

## THE NEW ADAPTABLE POULTRY HOUSE

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Revised plans for poultry houses are always in order, because there is always room for improvement. The first plans for the adaptable poultry house were published in 1922. Since that time some things have proved unnecessary or undesirable, and a few changes or additions have been found to be desirable.

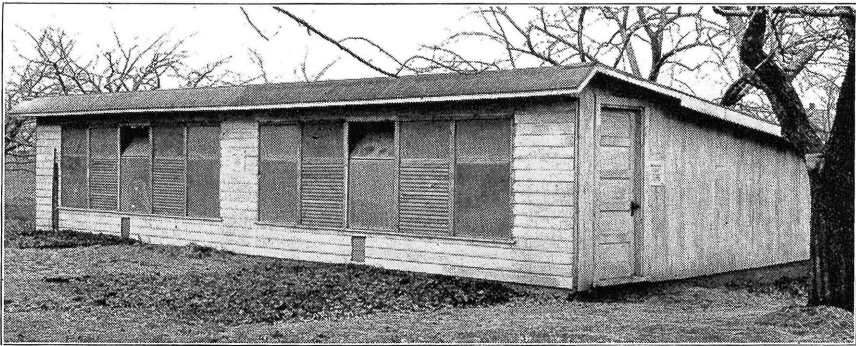


Fig. 1.—The New Adaptable Poultry House

This is a house of two 20 by 20 ft. units, or 20 by 40 ft., suitable for 230 of the lighter breeds, or 200 of the heavier breeds. The windows are made of cel-o-glass, and in each unit one of the upper sections is partly open in addition to the ventilation thru the lath wind bafflers and the ventilators which open between rafters over top front plate. The lath wind bafflers are optional. They may be replaced by windows, if it is desired to use the upper sections of the windows for inlet of fresh air.

The original plans called for an open space, 12 inches wide, running the length of the building just below the front upper plate. This feature has proved to be not only unnecessary, but undesirable, so it is omitted in the new plans. The next departure is in the windows and their arrangement. The new type of window consists of a lower sash, to which is hinged an upper half-sash, which hinges in at top. These upper half-sashes can be opened any degree desired to suit weather conditions. Either window glass or glass substitute can be used, as may be preferred. There is no provision for open front space, as such, since the upper sections of the windows are opened to suit prevailing weather conditions.

An important feature of the new house is the rafter ventilators, Figure 4. These ventilators are located where they will

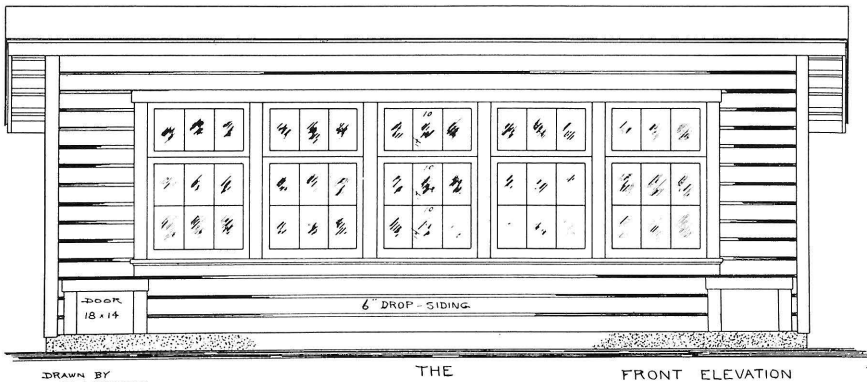
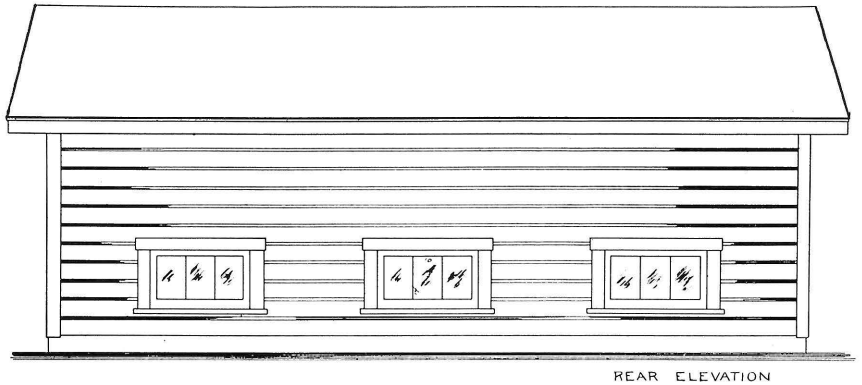
prove the most effective for ventilation, and removal of excess moisture from the house. Moist air being lighter than dry air, tends to rise to the highest point in the house, hence that is the place to locate the ventilators for out-going air. The in-coming air is admitted thru the upper window section openings. This air usually being cooler and drier, finds its way to the floor, where upon absorption of heat and moisture, it tends to rise as it is in turn replaced by outside air, and finally passes out the top rafter ventilators, thus ridding the house of the moist impure air and continually replacing same with fresh air from the outside.

It will be observed that a 2-inch opening is provided at apex of roof where the front roof projection joins. The idea of this is to provide a free escape of outgoing air, and avoid its becoming trapped under the front roof projection. When the wind is blowing, it should tend to draw the air thru this opening, preventing any back flow of air thru the ventilators, which might otherwise result.

It will be observed that the house is ceiled back of roosting quarters and under rafters, all the way to the front. Insulating board is very desirable for this purpose, as it is easily applied and usually provides better insulation against heat or cold than lumber, without additional expense. By ceiling the under side of roof, the house will be made so much more comfortable, both summer and winter, that the extra expense involved will be justified. Furthermore, the rafter ventilators will prove more effective when the ceiling is provided, because the warm moist air will be prevented from coming in contact with the cold roof, where condensation of moisture may take place.

By use of the upper front ventilators, practically all the windows can be closed during very severe windy or cold weather. This is sometimes desirable for the required comfort and protection of the birds. Care should always be exercised, however, never to close the house so tight as to interfere with the required ventilation, as this would be inviting serious trouble. No set rules can be offered for the ventilation of a poultry house, because it must be governed by the number of fowls, the weather, and the location of the poultry house. Each house, therefore, has different ventilation requirements, and must be manipulated according to the judgment of the caretaker. Furthermore, no poultry house is fool proof, nor will it manipulate itself—it is entirely up to the poultry keeper to assume this responsibility.

The foregoing has reference to winter management. During the summer, or usually from May 1 to November 1, the house is opened as much as possible by opening rear sash, removing all of the front sashes, and opening front and rear ventilators. The front windows should be stored in a suitable place, where they will not be damaged by weather or otherwise.



DRAWN BY  
S.A. POWER.

THE  
ADAPTABLE POULTRY HOUSE  
20x20 MULTIPLE UNIT

FRONT ELEVATION

Fig. 2.—Rear and front elevations



**Figure 3 described**

The same plan will serve for a width of 24 ft. In that case, the front will be extended 4 ft., which will require 8 ft. studding instead of 7½ ft. The center purlin to support the rafters, will need to be about 2 ft. farther from rear wall so as to use 14 ft. rafters instead of 12 ft. rafters. The droppings boards will need to extend 6 ft. from rear wall so as to accommodate five roosts, instead of four. The droppings boards in either case are 3 ft. from floor at rear, and slope to 2 ft. 9 in. at the front edge.

The droppings boards are supported by a 2 by 4 running lengthwise, 4 inches in from front edge, and another lengthwise of the center. The front stringer is fastened to the end walls at each end, and supported by a 2 by 4 in. post in the center. The center of middle stringer is supported by a 2 by 4 cross tie from center post, near front edge of boards, to the rear stud. The other ends are anchored to the end walls. The back ends of droppings boards are supported by a 1 by 4 in. cleat, nailed to rear studs. The droppings boards are 1 by 6 in. matched flooring, and extend the short way from rear to front.

The frame for supporting roosts is 4 in. above the droppings boards. 1 by 2 in. legs in each corner support the front. The rear is suspended to wall above by means of No. 9 wire. A half-inch hole is bored thru the rear side of frame 18 in. from ends, so the top of hole is ¾ in. below top edge of frame. The wires are put thru the holes and twisted so as to make an eye about 1 in. in diameter. This permits the frame to be hinged up easily when the boards are cleaned. A similar eye is made on the other end of the wire, which hooks over a large nail or spike to support frame 4 in. off the boards. The top eye is about 6 in. above the roost frame. This makes the frames easily removable when desired. The frames are covered with 1½ in. mesh netting, made of No. 16 gauge wire. The roosts are not attached, but held in place by a large finishing nail at each end, which is driven into the frame. A small hole is drilled thru the ends of roost at the proper point so the roosts will fit over the nails. The nails need to be 3 in. long so as to go 1¼ in. into the frame, and extend above 1¼ in. to receive the roost.

The ceiling is indicated as matched sheathing, but insulating board may be used instead, and in many cases it will, no doubt, be preferred. The 8 in. ventilators, front and rear, permit ventilation thru the rafter spaces. A 2 in. opening running the length of the house at the apex of roof, where the front projection joins, is provided so the outgoing air, moisture, and impurities will readily escape. The rafter joints are covered with roofing to protect them against weathering.

Floor plan. The bill of material does not include nests, water stand, mash feeders, or feed bin. It will be observed that the spacing between studding is the same for front, rear, and ends of the house. The 2 by 6 rafters are spaced the same as the front and rear studs, so that a rafter is placed directly over each front and rear stud. The roost frames are made of 1 by 4 in. boards set edgewise. The frames have 3 in. clearance at ends, and in the center. The roosts are 2 by 2 in., and the length should be such as to provide 1 in. clearance at ends and in center.

**MATERIAL FOR 20 BY 20 FOOT NEW ADAPTABLE  
POULTRY HOUSE**

**CONCRETE**

Foundation and post footing (4 cubic yards, 1:2:4 mixture):	
Portland cement .....	.25 sacks
Sand .....	2 yards
Stone .....	3½ yards
Floor (4 cubic yards, 1:2:4 mixture):	
Portland cement .....	.25 sacks
Sand .....	2 yards
Stone .....	3½ yards
Top finish (¾ yard, 1:2 mixture):	
Portland cement .....	9 sacks
Sand .....	1 yard

**LUMBER**

4 pieces	2" x 4", 20 ft. long, sills
1 piece	2" x 8", 20 ft. long, purlin
1 piece	4" x 4", 7 ft. long, center purlin post
4 pieces*	2" x 4", 20 ft. long, plates
10 pieces	2" x 4", 5 ft. long, rear studs
10 pieces	2" x 4", 8 ft. long, front studs
7 pieces	2" x 4", 14 ft. long, end studs
2 pieces	2" x 4", 16 ft. long, framing front windows
2 pieces	2" x 4", 14 ft. long, framing rear windows
2 pieces	2" x 4", 4 ft. long, framing doors
16 pieces†	2" x 6", 12 ft. long, rafter (3 ft. centers)
16 pieces	2" x 4", 2 ft. long, front roof projection rafters
2 pieces	2" x 4", 20 ft. long, supports for droppings boards
3 pieces	2" x 4", 2 ft. 10 inches long, posts for supporting droppings boards stringers
2 pieces	1" x 4", 10 ft. long, spruce No. 1 common, rest on wall for droppings boards
4 pieces	1" x 4", 10 ft. long, spruce No. 1 common roost frame
6 pieces‡	1" x 4", 5 ft. long, spruce No. 1 common roost frame
8 pieces	2" x 2", 10 ft. long, Y. P., roosts
125 ft.§	B. M. 6", matched sheathing, 5' lengths for droppings boards
575 ft.	B. M. 6", cove siding
640 ft.	B. M. 6", matched sheathing for roof
550 ft.	B. M. 6", matched sheathing, lining under rafters and back of roosts, or, 420 sq. ft. insulating board
6 pieces	1" x 8", 10 ft. long, spruce No. 1 common, ventilators
8 pieces	1" x 4", 10 ft. long, spruce No. 1 common, facing
2 pieces	1" x 4", 14 ft. long, spruce No. 1 common, corner board
2 pieces	1" x 3", 14 ft. long, spruce No. 1 common, corner board
4 pieces	1" x 4", 10 ft. long, spruce No. 1 common, frieze-gable
2	door frames, 3' 6" x 6', rabbited for 1⅜" door
2	door frames, 18" x 14", jamb 1" x 4"—casing 1' x 4'
2	doors 3' 6" x 6'—1⅜" white pine, paneled

- 2 doors 18 " x 14 " ,  $\frac{7}{8}$  " Y. P., 1 panel
- 1 quintette window frame, sash opening—2' 10½ " x 4' 3½ "
  - jamb—4 " , casing—4 " , mull—4 "
- 3 window frames 10 " x 14 " , 3 light—4 " jamb, casing— $\frac{7}{8}$  "
- 5 sashes 10 " x 14 " , 6 light glazed—1 $\frac{3}{8}$  "
- 8 sashes 10 " x 14 " , 3 light glazed—1 $\frac{3}{8}$  "

## HARDWARE, ROOFING, ETC.

- 6 squares roofing, heavy—smooth
- 5 squares, 2 ply, medium weight roofing paper—under cement floor
- 40 linear ft., 1 " poultry mesh, 3 ft. wide—window openings
- 20 linear ft.,\*\* 1½ " mesh netting, No. 16 gauge wire, 4' x 6 " wide,
  - for over roost frames
- 12 extra heavy 3 " strap hinges—rear ventilators
  - 6—4 " strap hinges—entrance doors
  - 20—4 " butt hinges—windows and exit doors
  - 2 door latches (D handles)
- 30—2 " iron door buttons—ventilators and front windows
- 20 lbs. 6d nails
- 12 lbs. 8d nails
- 10 lbs. 10d nails
  - 2 lbs. 16d nails
  - 4 lbs. 20d nails
  - 2 lbs. 30d nails
- 4 lbs. poultry netting staples
- 16—½ " x 6 " bolts with nuts and washers—holding sills to concrete
  - foundation

## CHANGE OR ADD TO MAKE HOUSE 24 FEET WIDE

- \* 4 pieces 2" x 4", 24 ft. long, instead of 2" x 4", 20 ft. long, sills and plates
- † 16 pieces 2" x 6", 14 ft. long, instead of 12' (rafter)
- ‡ 6 pieces 1" x 4", 6 ft. long, spruce No. 1 common—roost frame
  - 10 pieces 2" x 2", 10 ft. long, Y. P., roosts
- § 150 ft. B. M. 6", matched sheathing, 6' lengths, droppings boards
- \*\* 20 linear ft. 1½ mesh netting No. 16 gauge wire, 5 ft. wide, for over roost
  - frames

Add—

- 2 pieces 2" x 4", 8 ft. long—end studs
- 100 ft. B. M. 6", matched sheathing—for roof
- 100 ft. B. M. 6", matched sheathing—ceiling, or, 80' composition board
- 75 ft. B. M. 6", cove siding
- 16 ft., trimming, 1" x 4", spruce
- 1 square roofing

NOTE—Since any length house will have two ends, the material for additional units will be slightly less, owing to inside partitions replacing ends of the building. Matched lumber or insulating board should be used for the partitions, which are carried all the way to the front. In a long house, these partitions may be from 20 to 30 feet apart. The door in partition is the same in size, and located just in front of purlin, or in the same position as the end doors. The inside doors may be made of 1 by 4 in. frames, covered with 1-inch mesh poultry netting. Your lumber dealer, carpenter, or contractor will figure the corresponding deductions of material required when two or more units are to be constructed.

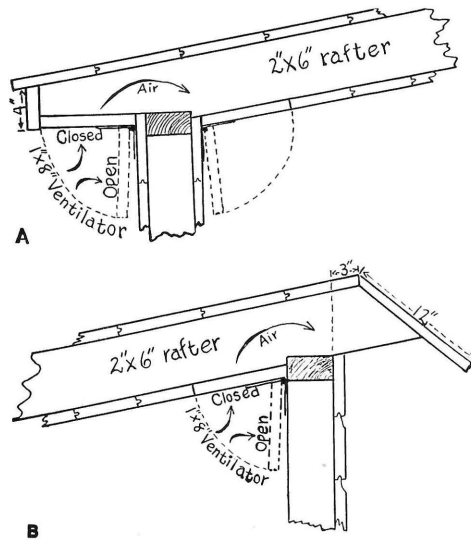


Fig. 4.—The front ventilator (B) is shown in connection with front roof projection for the portable brooder house, described in Special Circular 14. The same ventilator is used for laying houses. Some may prefer this simple, less expensive roof projection for the laying house.