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# AGRICULTURAL EXPERIMENT STATION.

## KANSAS STATE AGRICULTURAL COLLEGE.

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DEPARTMENT OF POULTRY HUSBANDRY.

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### Chicken Houses.

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**M**ANY farm flocks do not give good returns because of poor housing facilities. This does not mean that an expensive house with elaborate fixtures is necessary. It does mean that a building of adequate size with good ventilation and protection from the weather is essential. Only a few fixtures are required.

Some Kansas chicken houses are entirely satisfactory; others are too small; some do not have enough ventilation; others are too open, or have cracks on all sides, permitting drafts to blow on the fowls. The problem may be to improve the house which is in use, or it may be to build an entirely new one. Some Kansas farm chicken houses which have given poor results have been remodeled at a small cost and are now giving good results.

In this circular a number of houses and floor plans are illustrated, showing various plans of building, arrangements of fixtures, and systems of ventilating. Details of construction and bills of lumber are omitted, because it is doubtful whether any one would wish to build a house of the exact size or plan of any of those shown. Suggestions may be secured from the various illustrations for planning a building to meet the needs of the individual.

### LOCATION OF THE HOUSE.

The ideal location for a chicken house is on a southern or eastern slope, near an orchard or wood lot, so that the chickens may have shade. On a southern or eastern slope snow thaws

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more readily, and the ground dries and warms much more quickly than on a northern or western slope. The house should not be located too near the base of the slope, because of the damp air currents found there. Small portable houses may be moved to an orchard or grain field where insect life or waste grain is available. Chickens do well in such places, save waste feed, and protect crops from insect pests.

Farmers in the western part of the state have reported saving part of an alfalfa crop during grasshopper years by hauling portable houses full of chickens to the alfalfa field and allowing the chickens to subsist on grasshoppers and alfalfa.

### SIZE OF THE HOUSE.

The size of the house is governed largely by the breed of fowls, the amount of protection provided outside the chicken

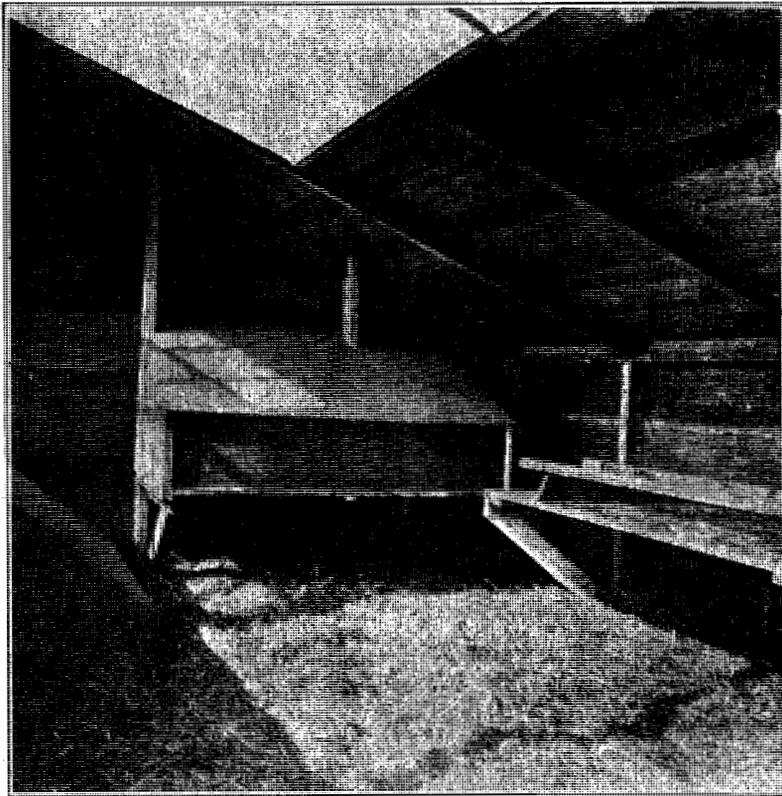


FIG. 1. Interior of house, showing arrangement of perches above the dropping board, and nests at the end of the house.

house, and the section of the state in which the farm is located. The farmers of Kansas who get the most winter eggs provide a scratching room where the hens are given grain feed in a deep litter of straw or similar material. The fowls are kept in this room whenever the weather is not satisfactory for them to run at large. This scratching room should allow from three to five square feet of floor space for each hen. Heavy breeds, and fowls confined a great part of the time, require the larger space, while those which range most of the time may have the smaller floor space. Crowding of fowls does not give satisfactory results. Another room may be used for roosting, or a dropping board may be placed in the scratching room about thirty inches above the floor, and the perches placed six or eight inches above it, as shown in Fig. 1. This is an economical plan, because it eliminates the necessity of providing a separate roosting room.

### VENTILATION.

There is no best method of providing ventilation. The two methods most common in Kansas are the curtain front and the open front. The open front is giving excellent results in some sections of the state, but many people find it desirable to have curtains that may be placed over most of the openings during bad weather. It has been found that a house closed on three sides and curtained tightly on the south does not provide enough fresh air. To remedy this, a narrow opening is often provided along the south side of the house just under the rafters. This causes a greater circulation of air than the curtained openings alone, yet does not allow the wind to blow on the fowls. The large curtained openings should be from thirty to thirty-six inches from the floor, so that the wind will not blow on the fowls when the curtains are raised. During the summer months other openings are necessary to make the building cool enough so that the fowls will roost there. These should be so located at the back of the house that drafts will not blow on the fowls during the night. These openings should be closed tightly during the winter months.

## FLOORS.

Floors of portable houses are necessarily made of wood. For permanent houses, however, concrete and building-tile floors are coming rapidly into favor. Such floors are easily cleaned, rat proof, long lived, and practically as cheap as board floors. If properly constructed and well littered with straw, they are not cold or damp. If concrete floors are built, the moisture may be kept down by the use of a coarse rock floor foundation, as shown in Fig. 2.



FIG. 2. Rock foundation for cement floor. This prevents the moisture from coming up from the soil below. A floor on such a foundation should be dry.

## FIXTURES.

Poultry-house fixtures should be simple, few in number, and easily removed. They usually consist of a perch, with or without a dropping board, nests, a feeding shelf, and a broody coop.

The perches should provide six to eight inches of room for each fowl, and be fourteen inches apart. Overcrowding will very likely result in an epidemic of colds or roup. All perches should be on the same level, to avoid the crowding that results from the effort of all to roost on the top perch. The most common material used for perches is 2 in. by 3 in. lumber. This may be placed on edge and the upper edges rounded to avoid bruising the feet.

If it is desired to place nests under the perches or provide more space for scratching, a dropping board should be used.

This should be made of good matched material, so that there will be a minimum of cracks for harboring mites. It should be removable, so that the ends may be easily sprayed.

A nest should be roomy, easily cleaned and sprayed, dark, and conveniently located. For most fowls a nest fourteen inches square and six inches deep is a good size. There should be one nest for every five hens in a farm flock of ordinary size. Hens are quite likely to roost on the edges of the nests during the molting season, owing to the fact that their bodies are tender from the growing feathers and they try to escape the crowded perch. It is a great advantage to be able to close

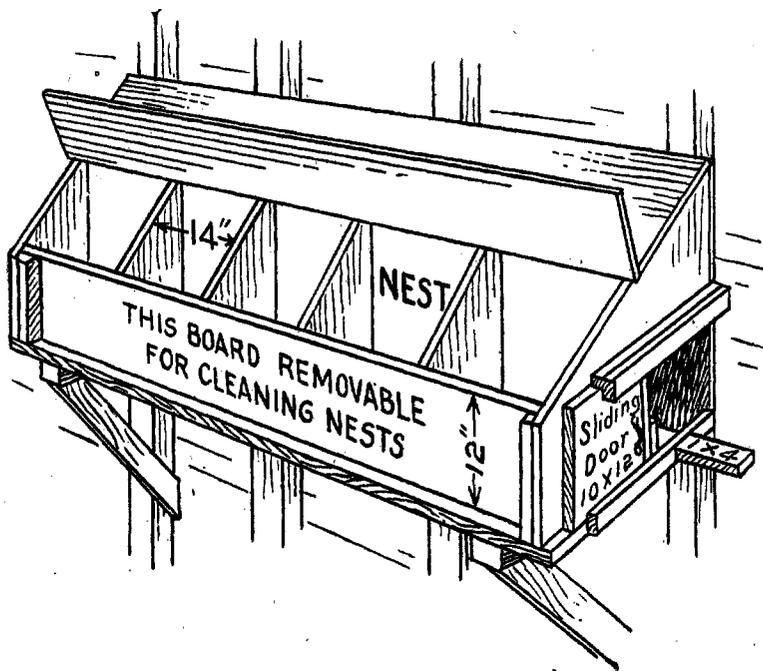


FIG. 3. A good type of wall nest.

the nests at the time of the evening feeding. This may be accomplished by means of a slide door, as shown in Fig. 3.

A feeding shelf may be constructed to keep the feed hopper and water pan up out of the way of the floor litter as it is scratched about by the flock. A dry-mash hopper and grain bin, as shown in Fig. 4, are very useful in the chicken house. The bin makes it possible to have a supply of grain near at hand.

A broody coop is a convenience in every chicken house for breaking up broody hens. It should be provided with a slatted bottom, so that it will be self cleaning and there can be no accumulation of nesting material.

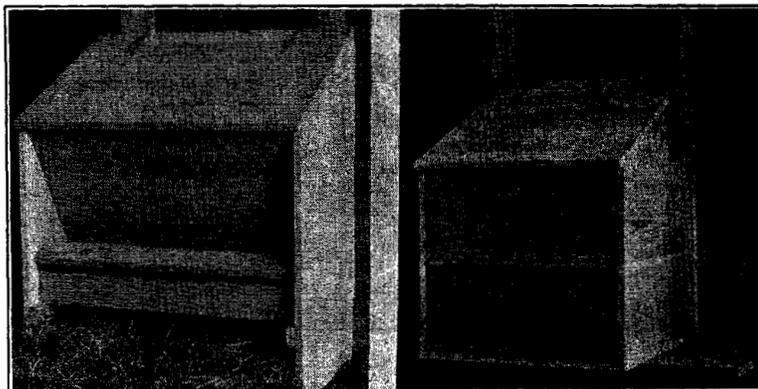


FIG. 4. Mash hopper to left. Grain bin to right.

### CARING FOR THE CHICKEN HOUSE.

The chicken house should be littered at all times with straw, eight to twelve inches deep. This should be renewed whenever it becomes damp, badly broken up, or so full of droppings that grains thrown down are not quickly lost from sight.

When a dropping board is used it should be cleaned at least once a week, because disease germs and mites accumulate on it. Further, if not cleaned frequently the feet of the birds become soiled, causing a large per cent of dirty eggs. Also, injurious gases are given off by the decaying manure.

As a matter of precaution against disease and insects, the chicken house should be thoroughly cleaned at least once a year, and soaked in every part with a 3 per cent mixture of compound solution of cresol or a good stock dip.

The two most common poultry parasites are mites and lice. Mites are usually first noticed on the under side of the perches or in the corners of the nests where they live, rather than on the fowl's body. They stay on the body of the fowl only long enough to feed. Mites are killed by spraying. In order to get entirely rid of them it is necessary to spray two or three times to kill the mites which have hatched after the previous spraying. In warm weather the sprayings should follow each other

at intervals of five to seven days. If it is cool, ten days will be sufficient.

The chicken louse spends most of its life on the fowl, and is thus not affected by cleaning or spraying. It is controlled by dust baths, dust powders, and blue ointment. A good, cheap lice powder can be made by mixing three parts of gasoline with one part of cresol, and gradually stirring in plaster of Paris or building cement to take up the moisture. After drying, this mixture is ready for applying to mature fowls. It should be applied thoroughly.

Blue ointment may be purchased from a drug store and mixed with equal parts of Vaseline. A piece of the mixture about the size of a pea should be thoroughly rubbed into the fluff of each fowl, close to the vent. A second application should be made eight or ten days later to kill the lice which hatch after the first application.

A whitewash is also good in keeping parasites and disease in check. A good whitewash is made as follows: Slack one bushel of lime in a container, and add water until twelve gallons have been used. In another vessel dissolve two pounds of salt and one pound of sulphate of zinc in two gallons of water.



FIG. 5. Shed-roof chicken house having good light and ventilation.

After these are dissolved add the mixture and two gallons of sweet skimmed milk to the lime water.

Fig. 5 shows the wall construction and front ventilation of a shed-roof chicken house. The openings in the front have

muslin curtains, which may be closed in severe weather. There are openings on the back side, just below the roof, for use during the summer time. These are so arranged that drafts do not blow on the fowls. Doors are shown above the front openings. These may be used if it is found necessary.

The floor plan of this house is shown in Fig. 6. This gives the arrangement of nests, roosts over dropping board, broody coop to confine broody hens, and platform for mash hopper and water bucket.

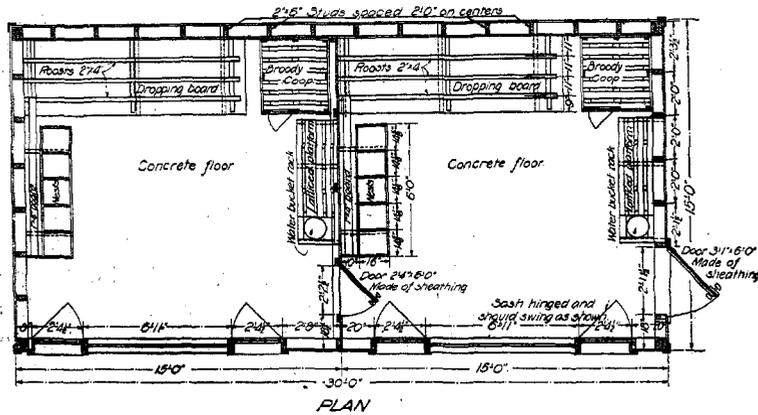


FIG. 6. Floor plan of house shown in fig. 5.

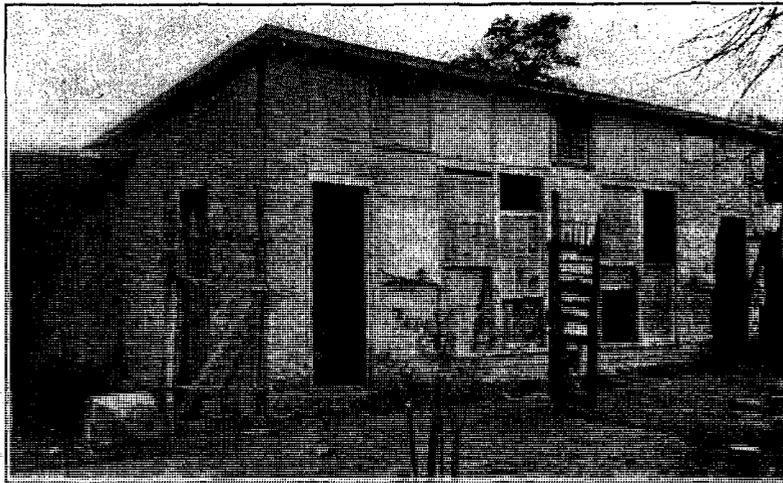


FIG. 7. Stone chicken house which is giving good results on a Kansas farm.

The shed-roof house shown in Fig. 7 is giving good results on a farm in northern Kansas. Originally this house was much narrower, an addition being made later. Had the entire house been built at one time it probably would have been made lower. As it is, it is higher than is necessary, both in the front and in the back. This house is well ventilated, as indicated by the large number of openings. The openings in the upper part of the front form an outlet for all bad air which may accumulate near the roof.

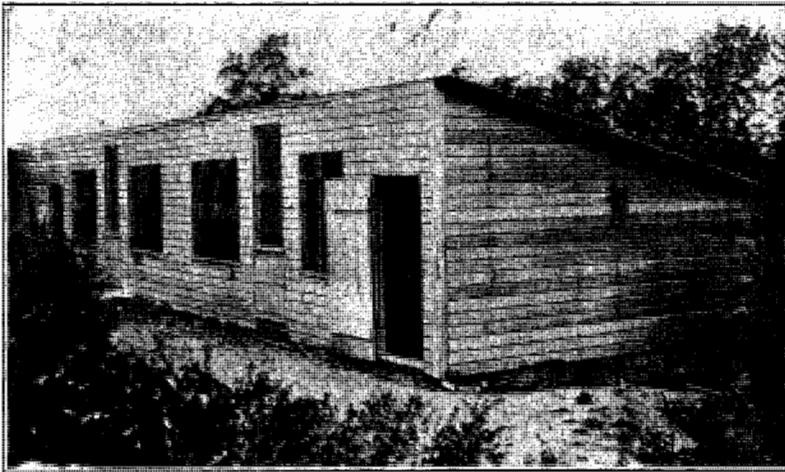


FIG. 8. The ventilation is not overlooked in this house. The openings may be covered with curtains if weather demands.

Fig. 8 shows a Kansas farmer's well-proportioned shed-roof chicken house. The openings in the front have muslin curtains, which may be lowered whenever the weather is severe enough to make it advisable. In this house the fowls roost along the back wall over dropping boards. The nests are similar to those shown in Fig. 3, except that they are two tiers high. They are built on both ends and on the partition, which divides the house into two similar rooms. There is a room on one end of the house for the storage of feed. Such a room is very useful because it saves a great deal of time in feeding the fowls.

The type of house illustrated in Fig. 9 is satisfactory when built about twenty feet wide. This house has an open front, with no curtains for protection. It has been used with good results in states farther north than Kansas for the medium-

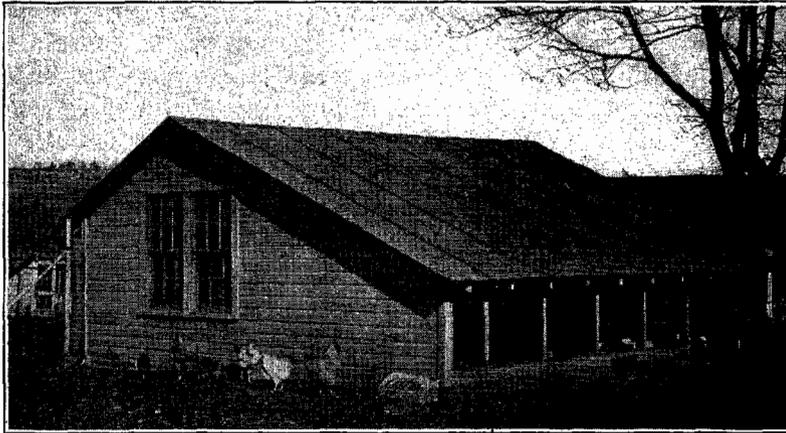


FIG. 9. An open front hen house which is giving good results.

weight breeds. This house has windows on both the east and the west. It also has an opening along the north side, under the eaves, to provide summer ventilation.

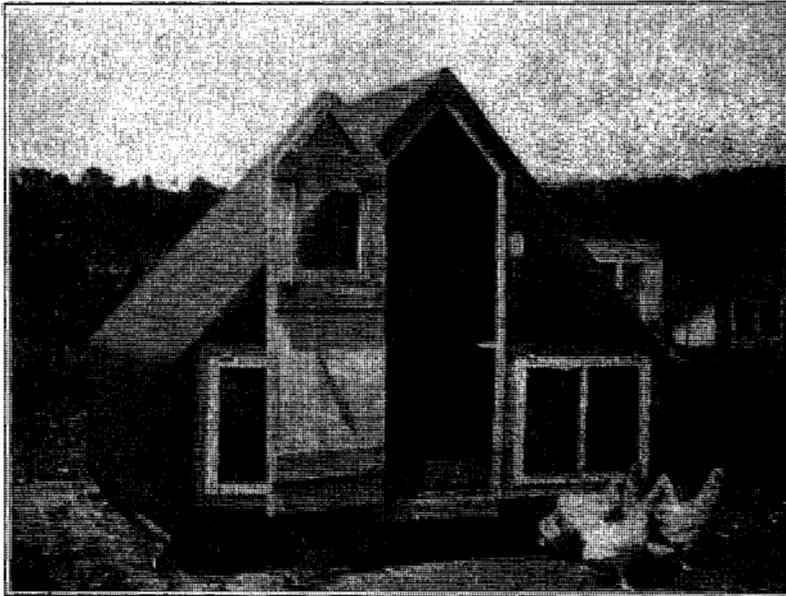


FIG. 10. An economical house for either hens or growing chicks.

The house shown in Fig. 10 may be used for hens or for growing chicks. It may be moved from place to place, so that

the chickens may have fresh range. This is probably the cheapest type of house for a given floor space, unless it be a house with no side wall at all. The dimensions are 8 ft. by 8 ft. This type of house is often built 10 feet from front to back. The shape of roof is such that it may be moved easily between the rows of trees in an orchard.

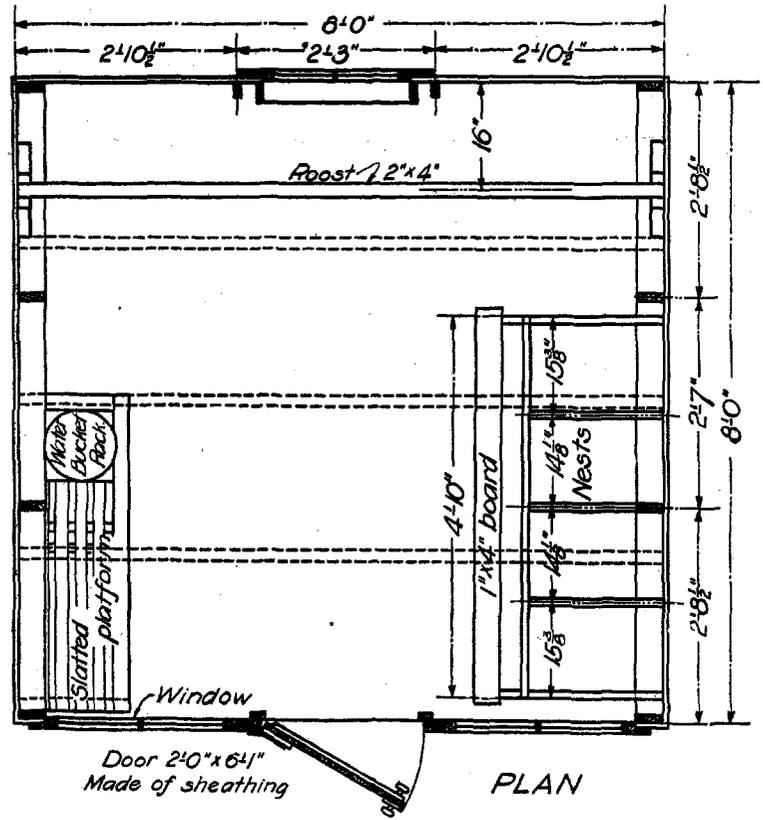


FIG. 11. Floor plan of house shown in fig. 10 when used for laying hens.

The floor plan of this house is shown in Fig. 11. The dotted lines are the joists for the floor.

Fig. 12 shows a house made from two piano boxes. There are enough boards in two boxes to make this entire house. The only added expense is the lower framework for the floor, roofing paper, windows, and hardware. This house may be used for growing chicks during the summer and for manure

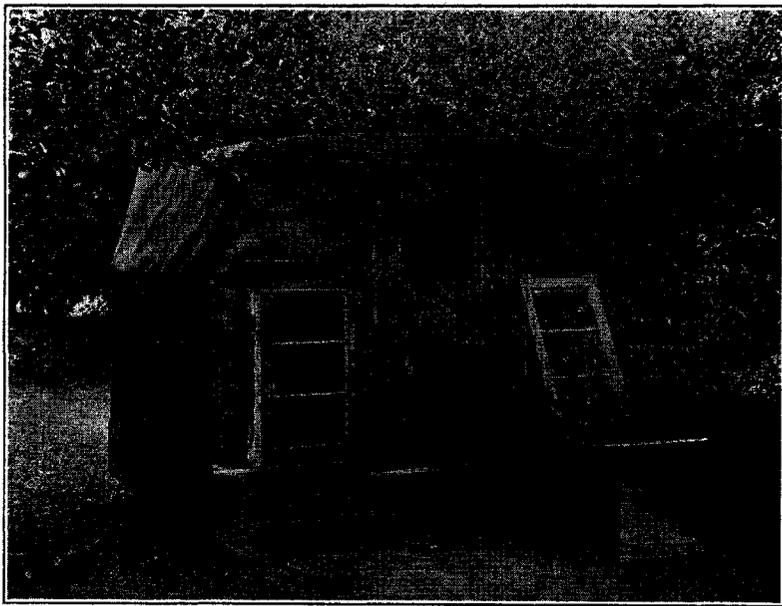


FIG. 12. House made of two piano boxes covered with roofing paper.

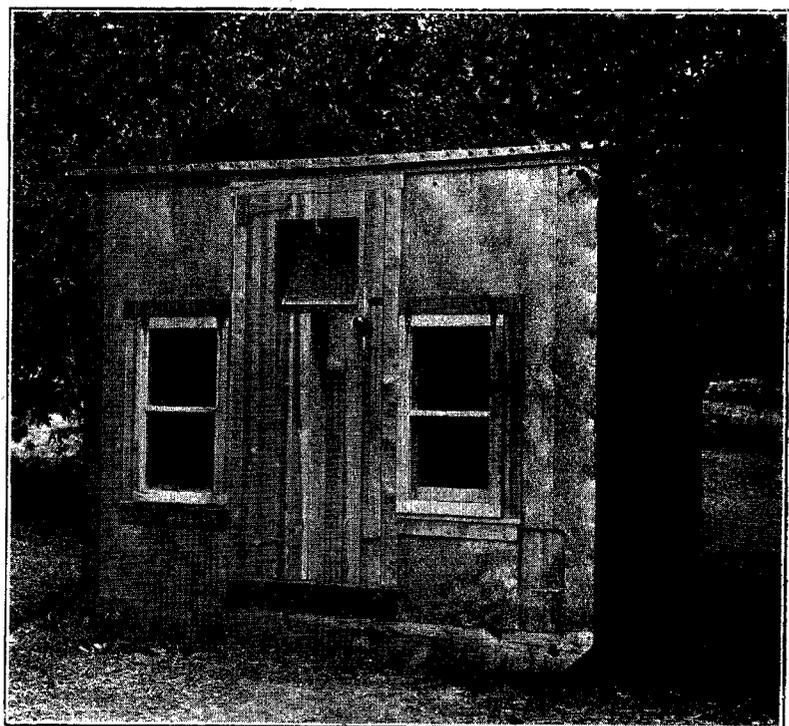


FIG. 13. Shed roof colony house for chicks or mature fowls.

fowls during the rest of the season. It is a very practical type where piano boxes are available at a reasonable cost.

For those who wish a shed-roof movable house for hens or growing chicks the house shown in Fig. 13 is suggested. It is necessary to provide more ventilation than is specified if it is used for mature fowls.

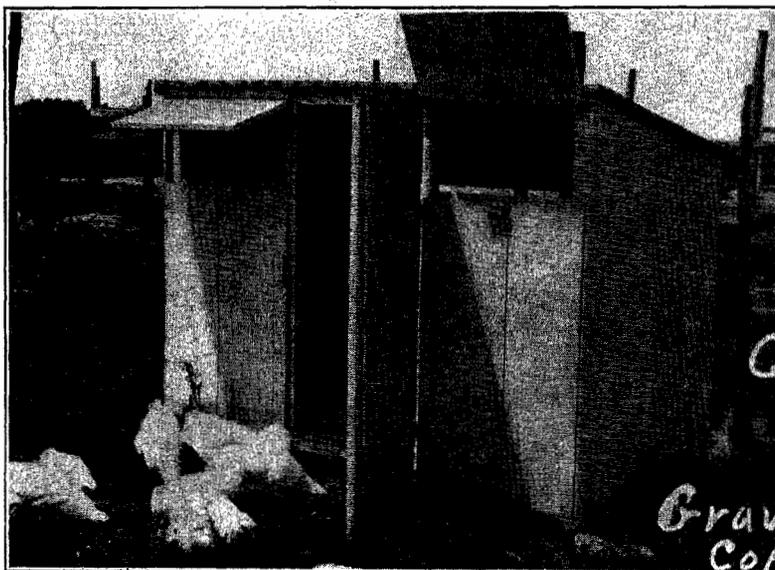


FIG. 14. Economical coop for growing chicks. It is especially well ventilated.

A farmer in southern Kansas has solved the problem of housing for a small flock of growing chicks by constructing the small house shown in Fig. 14. The building is sided with ship-lap on a light frame of 2 in. by 2 in. material. It is covered with prepared roofing. Ventilation is well provided for. There is a long, narrow door under the eaves on the back side as well as the two doors on the south side. By properly operating the doors the house may be kept comfortable for the chicks.

The broody coop shown in Fig. 15 is very useful for a hen and chicks, or for a sitting hen. Such a coop should be provided with a tight floor. It will then protect chicks from surface water and rats. The yard makes it possible to confine the chicks while the grass is wet. If hens are confined, in such

coops until the chicks are several weeks old, the loss of chicks will be much smaller than is often the case.

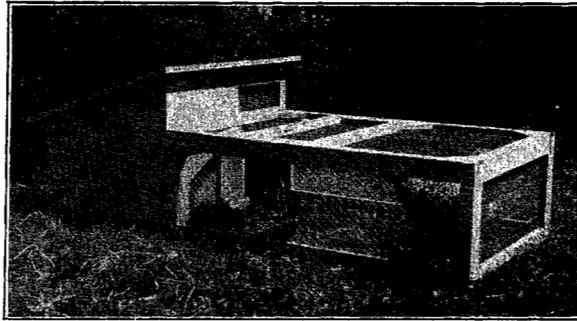


FIG. 15. Coop and yard for hen and chicks. Chicks are protected from their enemies in such a coop.

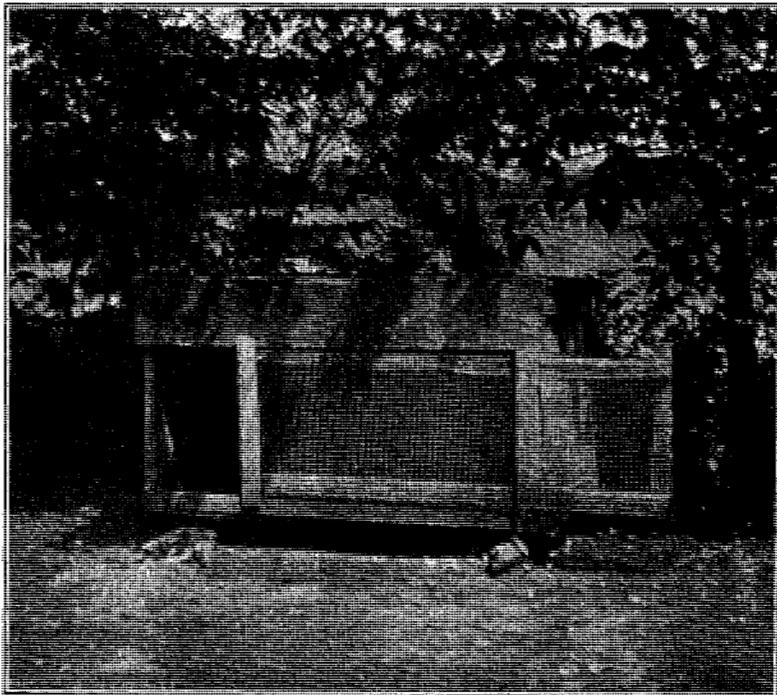


FIG. 16. Excellent broody coop made from large tight box covered with roofing paper.

Fig. 16 shows a very useful and economical broody coop. This is made from a large, tight box with prepared roofing paper fastened over the top for a roof. The door at the front is covered with  $\frac{1}{4}$ -in. mesh hardware cloth to protect the chicks from enemies without depriving them of proper ventilation. This coop may also be used for sitting hens.