)

Barge Board

2—2"x6"—16' (No. 1 Common)

2—2"x6"—10' (No. 1 Common)

Braces

100 board feet 1"x4" random lengths (No. 2 Common)

Roof Sheeting

1300 board feet 1"x6"

Shingles

16,500 (4 $\frac{1}{2}$ " exposure)

Siding

1400 board feet 1"x4" clear T & G or car siding

Ceiling

1400 board feet 1"x4" clear or (1"x6" T & G or car siding)

1400 board feet (No. 1 Common) ceiling (1"x6" T & G or car siding)

Partition

2—2"x4"—12' (No. 1 Common)

1—2"x4"—16' (No. 1 Common)

400 board feet 1"x6" T & G (No. 1 Common)

Dropping Board

140 board ft. (No. 1 Common)

500 board ft. 1"x4" T & G flooring

Roosts

140 board feet 2"x3" (No. 1 Common)

Nests

60 linear feet 1"x12" (No. 1 Common)

20 linear feet 1"x8" (No. 1 Common)

20 linear feet 1"x4" (No. 1 Common)

40 linear feet 1"x3" (No. 1 Common)

40 linear feet 1"x1 $\frac{1}{2}$ " (No. 1 Common)

Grain Bins

250 board feet 1"x6" T & G (No. 1 Common)

Ventilators

4—15 $\frac{1}{2}$ " revolving metal ventilator heads

4 galvanized iron shafts

Windows

9—8x10—4 light sash (20x24)

72 board feet 1"x4" (Select Common)

12 sq. yds. cel-o-glass

15 board feet 1"x3" sill

Trim

54 linear feet 1"x4" (Select Common)

90 linear feet stop for cel-o-glass frames

140 board feet 1"x4" (Select Common) (cut in between rafters)

Hardware

86 feet barn door track

6 barn door hangers

2 hasp locks

7 8" strap hinges

20— $\frac{1}{2}$ "x10" bolts

30 lb. 20d common nails

200 lb. 8d common nails

100 lb. 16d common nails

40 lb. galv. shingle nails

Paint

Outside—6 gallons

Inside—10 gallons

Roof—20 gallons

SUMMARY OF LUMBER*

75—2"x4"x10' No. 2 Common

24—2"x4"x18' No. 1 Common

37—2"x4"x16' No. 1 Common

36—2"x4"x10' No. 1 Common

2—2"x4"x12' No. 1 Common

23—4"x6"x10' No. 1 Common

36—2"x6"x20' No. 1 Common

2—2"x6"x10' No. 1 Common

14—2"x8"x10' No. 1 Common

60 linear feet 1"x12" No. 1 Common

20 linear feet 1"x8" No. 1 Common

20 linear feet 1"x4" No. 1 Common

40 linear feet 1"x3" No. 1 Common

40 linear feet 1"x1 $\frac{1}{2}$ " No. 1 Common

54 linear feet 1"x4" Select Common

90 linear feet stop for cel-o-glass frames

3 rolls building paper

16,500 shingles

1600 board feet 1"x8" No. 2 Common

100 board feet 2"x4" random lengths

4550 board feet 1"x4" T & G No. 4 Clear

500 board feet 1"x4" T & G flooring

212 board feet Select Common

2050 board feet 1"x6" T & G No. 1 Common

140 board feet 2"x3" No. 1 Common

15 board feet 1"x3" sill

100 board feet 1"x12" No. 1 Common

140 board feet No. 1 Common

1300 board feet sheeting

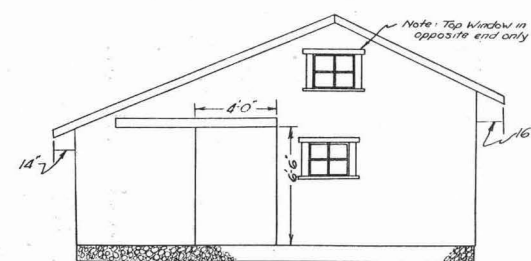
240 board feet 1"x14" No. 2 Common

36 6' Posts

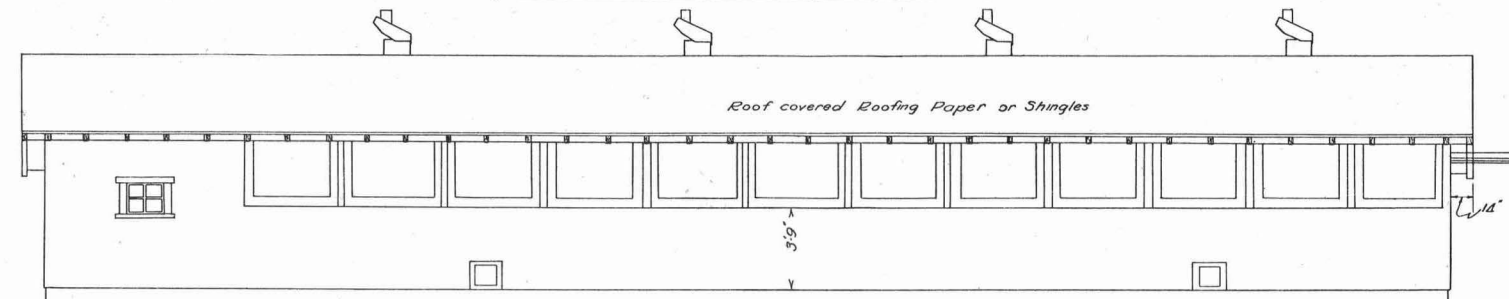
36 8' Studs

9—8x10—4 light sash (20"x24")

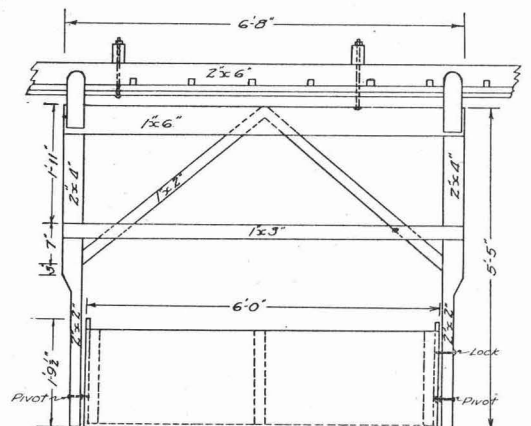
*If the cement floor is used deduct the lumber specified for a wood floor.



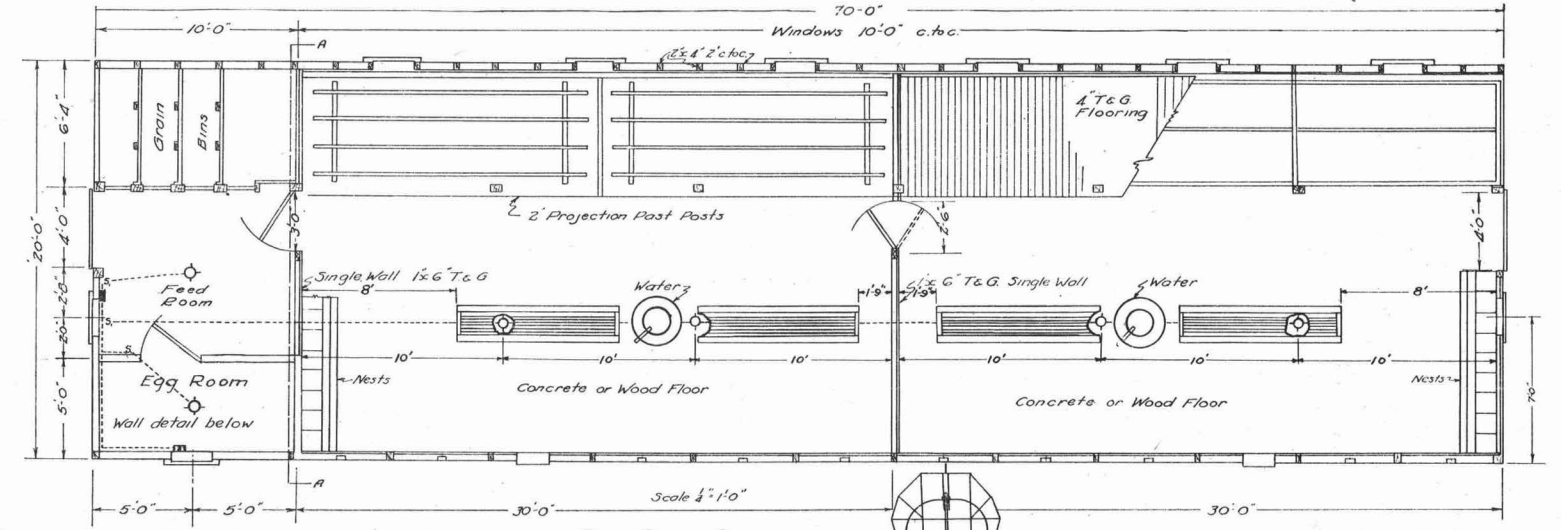
END ELEVATION



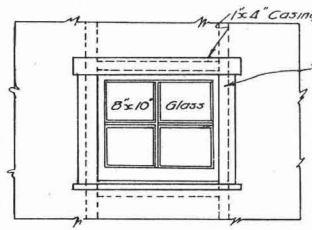
FRONT ELEVATION



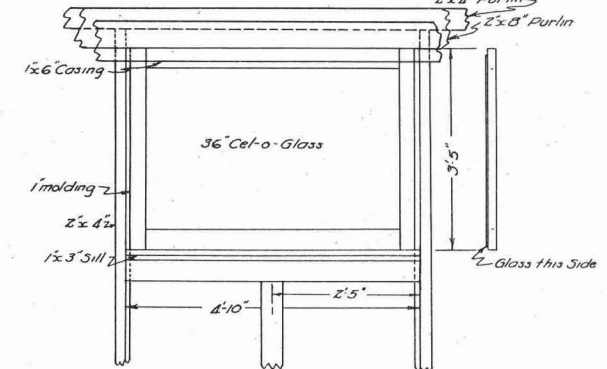
LITTER CARRIER DETAIL



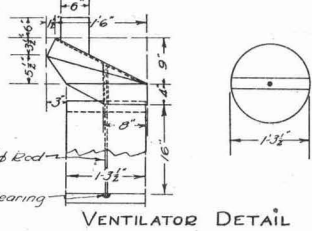
PLAN CROSS SECTION



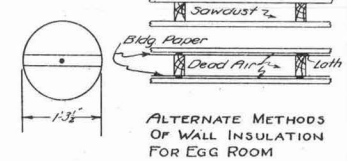
WINDOW DETAIL



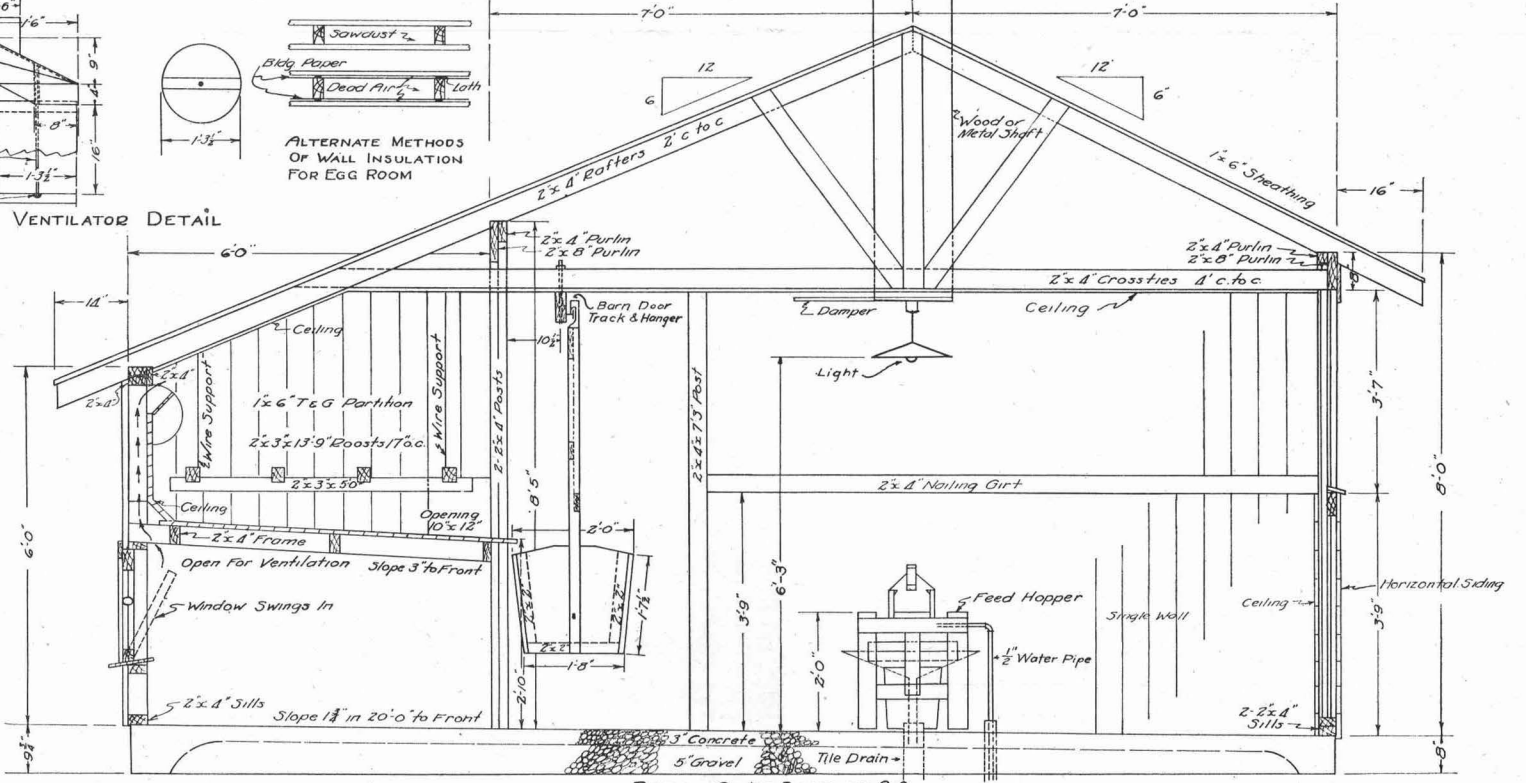
CELLO GLASS WINDOW DETAIL



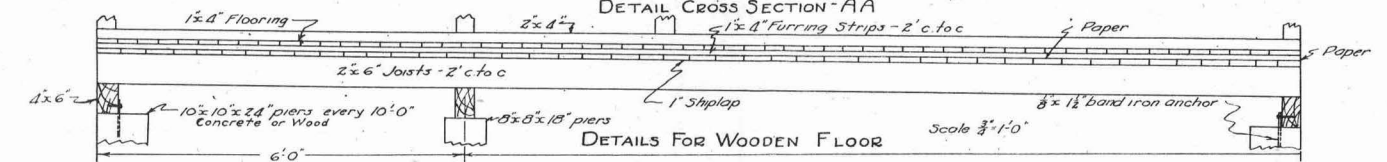
VENTILATOR DETAIL



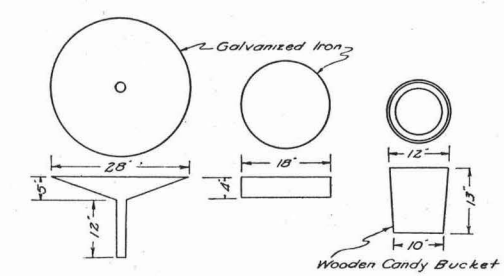
ALTERNATE METHODS OF WALL INSULATION FOR EGG ROOM



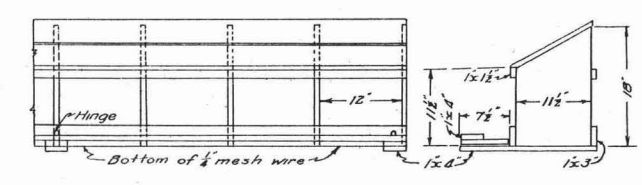
DETAIL CROSS SECTION AA



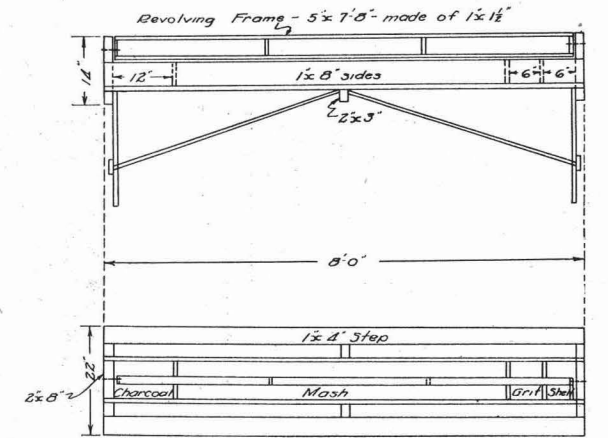
DETAILS FOR WOODEN FLOOR



DETAIL OF WATERING DEVICE



DETAIL OF TYPE OF ORDINARY NEST SUITABLE FOR USE IN THIS LAYING HOUSE



DETAIL OF FEED HOPPER

OREGON STATE AGRICULTURAL COLLEGE
EXTENSION SERVICE

PLAN FOR 400 HEN LAYING HOUSE

PREPARED BY DEPARTMENTS OF
POULTRY HUSBANDRY & AGRICULTURAL ENGINEERING
May 1932

Scale as Shown